

Sydney Trains Environmental Management System Template

Weed Control Technical Specification

Document History

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Contents

- 1 Introduction 4**
 - 1.1 Introduction and Scope 4
 - 1.2 Timing 5
 - 1.3 Materials 5
 - 1.4 Records 6
 - 1.5 Legislation 6

- 2 Work Practices 7**
 - 2.1 General 7
 - 2.2 Waste Disposal 7
 - 2.3 Erosion 7

- 3 Weed Control 8**

- 4 References 10**

- Appendix A: Weed Species and Control Methods 11**

- Appendix B: Site Plan 14**

1 Introduction

NOTE: ALL WORDING IN RED IS TO BE REPLACED OR REMOVED BEFORE THE TECHNICAL SPECIFICATION IS ISSUED

The following specification template can be used for weed control works where a lump sum contract is required for works on Sydney Trains lands. Note this specification should not be used in sensitive sites or where there is native vegetation. In these cases bush regeneration should be undertaken using a qualified bush regeneration contractor. See EMS-09-TP-0064 *Bush Regeneration Technical Specification Template*.

The target weed list to be included in the specification should be appropriate to the local area and include weed species that are being targeted by other regional land managers and the local council, as well as weeds likely to cause operational issues for Sydney Trains. Seek advice regarding preparation of the target weed list in Appendix A).

A schedule of rates similar to the table below should also be requested in the schedule.

The rates (not subject to rise and fall) are; -

Item	Services or Works Description	Unit (hour/each etc)	Rate (\$ per unit)
1	Supply and plant locally indigenous tubestock	Each with minimum 50 plants	\$ per plant
2	Maintain plants - weed control and water	Each week to minimum 50 plants	\$ per plant
3	Supply and spread eucalypt mulch to 75mm deep.	5 x cubic metre	\$ per cubic m
4	Perform Bush regeneration and supply all materials and equipment required	Man hour - minimum 4 hours	\$ per man hour
5	Perform bush regeneration/ weed control and supply all materials and equipment required with a team of three (3) bush regenerators (inc one qualified and experienced supervisor) and one worksite protection officer on site at all times	Per team per hour (minimum 4 hours)	\$ per team per hour
6	Supply worksite protection officer minimum PO1 qualification	Hour - minimum 4 hours	\$ per man hour
7	Waste disposal	Tonne	\$ per tonne
8	Chip branches	Cubic metre(chipped)	\$ per cubic m
9	Brushcutting	Hour - minimum 4 hours	\$ per hour
10	Supply and spray glyphosate	Square metre- minimum 20m ²	\$ per sq m

Note: The rate is the cost for each unit not the cost for the minimum number. E.g. For item 1, the rate will be a \$ cost for each plant and not the \$ cost of 50 plants.

1.1 Introduction and Scope

- 1.1.1 The current specification is for Weed control in non native vegetation areas (using a mix of herbicide spray methods and low impact methods, such as the cut and paint technique)
- 1.1.2 The contract area is as per Schedule XX and the attached drawings and covers the rail corridor from -----to----- administered by the Sydney Trains xxxxx District.
- 1.1.3 Tenderers shall fully inspect the contract area prior to submitting their tender. No claim shall be

accepted if due to failure to adequately inspect the area.

- 1.1.4 The contract area is defined as the railway corridor along both sides of the track(s), and strips of land between tracks where the land is not ballasted, **as highlighted on the attached sketch(s)**. Lateral boundaries are the existing boundary fencing along each length of line. Where there is no extant boundary fence, the boundary of the contract area is to be taken as a line parallel to the track, joining the nearest ends of the existing boundary fencing, or a lateral distance of forty (40) metres out from the nearest rail, which ever line is closest to the track. **Other boundaries are shown on the sketch(s) by dot-dash-dot lines.(delete if sketches or maps not provided)**
- 1.1.5 Areas of ballasted track, areas inside electrical transformer yards, station platforms, areas inside fenced depots, formally landscaped areas, and areas inside leased properties, are excluded from the contract area, **as are areas marked as “excluded” on the attached drawings and sketches.**

1.2 Timing

- 1.2.1 The standards given in these specifications must be achieved by the Practical Completion (PC) and other critical dates outlined in the following table. **(or in the schedule XX)**

Completion Date	Item
__ / __ / 20__	Release of specification
__ / __ / 20__	Site (or office) meeting with tenders at
__ / __ / 20__	Close of Tenders at 10.00am at
__ / __ / 20__	Projected start on site date
__ / __ / 20__	Complete all initial weed control at all areas covered by the contact
__ / __ / 20__	Complete all follow up weed control (second control session) and cutting down and mulching of all woody material as specified for all areas covered by the contract (Delete if not required or only two weed control sessions possible over the area)
__ / __ / 20__	Complete next pass of complete weed control over all areas covered by the contract – Practical completion.
__ / __ / 20__	Final tidy up on any identified works not yet completed – Contract Completion

1.3 Materials

- 1.3.1 The Contractor shall provide all materials, plant, equipment, tools, water, herbicides, and additives, transport, labour etc. necessary for performing the works of this contract. The Contractor shall equip all work units with a mobile phone, and advise Sydney Trains of the phone numbers prior to starting work. Team supervisor should advise Sydney Trains of their work location each day.
- 1.3.2 All herbicides used shall be registered for their intended use in NSW (or a current permit for use issued) and herbicides shall be used strictly according to directions on their labels. The contractor must choose the most effective herbicide for use on each target species as recommended by the Department of Primary Industries in the most current version of *Noxious and Environmental Weed Control Handbook*. Herbicides intended for use (and the intended target species) shall be listed in the Tender. Only herbicides approved by the Principal and listed in EMS-09-RG-0073 *Sydney Trains Pesticides Register* shall be used for this contract.

- 1.3.3 A compatible vegetable based dye must be used with all herbicide applications that result in a distinct colour that will clearly indicate where herbicide has been applied to foliage or stumps.

1.4 Records

- 1.4.1 The Contractor shall submit a written report to Sydney Trains by the twenty fifth (25th) day of each month outlining; date of visits, work completed and general comments on progress in relation to the submitted management plan.
- 1.4.2 The contractor must have available for review upon request by the Supervisor EMS-09-FM-0057 *Daily Pesticide Application Forms* (or equivalent EPA compliant pesticide application forms) and *Pre-work briefings* for each day's activity for a period of three years after completion of contract. Pesticides application records as per the Sydney Trains pesticides procedures.

1.5 Legislation

- 1.5.1 The Contractor shall be fully responsible for complying with all relevant legislation and will be fully liable for any off-target damage arising out of the works of this contract.
- 1.5.2 This rail corridor contains several areas of environmental sensitivity listed under the *Threatened Species Conservation Act 1995* or other acts . Which include; ~~XXXXXXXXXXXXXXXXXX at XXXXXX~~ locations. All staff working on the contract must be briefed on recognition of these occurrences prior to commencement of works. Any damage to threatened species, populations or communities will be dealt under the associated Act, and the contractor shall be fully responsible and liable for any such damage. ~~(Delete this section if there are not known sensitive areas in the contract area)~~
- 1.5.3 Any spills, accidents, incidents, etc shall be immediately cleaned up in accordance with Environmental Protection Authority guidelines, and reported to Sydney Trains as soon as possible. Spill response guidelines and kits shall be maintained at all sites where herbicide is being used.

2 Work Practices

2.1 General

- 2.1.1 All work will be in compliance with a Work Method Statement prepared by the contractor prior to commencement of work onsite.
- 2.1.2 Works shall only be carried out during daylight hours.
- 2.1.3 Should the Contractor have to remove any fencing for access into the site(s), the fencing shall be reinstated to its original condition prior to completion, at the sole cost of the contractor. All fencing shall be reinstated to its original condition whenever the contractor is not on the site(s). All areas where fencing is removed must be manned to prevent public entry whilst the contractor's works are in progress.
- 2.1.4 Where work may potentially obstruct a running line, or require contract staff to come within 3.0 metres of the nearest running rail, "track possession" &/or "full worksite protection" will be required. The Contractor shall advise at the earliest time any such areas not already identified by Sydney Trains, and work is not to commence until appropriate Safe-Working mechanisms are in place, as assessed by a Safeworking Protection Officer.

2.2 Waste Disposal

- 2.2.1 All litter, empty containers and other debris shall be removed from the site at the end of each day's operation and disposed of in an approved manner.

2.3 Erosion

- 2.3.1 No area shall be left exposed to erosion from wind or water. All areas of cleared or poisoned vegetation not immediately protected by mulching and pose an erosion risk should be reported to Sydney Trains and if advised have appropriate sediment control measures installed at all egress points around the sites as outlined in the Office of Environment and Heritage's, *Erosion and Sediment Control Technical Handbook* or Field Guide. If deemed appropriate.
- 2.3.2 Areas subject to erosion shall be identified and notified to Sydney Trains as soon as practical.

3 Weed Control

- 3.1.1 All supervisory staff engaged on work of this contract shall have qualifications acceptable to the Principal. eg, Technical and Further Education (TAFE) Bush Regenerator's Certificate, Horticultural Trade Certificate or equivalent. A qualified site supervisor must be on site at all times when any work is undertaken on the work site. Documentary evidence of accreditation and qualifications and experience of supervisors shall be submitted with the tender.
- 3.1.2 Any staff using pesticides must hold the correct ChemCert accreditation for the herbicides used and are bound by the requirements of the *Pesticides Act 1999*, associated regulation and the Sydney Trains Pesticides Procedures.
- 3.1.3 All those plants nominated in Table A (attached) that are visible during the period of the contract must be controlled by the method outlined for that species in Table A. The Contractor shall continuously search diligently for all plants of the nominated species, and control all that are found.
- 3.1.4 Woody weeds, to be treated by the cut stump and paint method or the scrape and paint method, must be treated with herbicide immediately (application within 10 seconds).
- 3.1.5 Weeds to be treated by foliar spraying of herbicide, and any stumps generated by other methods, shall be cut off as close as possible to flush with ground level after the herbicide has thoroughly translocated and the plant is obviously dead.
- 3.1.6 Weeds specified in Table "A" growing over/through/under perimeter fences, shall be physically cut back to the railway side of the fence line.
- 3.1.7 Vines to be treated shall be cut-off close to ground level. Immediately after cutting, the portion of vine that is attached to the roots shall be dipped into a concentrated solution of the selected herbicide, for a sufficient length of time to allow an adequate volume of the herbicide to be taken up by the plant. The portion of vine hanging in the tree or on boundary fences may be left in-situ. **Where Madera vine is a target species all parts of the vine is to be removed from site including aerial tubers that should be collected in a tarp for disposal off site.**
- 3.1.8 Cut material shall be chopped into pieces no longer than 1.0 metres long and scattered over well-drained areas on-site as a mulch no more than 200mm deep. Pieces shall not be placed so as to obstruct drainage, impede access to infrastructure (including drains and fences), create a fire hazard, or detract aesthetically from the corridor appearance.
- 3.1.9 Where Sydney Trains deems that the material is not suitable for mulching (such as containing weed propagating material) or a suitable location is not available on-site, then the cut material shall be chipped on site or removed from site and disposed of at an approved landfill site. This cost of disposal off site will be treated as a variation to the contract after consultation and approval from Sydney Trains.
- 3.1.10 Unless otherwise indicated in the timing section or **Schedule XX** Practical Completion shall be deemed to be reached when all primary weeding has been completed and at least 95% of all existing plants of all the nominated weed species has been killed and mulched within the whole of the contract area. Sydney Trains will consider 95% as being achieved when weeds of the target species are no longer observed on normal inspection.
- 3.1.11 The maintenance period (secondary weeding) shall start when practical completion has been achieved and certified accordingly by Sydney Trains, and shall extend to the completion of the contract.

- 3.1.12 During the maintenance period all target weeds are to be continually suppressed and prevented from seeding or reaching maturity. A maintenance report is to be submitted to Sydney Trains after each maintenance run is completed outlining the time spent and the works undertaken.

4 References

EMS-09-WI-0053 *Noxious and Environmental Weed Herbicide Application Work Instruction*

EMS-09-RG-0073 *Sydney Trains Pesticides Register*

EMS-09-FM-0057 *Daily Pesticide Application Forms*

LANDCOM "Bluebook" *Soils and Construction*, Vol 1. March 2004.

Department of Land and Water Conservation's, *Erosion and Sediment Control Technical Handbook or Field Guide*

Pesticides Act 1999

Appendix A: Weed Species and Control Methods

TABLE A: WEED SPECIES and required CONTROL METHODS

Insert a suitable and manageable weed species list determined from the District Biodiversity Management Plan and in consultation with the local weeds committees, local council requirements and adjoining landholder weed control works. The following tables include most possible target species. For recommended weed control measure see “Identification of Common Rail Corridor Weeds”

TABLE A1 Cumberland Plain and coastal areas (Newcastle to Nowra)

<p><i>Acacia saligna</i> - Cut and paint#</p> <p>African Boxthorn - Cut and Paint</p> <p>African Olive - Cut and Paint#</p> <p>African lovegrass - spot spray</p> <p>Albizia- Cut and Paint#</p> <p>Arundo - Cut and Paint (spray regrowth only)</p> <p>Asthma weed - Spot spray</p> <p>Asparagus fern - crown out</p> <p>Balloon vine - Cut and Paint</p> <p>Bamboo species - Spray large clumps* or Cut and Paint</p> <p>Bitou Bush and Boneseed - Cut and Paint or hand pull only#</p> <p>Blackberry - Spray October to March only#</p> <p>Bridal Creeper - hand weed in sensitive areas or spray</p> <p>Brush box - {where less than 5 metres} Cut and Paint</p> <p>Cape Ivy - scrape and paint</p> <p>Camphor laurel - {where less than 5 metres high} Cut and Paint#</p> <p>Canary Island Date Palm - cut down and remove</p> <p>Cytisus species - Cut and Paint or hand pull only#</p> <p>Castor Oil Plant - Cut and Paint only#</p> <p>Cats Claw Creeper - Spray</p> <p>Climbing Asparagus – hand remove by crowning</p> <p>Coolatai grass- spray (notify any new infestations to Sydney Trains)#</p> <p>Coral Tree {where less than 5 metres} - Cut and Paint</p> <p>Cotoneaster species - (where not deliberately planted) Cut and Paint</p> <p>Dolichos pea - Cut and paint</p> <p>Fennel - grub out individuals or spot spray</p> <p>Genista species - cut and paint only#</p> <p>Green cestrum - Scrape and Paint only#</p>	<p>Gorse - spray large clumps* or cut and paint#</p> <p>Hackberry (Celtis trees under 5 metres tall) - Cut and Paint#</p> <p>Harrisia Cactus - Cut and Paint (remove all material off site)</p> <p>Honeysuckle vine - spray</p> <p>Jacaranda - {where less than 5 metres} Cut and Paint</p> <p>Lantana camara – spray#</p> <p>Large Leaf Privet - cut and paint#</p> <p>Ludwigia – spray (only aquatic registered herbicide)</p> <p>Maderia vine – dig up tuber and remove all material off site, Spray large clumps if no off target damage possible</p> <p>Morning Glory vine - spray (if off target damage likely remove by hand and spray regrowth)#</p> <p>Moth vine – cut and paint</p> <p>Mulberry – Cut and Paint</p> <p>Ochna serrulata- scrape and paint</p> <p>Pampas Grass- foliar spray or grub out#</p> <p>Pinus radiata {where less than 5 metres} - cut and Paint#</p> <p>Prickly pear- cut and paint stump and remove from site manually</p> <p>Pyracantha species- cut and paint</p> <p>Rhus Tree- cut and paint (using PPE)</p> <p>Senna species- Cut and Paint</p> <p>Silky Oak – cut and Paint</p> <p>Small Leaf Privet- Cut and Paint#</p> <p>St. John’s Wort- spot spray</p> <p>Turkey rhubarb - spray</p> <p>Wild tobacco- Cut and Paint</p> <p>Willow trees – Cut and Paint</p>
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* Note that clumps of weed are classed as ten (20) or more individual plants grouped together in as high a density that there is no understorey growth. Under no circumstances are individually occurring specimens of woody weed be sprayed with herbicide if another technique is listed as the control method.

TABLE A2 Blue Mountains

Common Name	Common Name
African boxthorn- Foliar spray	Morning Glory vine- scrape and paint or folia spray for large* clumps#
African love grass – spot spray Optional target species	Moth Vine- hand remove or scrape and paint
African olive- cut and paint#	Mother-of-millions- hand removal and dispose of
Asparagus fern- crown out	Mount Morgan Wattle- cut and paint
Balloon Vine- scrape and paint	Nodding thistle- chip out scattered plants or spot spray
Barberry- cut and paint	Pampas grass- grub out small plants or foliar spray#
Bathurst Noogoora- spot spray Californian Cockle burrs	Paterson's curse Optional target species - spot spray
Bitou bush and Boneseed- cut and paint only#	Polygala- cut and paint
Blackberry- foliar Spray (Oct to Feb)#	Portuguese Heath- hand weed small plants or spot spray large* clumps
Black-eyed susan- hand remove or spot spray	Prickly pears- Remove from site manually and dispose of at landfill
Blue Periwinkle- foliar spray	Privet – broadleaf- cut and paint#
Box Elder- cut and paint	Privet – small leaf- cut and paint#
Bridal Creeper- hand remove	Pyracantha- cut and paint
Briers (various)- foliar spray	Radiata Pine (treat trees less than 5 metres)- cut down only#
Buddleia Butterfly bush- cut and paint#	Rhizomatous bamboo- Note only treat clumps that are exclusively on the rail corridor- cut and paint or foliar spray regrowth
Camphor laurel (only trees less than 5 metres tall)- cut and paint#	Rhus tree- cut and paint (Using PPE as this plant is toxic)
Cytisus sp (brooms)- cut and paint#	Scotch Illyrian Stemless thistles- spot spray
Senna sp. (cassia)- cut and paint	Scurf Pea- cut and paint
Castor Oil Plant- cut and paint#	Seaside Daisy- hand remove or spot spray large* clumps
Cherry laurel- cut and paint	Serrated tussock- spot spray
Columbus grass- spot spray#	Silverleaf nightshade – hand pull or spot spray large* clumps
Coolatai grass- spot spray#	Spiny burr grass- spot spray
Cootamundra wattle- cut and paint	St John's wort – spot spray in warmer months only
Cotoneaster- cut and paint	Star thistle- spot spray
Crofton weed Optional target species for sensitive sites - spot spray or hand removal	Tree Lucerne/ Tagasaste- cut and paint#
Dodder Optional target species - hand remove from desirable vegetation	Tree of heaven- cut and paint
English Ivy Optional target species only in sensitive native areas - hand remove or spot spray	White Jasmine- scrape and paint
Genista sp (Brooms)- cut and paint only#	White/silver Poplar- (treat trees under 5 metres only)- cut and paint
Giant Parramatta grass- spot spray	Wild radish Optional target species for sensitive areas - spot spray
Giant reed Elephant grass- cut and paint and foliar spray regrowth	Wild tobacco- cut and paint#
Gleditsia- cut and paint#	Willows- (treat trees under 5 metres only)- cut and paint
Gorse- cut and paint or foliar spray for large* clumps#	Zebra Grass- spot spray#
Green cestrum- Scrape and paint#	
Harrisia cactus- Grub out and remove to landfill	
Hemlock- spot spray	
Himalayan Honeysuckle- scrape and paint	
Holly- cut and paint	
Irish strawberry tree (only treat trees under 5 metres)- cut and paint	

Common Name	Common Name
Jacaranda-(only treat trees under 5 metres)- cut and paint	
Japanese Honeysuckle- scrape and paint (Oct to Feb only)	
Johnson grass- spot spray	
Kikuyu Optional target species for sensitive native areas – spot spray	
Lantana- folia spray	
Longstyle feather grass – hand removal only	
Ludwigia – foliar spray with aquatic registered herbicide	
Madiera Vine- hand removal only and dispose of to landfill	
Micky Mouse Plant (Ochna sp)- scrape and paint	
Montbretia- Optional target species for sensitive native areas – spot spray between flowering and fruiting	

Minimal disturbance, best practice bush regeneration techniques must be used at all times.

* Note: Clumps of weed are classified as twenty (20) or more individual plants grouped together in as high a density that there is NO understorey growth.

Appendix B: Site Plan

INSERT MAPS OR PLANS OF THE EXTENT OF THE WORK AREA. (If Required)

Ensure that the boundaries of the work area can be fully defined by kilometrege or suitable landmarks.