

Master Specification

Part PR-LS-M5

Bushcare

September 2024



Government of South Australia
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PR-LS-M5 Bushcare

1 General

- a) This Master Specification Part specifies the requirements for bushcare (i.e. the control of herbaceous and woody weeds in areas of good quality native vegetation), including:
 - i) the documentation requirements, as set out in section 2;
 - ii) the weed control category requirements, as set out in section 3;
 - iii) the weed control requirements, as set out in section 4;
 - iv) the methods of weed control requirements, as set out in section 5;
 - v) the requirements for disposal of cut material, as set out in section 6; and
 - vi) the records and reporting requirements, as set out in section 7.
- b) Bushcare works must comply with:
 - i) the Reference Documents, including:
 - A. List of plants and animals declared under the provisions of the *Landscape South Australia Act 2019* (SA) (available from: <https://cdn.environment.sa.gov.au/environment/docs/plant-declaration-list-extracted-from-gazette.pdf>);
 - B. Department Environmental Weeds List (available from: <https://dit.sa.gov.au/standards/manuals>);
 - C. Department Phytophthora (Dieback) Control Environmental Instruction (available from: <https://dit.sa.gov.au/standards/manuals>); and
 - D. Department EHTM Attachment 4B - Vegetation Impact Assessment Guideline (available from: <https://dit.sa.gov.au/standards/manuals#EHTM>);
 - ii) all relevant Laws, including:
 - A. *Controlled Substances Act 1984* (SA);
 - B. *Controlled Substances (Pesticides) Regulations 2017* (SA); and
 - C. *Landscape South Australia Act 2019* (SA).
- c) The Contractor must review all existing vegetation surveys regarding the site prior to undertaking bushcare works. The Contractor must follow the priority actions detailed in any weed control management plan relevant to the site.
- d) The Contractor must ensure that, where required under the *Controlled Substances Act 1984* (SA) and the *Controlled Substances (Pesticides) Regulations 2017* (SA), workers undertaking pest control work must hold a current Pest Management Technician's License. The Contractor must provide evidence of the Pest Management Technician's Licenses prior to commencement of a spraying program, as part of the Quality Management Records.
- e) Prior to commencing bushcare works on-site, the Contractor must undertake a Phytophthora risk assessment to determine the required hygiene procedures and disposal requirements for the bushcare works. The Phytophthora risk assessment must be undertaken in accordance with the Department Phytophthora (Dieback) Control Environmental Instruction, and submitted to the Principal as part of the Construction Documentation or the CEMP (as applicable).

2 Documentation

2.1 Construction Documentation

In addition to the requirements of PC-CN3 “Construction Management”, the Construction Documentation must include:

- a) if not included in the CEMP, a Phytophthora risk assessment, as set out in section 1e);
- b) the approvals obtained pursuant to section 4a); and
- c) the schedule set out in Appendix 1: Example bushcare schedule, in accordance with section 4b).

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:

- a) current Pest Management Technician’s Licenses, in accordance with section 1c); and
- b) daily records of herbicide applications, in accordance with section 7a).

3 Weed control category

- a) Unless specified otherwise in the Contract Documents, Design Documentation or the vegetation management plan which forms part of the Contract Documents, the Contractor must:
 - i) 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 5 m per annum; and
 - ii) in each subsequent year, the area behind the weed control front must be maintained with follow-up weed control, and the weed control front progressed by an additional 5 m per annum.
- b) The Contractor must provide a monthly progress report to the Principal that aligns with their invoicing for the works completed under section 3a).
- c) Weeds to be controlled by the Contractor are those plant species listed as declared under the provisions of the *Landscape South Australia Act 2019* (SA) and weeds listed in the Department Environmental Weeds List.
- d) The Contractor must undertake the bushcare works in the locations specified in the Contract Documents, Design Documentation or the vegetation management plan.
- e) The Contractor must undertake the bushcare works in accordance with the requirements for the bushcare site category specified in the Contract Documents or vegetation management plan, summarised as follows:
 - i) for high quality and sensitive sites (i.e. 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), the Contractor must:
 - A. ensure very low disturbance bushcare techniques are deployed using trained, skilled on-ground operators;
 - B. use weed control methods such as the use of light hand tools, brushes, sponge tongs and hand held spray bottles for hand removal, swabbing, frilling, wiping and precise spot spraying; and
 - C. minimise disturbance caused by weed control works, accessing the Site and removal of waste at all times;

- ii) for moderate quality sites (i.e. 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 rare, endangered or threatened species), the Contractor must:
 - A. ensure low disturbance bushcare techniques are deployed using at least basically trained operators with a high level of supervision by trained, skilled supervisors; and
 - B. use weed control methods such as the use of hand or light power tools (generally not brush-cutters or similar), drilling to create chemical reservoirs, brushes, sponge tongs and hand held spray bottles, and small knapsack sprays for hand removal, swabbing, frilling, wiping and precise spot spraying; and
- iii) for sites with weedy areas (i.e. 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), the Contractor must:
 - A. if required, use power tools such as brush-cutters, chainsaws and power spray units in addition to lighter tools and lower impact methods;
 - B. ensure disturbance to the site is minimised, and
 - C. use basically trained operators with supervision by trained, skilled supervisors.

4 Weed control requirements

- a) The Contractor must obtain all approvals required in accordance with relevant legislation including the *Planning, Development and Infrastructure Act 2016* (SA) and *Native Vegetation Act 1991* (SA), and Department EHTM Attachment 4B - Vegetation Impact Assessment Guideline, prior to commencing weed and vegetation control work and provide these to the Principal as part of the Construction Documentation.
- b) The Contractor must examine the Site conditions to determine the recommended methods of weed control or bushcare for the Project and submit these details to the Principal in the schedule set out in Appendix 1: Example bushcare schedule as part of the Construction Documentation.
- c) The methods of weed control recommended in section 4b) must 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.
- d) All chemicals must be used in accordance with the manufacturer's instructions and recommended rates.
- e) A herbicide marker dye must be used when spot spraying is undertaken.
- f) Weed control must target weed species as specified in the vegetation management plan.
- g) If the initial spray does not control all listed weeds, the areas must be re-sprayed by the Contractor.
- h) Native vegetation must be preserved and protected during weed control works on Site.
- i) The Contractor must avoid off-target damage and rectify any off-target damage that occurs.

5 Methods of weed control

- a) All weed control work must:
 - i) be carried out by persons trained or experienced in selective, minimal disturbance weed control techniques in native vegetation;
 - ii) include one or more of the procedures specified in section 5b); and

- iii) be performed in accordance with the procedures specified in section 5b), as appropriate to the target weed species and bushcare site category.
- b) The Contractor must use one or more weed control methods, including:
 - i) the cut and swab, cut and frill method, where:
 - A. 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-removed, or where soil disturbance is to be minimised;
 - B. large stems (exceeding 20 mm diameter) must be frilled to the depth of the sapwood below the main stem cut and immediately applied with herbicide to ensure adequate translocation of herbicide;
 - C. all live stems must be removed from the cut stump; and
 - D. herbicide must be applied immediately to all cut surfaces by brush (or similar), avoiding any spillage of herbicide on the soil or adjacent non-target plants;
 - ii) the cut only method, where:
 - A. weeds that will not shoot from a cut stump must be cut as close as possible to ground level; and
 - B. all live side stems must be removed to prevent regrowth;
 - iii) the hand-removal method, where:
 - A. the hand-removal method of herbaceous weed control must 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; and
 - B. disturbance to the soil must be minimised when using the hand-removal method;
 - iv) the spot spray method, where:
 - A. spot spraying, involving the controlled application of suitable selective or knockdown herbicide to a target plant, must only be carried out where there is very low risk of non-target damage;
 - B. spot spraying must not be carried out in windy conditions to avoid spray drift; and
 - C. spray must not be applied to adjacent non-target plants;
 - v) the wiping method, where:
 - A. leaves of herbaceous species, particularly strap-leaved species such as *Watsonia* and *Freesia*, must be wiped with systemic herbicide using sponges mounted on a holder such as tongs or with a paint brush or specialised equipment such as a wick wiper;
 - B. the wiping method may be employed for eradicating perennial strap-leaved plants amongst remnant understorey;
 - C. operators must be trained specifically in the use of the wiping methods; and
 - D. only suitable non-spill herbicide containers must be used in the works area;
 - vi) the frilling method, where:
 - A. systemic herbicide must be applied 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;
 - B. drilling to create herbicide reservoirs may also be used but must expose and treat a similar area of cambium layer;

- C. for smaller and soft wooded weeds, a knife or other sharp bladed hand tool must be used;
 - D. operators must be trained specifically in the use of the frilling methods; and
 - E. only suitable non-spill herbicide containers must be used in the works area; and
- vii) the ringbarking method, where:
- A. the cambium layer around the circumference of all trunks or stems of suitable trees or shrubs must be completely removed;
 - B. the ringbarking method must only be used for weed species that will not reshoot from roots or stems below the ringbark wound; and
 - C. if the plant is to be killed and left standing, the Contractor must 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.

6 Disposal of cut material

- a) Subject to section 6e), vegetation that has been cut or hand-removed must not be removed from the Site unless it has the ability to regenerate or propagate from seed or other plant propagules.
- b) If removal from Site is required, the vegetation must be bagged with seeds and flowers intact prior to removing from Site to prevent the spread of plant propagules.
- c) The Contractor must obtain all required Approvals (and comply with all conditions of the Approvals) for transportation of declared weed species from the relevant Authority (e.g. the relevant landscape board established under the *Landscape South Australia Act 2019* (SA)).
- d) The vegetation removal operation must be carried out in a manner involving minimal movements across the Site resulting in minimal disturbance to the vegetation, soil and watercourses.
- e) Unless specified otherwise, cut material may be left on Site where it provides 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.
- f) Chipped prunings may be spread evenly over the ground and must avoid indigenous grasses and ground covers. The spread chippings must not exceed 100 mm in depth across the Site.
- g) 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 chipping unit must:
 - i) comply with all applicable WHS, noise and spark arrestor requirements in accordance with South Australian Country Fire Service (CFS) publications (available from: https://safecom-files-v8.s3.amazonaws.com/current/docs/grinders_welders_cutters_and_engines.pdf); and
 - ii) be operated only by trained operators equipped with appropriate personal safety equipment.
- h) In high risk *Phytophthora* (Dieback) areas, all cut material that has been in contact with soil, and requires removal from Site as specified in this section 6, must be disposed of at a licensed waste depot or burnt in accordance with the Department *Phytophthora* (Dieback) Control Environmental Instruction.

7 Records and reporting

- a) The Contractor must keep daily records of herbicide applications.
- b) The Contractor must notify the PIRSA of any reportable weed encountered during the Works. The Principal must be notified of any reported weeds provided to the PIRSA.

- c) A copy of the records required by section 7a) must be provided to the Principal as part of the Quality Management Records and whenever requested by the Principal.
 - d) The records required by section 7a) must include the following:
 - i) name of Contractor and operators;
 - ii) contract reference, including contract number, date, spray start time and finish time;
 - iii) weather conditions including temperature, wind speed, wind direction and rainfall (relative humidity and Delta T may also be recorded);
 - iv) locations, including road reserve details (road number and name, section (start and finish road maintenance markers), side of road) or the property address;
 - v) details of application method including equipment type, nozzle type and flow rate, spray pressure and spray volume;
 - vi) details of chemicals used including product and adjuvant names (e.g. herbicide, surfactant or dye), application rate, area treated, situation including weed species controlled; and
 - vii) any supporting notes, such as weed growth stage, plant condition, water source, and reasons and length of any delays.
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8 Appendix 1: Example bushcare schedule

METHOD:

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HERBICIDE DETAILS:

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