

Public Realm

Master Specification

PR-LS-M5 Bushcare

Document Information

K Net Number:	14386913
Document Version:	1
Document Date:	August 2021

DEPARTMENT FOR
INFRASTRUCTURE
AND TRANSPORT



Government of South Australia

Department for Infrastructure
and Transport

Document Amendment Record

Version	Change Description	Date
1	Initial issue (formerly L45 Bushcare); content updated.	August 2021

Document Management

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PR-LS-M5 Bushcare

1 General

- 1.1 This Part defines the requirements for bushcare (i.e. the provision of minimal disturbance, and selective control of herbaceous and woody weeds in areas of significant native vegetation).
- 1.2 This Part references the following documents:
 - a) Controlled Substances Act 1984.
 - b) Controlled Substances (Pesticides) Regulations 2017.
 - c) Landscape South Australia Act 2019.
 - d) List of plants and animals declared under the provisions of the Landscape South Australia Act 2019 (http://pir.sa.gov.au/data/assets/pdf_file/0003/231924/animal-and-plant-declaration-list-extracted-from-Gazette.pdf)
 - e) The Department Weeds List.
 - f) The Department Phytophthora (Dieback) Control Environmental Instruction 21.3.
- 1.3 The Department's publications are available from: <http://www.dit.sa.gov.au/documents/environment>.
- 1.4 Environmental weed species are listed in the Department's Weeds List.
- 1.5 Where required under the Controlled Substances Act 1984 and the Controlled Substances (Pesticides) Regulations 2017, employees undertaking pest control work shall hold a current Pest Management Technician's License.
- 1.6 The Contractor must operate in accordance with the Department's Phytophthora (Dieback) Control Environmental Instruction 21.3. Prior to commencing works onsite, the Contractor must undertake a Phytophthora risk assessment to determine the required hygiene procedures and disposal requirements for the works.

2 Weed Control Category

- 2.1 Unless specified in the Contract Documents, the Contractor shall establish a weed control front commencing at the location of the best quality native vegetation and progress the weed control front at a rate of five metres per annum. In each subsequent year, the area behind the weed control front shall be maintained with follow-up weed control, and the weed control front progressed by an additional five metres per year.
- 2.2 Weeds to be controlled are those plant species listed as declared under the provisions of the Landscape South Australia Act 2019 and weeds listed in the Department's Weeds List.
- 2.3 Refer to the Contract Scope for the bushcare locations and associated categories. Bushcare sites can be summarised into the following categories:
 - a) High Quality and Sensitive Sites: Bushcare sites in native vegetation which is of high quality, sensitive to disturbance and contains significant or threatened species or dormant perennial species such as orchids. These sites will require very low disturbance bushcare techniques using trained, skilled on-ground operators. Weed control methods may include the use of light hand tools, brushes, sponge tongs and hand held spray bottles for hand removal, swabbing, frilling, wiping and precise spot spraying. Disturbance by weed control works, accessing the site and removal of waste shall be minimised at all times.
 - b) Moderate Quality Sites: Bushcare sites in native vegetation which is of moderate quality and may contain varying levels of weed infestation amongst a reasonably intact understorey, but not characterised by high quality, high sensitivity or the presence of significant species. These sites will require low disturbance bushcare techniques, at least basically trained operators, and a high level of supervision by trained, skilled supervisors. Weed control methods may include the use of hand or light power tools (generally not brush-cutters or similar), brushes, sponge tongs and

hand held spray bottles, and small knapsack sprays for hand removal, swabbing, frilling, wiping and precise spot spraying.

- c) Sites with Weedy Areas: Bushcare sites in native vegetation which contains significant weedy areas with generally sparse to absent understorey and not containing high quality or substantial areas of moderate quality vegetation. These sites may require the use of power tools such as brush-cutters, chainsaws and power spray units in addition to lighter tools and lower impact methods. These sites will still require disturbance to be minimised, and basically trained operators are to be used with supervision by trained, skilled supervisors.

3 Weed Control Requirements

- 3.1 The Contractor shall examine the site conditions and recommend methods of weed control or bushcare for the project and specify them in Appendix 1. The methods shall specify nominated chemicals and application rates to be used and take into account all aspects of the work, including all weed species' capacity to regenerate, and disposal of cut material.
- 3.2 All chemicals shall be used in accordance with the manufacturer's instructions and recommended rates. The initial weed control treatment shall effectively clear all weed species. If the initial spray has not effectively cleared all listed weed, the areas shall be re-sprayed by the Contractor.
- 3.3 Native vegetation shall be preserved and protected during works on site. Any off-target damage shall be rectified by the Contractor.

4 Methods of Weed Control

- 4.1 All work specified shall be carried out by persons trained or experienced in selective, minimal disturbance weed control techniques in native vegetation. Weed control works shall include one or more of the following procedures and shall be performed in accordance with these procedures, as appropriate to the target weed species.
- 4.2 The Contractor shall use the following weed control methods:
 - a) Cut and Swab, Cut and Frill: Cut and swab is the preferred control method for woody weeds that are likely to re-shoot from an untreated cut stump, cannot be effectively hand-pulled, or where soil disturbance is to be minimised. Large stems (exceeding 20 mm diameter) shall be frilled to the depth of the sap-wood below the main stem cut and immediately applied with herbicide to ensure adequate translocation of herbicide. All live stems shall be removed from the cut stump. Herbicide shall be applied immediately to all cut surfaces by brush (or similar), avoiding any spillage of herbicide on the soil or adjacent non-target plants.
 - b) Cut Only: Weeds that will not shoot from a cut stump shall be cut as close as possible to ground level and all live side stems shall be removed to prevent regrowth.
 - c) Hand-pull: This method of herbaceous weed control shall only be used for species that will not regrow from residual rootstock left in the soil and in areas where other methods are impracticable or a high risk to adjacent vegetation. Disturbance to the soil shall be minimised.
 - d) Spot Spray: Spot spraying, involving the controlled application of suitable systemic or knockdown herbicide to a target plant, shall only be carried out where there is very low risk of non-target damage. Spraying shall not be carried out in windy conditions, in order to avoid spray drift. Spray shall not be applied to adjacent non-target plants
 - e) Wiping: Wiping of leaves of herbaceous species, particularly strap-leaved species such as Watsonia and Freesia, with concentrated or slightly diluted systemic herbicide using sponges mounted on a holder such as tongs or with a paint brush or specialised equipment such as a wick wiper. This method may often be employed for eradicating perennial strap-leaved plants amongst remnant understorey. Operators shall be trained specifically in the use of these methods. Only suitable non-spill herbicide containers shall be used in the Works area.
 - f) Frilling Only: Application of concentrated or slightly diluted systemic herbicide to the stems of woody plants by paring back the bark around stems, exposing the cambium layer around most or all of the stem circumference and immediately applying herbicide to this layer by means of a brush, squeeze bottle or similar. Drilling to create herbicide reservoirs may also be used but should expose and treat a similar area of cambium layer. For smaller and soft wooded weeds, a

knife or other sharp bladed hand tool shall be used. Operators shall be trained specifically in the use of these methods. Only suitable non-spill herbicide containers shall be used in the works area.

- g) Ringbarking: Complete removal of the cambium layer around the circumference of all trunks or stems of suitable trees or shrubs. This method is only suitable for weed species that will not reshoot from roots or stems below the ringbark wound, such as pine trees. If the plant is to be killed and left standing, the Contractor shall ensure that there is no potential for rotting branches or the whole plant to create a hazard by falling on roads, paths structures or trafficked areas.

5 Disposal of Cut Material

- 5.1 Vegetation that has been cut or hand-pulled shall not be removed from the site unless it has the ability to regenerate or propagate from seed or other plant propagules.
- 5.2 If removal is required, the vegetation shall be bagged with seeds and flowers intact to prevent the spread of plant propagules. The Contractor must obtain all required permits for transportation of declared weed species from the relevant authority.
- 5.3 The removal operation shall be carried out in a manner involving minimal movements across the site resulting in minimal disturbance to the vegetation, soil and watercourses.
- 5.4 Unless specified otherwise, cut material may be left on site where they provide protection to exposed soil, will not inhibit regeneration of indigenous species, will not significantly increase the current fuel load at the site and does not contain seed. Chipped prunings may be spread evenly over the ground taking care to avoid indigenous grasses and ground covers. The spread chippings are not to exceed 100 mm in depth across the site.
- 5.5 If chipping on site is required, the Contractor may use a motorised chipping unit to process the upper canopy and minor branches of woody weeds. The unit shall be in good working order, shall comply with all applicable WHS, noise and spark arrestor requirements in accordance with South Australian Country Fire Service (CFS) publications, and shall be operated only by trained operators equipped with appropriate personal safety equipment.
- 5.6 In High Risk Phytophthora (Dieback) areas, all cut material that has been in contact with soil, and requires removal from site as specified in the above clauses, shall be disposed of at a licensed waste depot or burnt in accordance with the Department's Phytophthora (Dieback) Control Environmental Instruction 21.3.

6 Records and Reporting

- 6.1 The Contractor must keep daily records of herbicide applications. A copy of the records must be provided to the Principal when submitting any associated invoice and whenever requested by the Principal. The records must indicate the following:
 - a) contractor and operator(s);
 - b) contract reference, e.g. contract number; date, spray start time and finish time;
 - c) weather conditions including temperature, wind speed, wind direction and rainfall (relative humidity and Delta T may also be recorded);
 - d) locations, i.e. road reserve details (including road number and name, section (start and finish Maintenance Markers (MM)), side of road) or the property address;
 - e) details of application method including equipment type, nozzle type and flow rate, spray pressure, spray volume, and travel speed;
 - f) details of chemicals used including product and adjuvant names (e.g. herbicide/surfactant/dye), application rate, area treated, situation including weed species controlled; and
 - g) any supporting notes, e.g. weed growth stage/plant condition, water source, reasons and length of any delays.

7 Hold Points

7.1 There are no Hold Points referenced in this Part.

Appendix 1: Example Bushcare Schedule

METHOD:

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HERBICIDE DETAILS:

DESCRIPTION	APPLICATION RATE	
Chemicals to be used for herbaceous weed control	Rate per litre water	Litres per hectare
Chemicals to be used for woody weed control	Rate per litre water	Rate per litre diesel

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Contractor’s signature

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Date