ALDI PRESTONS SITE

Vegetation Management Plan

For:

ALDI FOODS PTY. LTD

February 2008

Final Report

Cumberland Ecology
PO Box 2474, Carlingford Court 2118

Report No. 6001RP2

The preparation of this report has been in accordance with the brief provided by the Client and has relied upon the data and results collected at or under the times and conditions specified in the report. All findings, conclusions or recommendations contained within the report are based only on the aforementioned circumstances. The report has been prepared for use by the Client and no responsibility for its use by other parties is accepted by Cumberland Ecology

Approved by:	David Robertson
Position:	Project Director
Signed:	
Date:	*4 March, 2008*

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Chapter 1

Introduction

1.1 Background

Cumberland Ecology has been commissioned by Aldi Foods Pty Ltd (ALDI) to provide a Vegetation Management Plan (VMP) for an area of land located within an 11.87 ha property at Prestons, NSW (the subject site). This property consists of parts of Lots 41, 42, 43 and 49 in DP1057670, and is located between the Western Sydney Orbital (M7) and other private landholdings in the Liverpool Local Government Area (LGA).

ALDI has recently submitted a Part 3A Major Project Application to the Department of Planning (DoP) for the development of a warehouse and distribution facility on the subject site. The development will involve the clearing of approximately 10 hectares of vegetation, which comprises an Endangered Ecological Community (EEC) listed under the *Threatened Species Conservation Act* 1995 (TSC Act); Shale-Gravel Transition Forest (SGTF).

The remaining 1.52 hectares of vegetation to the east of the subject site will be retained for conservation and will be regenerated as part of an offset to compensate for the removal of native vegetation as part of the development. This area is referred to in this document as the Vegetation Restoration Area (VRA). Given appropriate management activities, the VRA has potential to regenerate into high quality SGTF, and has potential connectivity to Maxwells Creek and a nearby Crown reserve in the long term as it matures.

Conditions of Consent imposed by the Department of Planning (DoP) for this development indicate that a Vegetation Management Plan (VMP) is required to be prepared and implemented prior to construction commencing. The purpose of this document is to satisfy the requirements of Condition 16 of the Conditions of Consent and to provide a VMP for the revegetation and rehabilitation of the VRA that will outline a series of mitigation and long term management measures that will be implemented in this area. This plan conforms to the requirements of Condition 16 of the Conditions of Consent, which state that:

The Proponent shall prepare and implement a Vegetation Management Plan (VMP) to the satisfaction of the Director General. The VMP shall:

- *be prepared by a suitably qualified expert;*

- *Be submitted prior to commencement of construction on the site;*
- *describe the vegetation enhancement works that will be carried out in accordance with Condition 13;*
- *describe the detailed measures that will be implemented to enhance and protect the Environmental Offset Area, including the timing of these works;*
- *Assign responsibility for ongoing management of the Environmental Offset Area; and.*
- *detail a program to monitor the effectiveness of these works and measures.*

1.2 Proposed Development

The proposed development is for a new warehouse to supply the ALDI retail store network in south Sydney and southern NSW. The proposal involves the development on parts of the subject site, a new fully functioning ALDI warehouse and distribution facility capable of supporting at least 100 retail stores and a new southern NSW ALDI region.

The development will involve the clearing of approximately 10 hectares of vegetation. An area of 1.52 hectares of vegetation to the east of the subject site will be retained for conservation and stormwater/flood detention (the VRA), including Lot 48, part of Lot 49 and Lot 22 DP 1049307, which ALDI will purchase from the Roads and Traffic Authority (RTA) for this purpose (Figure 1.1). The entire VRA will be revegetated according to this VMP to represent high quality SGTF and subject to ongoing management in accordance with the Conditions of Consent.

As part of the initial stages of works, topsoil will be removed from the development area and temporarily stored within the VRA. This will result in a stockpile of soil that will be located in a degraded part of the VRA to avoid damage to higher quality vegetation (Figure 1.2). It is understood that some topsoil may remain after the majority of the stockpile has been removed. This will be spread thinly on areas of bare ground that currently exist throughout the VRA. This topsoil contains native plant seeds and will enable the regeneration of these bare areas of soil. Communications cables will also be trenched through the VRA and a sewerage pipeline installed near the southern boundary of the VRA. The impacts of these minor works will only have a temporary impact on the VRA. After the stockpile is removed, the communications cables installed and the sewer constructed, these areas of land will be revegetated to a similar condition to the rest of the VRA (i.e. high quality SGTF).

In accordance with the Conditions of Consent, ALDI is required to pay $342,912.45 to the Liverpool City Council for flora and fauna offsets. These monies will be spent on local works within the Liverpool Council area that will contribute to and enhance the natural environment and benefit indigenous flora and fauna. Details of the specific works are not yet available, but will be provided to the DoP at a later date.

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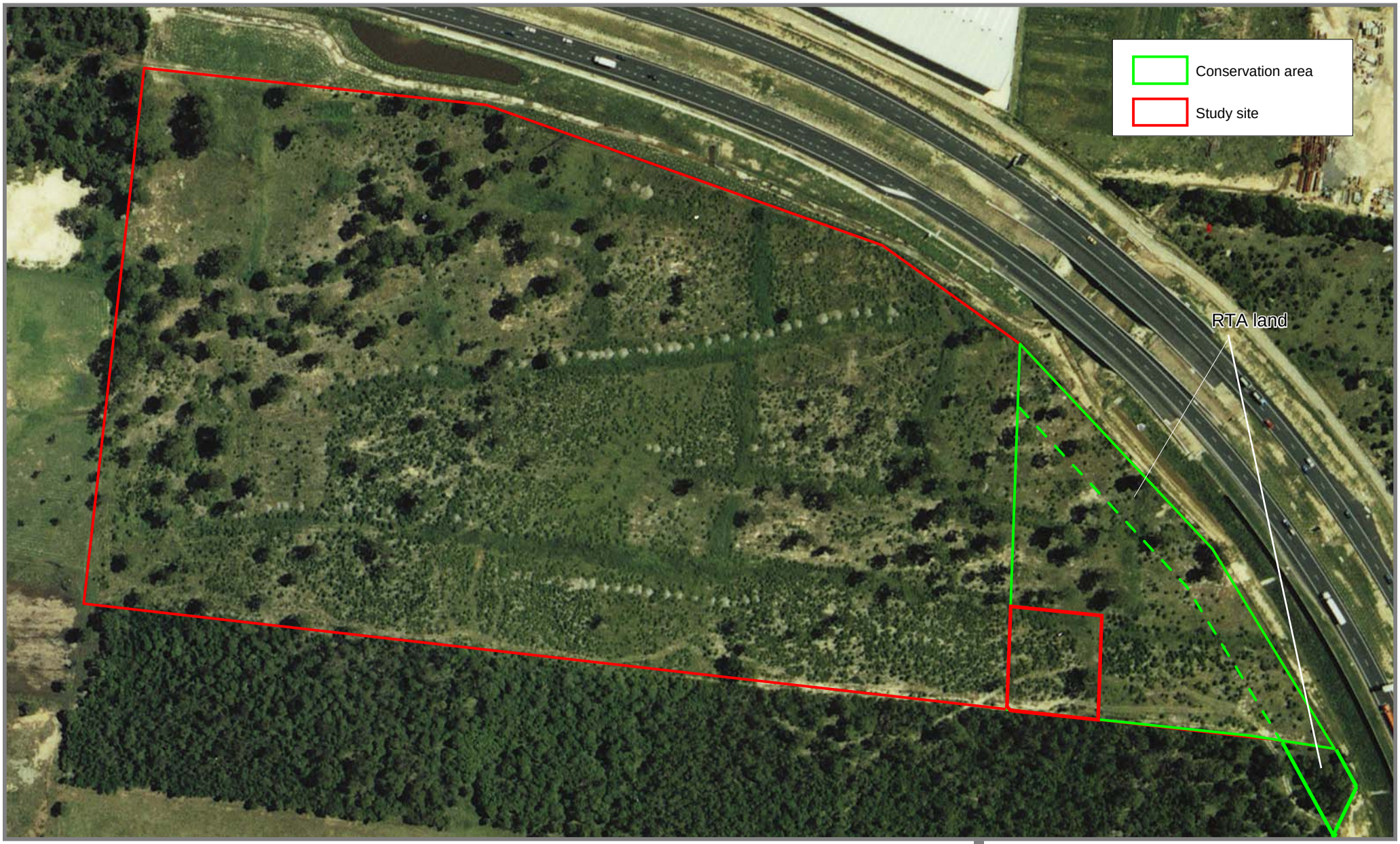

0 50 100 150

Metres

Figure 1.1 In-Situ Conservation Area

1.3 Aims and Objectives

This VMP applies to a 1.52 ha area of land in the east of the subject site, the VRA (Figure 1.1). Apart from some preliminary activities prior to clearing, this document does not apply to adjoining areas of land that will be developed, or to nearby areas of bushland that are outside of the subject site.

The primary aim of this VMP is to provide a working document for the revegetation and restoration of the VRA to a natural state. This will involve weed removal, planting native species, and encouraging native species to regenerate. In addition, this document outlines procedures for the relocation of native fauna from the development area prior to clearing.

More specifically, the objectives of this VMP are to:

- Assess the vegetation management issues relating to the VRA;
- Specify appropriate measures for the revegetation and regeneration of the VRA;
- Identify the appropriate timing of works including site preparation, planting and weed management, and provide a schedule of works; and
- Identify and assign responsibilities for ongoing management actions.

This VMP has been prepared in accordance with the NSW State Government Guidelines (Department of Natural Resources) "*How to prepare a Vegetation Management Plan*" – Version 4. This VMP addresses all of the requirements of the Conditions of Consent as provided by the DoP. The findings and recommendations of the *Ecological Assessment* (2007) prepared by Cumberland Ecology have also been incorporated into this VMP.

The VMP describes the activities required to be undertaken in the VRA, including planting schedules and weed control activities. The VMP includes lists of suitable flora species to be planted in this area and includes a detailed programme of works outlining the responsibilities and performance objectives for each stage of the revegetation works. The VMP Actions are to be implemented by a qualified Vegetation Management Contractor..

Chapter 2

Methods

Previous assessments and reports have been completed with respect to the subject site and utilised in the preparation of this report. Those of relevance to this VMP include:

- *Ecological Assessment* (2007), Cumberland Ecology; and
- NSW State Government Guidelines; *How to prepare a Vegetation Management Plan* – Version 4 (2006), Department of Natural Resources

Cumberland Ecology has previously conducted surveys on the subject site, dating from April 2006. A further three site inspections were conducted during December 2006, January and March 2007 to identify and evaluate the current vegetation community occurring on the subject site, identify any threatened flora and fauna species and assess the current nature and extent of fauna habitats. Details of species richness and plant community structure were obtained using 20 x 20 metre quadrats. Features of the vegetation including floristics, structure, extent, type and projective foliage cover, presence of weed species and other significant features were noted and recorded.

A survey was also conducted of nearby Crown Land that contains high quality remnant native vegetation. This survey information has been used as a guide to the appropriate species composition of the VRA.

Activities specifically related to the preparation of this VMP included:

- Identification of weed species recorded from the subject site;
- Determination of appropriate revegetation and rehabilitation techniques for the VRA;
- Determination of appropriate weed control techniques for the VRA; and
- Preparation of a schedule of activities, outlining the responsibilities under this VMP and performance criteria.

Chapter 3

Site Assessment

The vegetation community on the subject site consists of Shale-Gravel Transition Forest (SGTF), with strong elements of Cumberland Plain Woodland (CPW) and Cooks River/Castlereagh Ironbark Forest (CRCIF). All of these plant communities are listed as EECs under the TSC Act.

The vegetation structure across the subject site is not natural and has been modified by past land usage. Trees and shrubs are in a regenerative and immature stage following past clearing (Photograph 3.1). Treed areas across the subject site currently comprise a mosaic of indigenous and exotic species but the majority of the species are native. The structural complexity of the community is very low compared with the adjacent Crown land forest, with regenerating canopy and understorey tree species comprising one woody stratum (Photograph 3.2). Mature trees have been largely removed and only a sparse array remains in patches across the subject site. Despite the extent and intensity of previous clearing and subsequent opportunistic regeneration, the vegetation on the subject site is dominated by SGTF plant species, regardless of stage of regeneration.

Eucalyptus moluccana (Grey Box) is the main canopy species; however *Eucalyptus fibrosa* (Broad-leaved Ironbark) and *E. longifolia* (Woollybutt) are also common and widespread. An area near the eastern boundary of the subject site contains a stand of mature *E. fibrosa* and *Eucalyptus tereticornis* (Forest Red Gum) is occasional and widespread.

The small tree stratum has been removed except for a few individuals such as *Melaleuca decora* (Feather Honey-myrtle) and *M. styphelioides* (Prickly Paperbark). A dense shrub stratum has developed in some areas as a result of regeneration from tree rootstock left after clearing operations. Most of this consists of juvenile *M. decora* and *M. styphelioides*. Small patches consisting of mixtures of the shrub species *Bursaria spinosa* (Blackthorn), *Pultenaea villosa*, *Cryptandra spinescens*, *M. nodosa* (Ball Honey-myrtle), *Ozothamnus diosmifolius* (White Dogwood) and *Daviesia ulicifolia* (Gorse Bitter Pea) are present.

The groundcover is generally dominated by indigenous species where the ground is not covered in dead branches and stems. Typical species include: *Themeda australis* (Kangaroo Grass), *Entolasia stricta* (Wiry Panic), *Eragrostis leptostachya* (Paddock Love-grass) and *Lomandra filiformis* ssp. *filiformis* (Wattle Mat-rush).

Weeds are variable throughout the subject site, and consist of mostly grass species such as *Cynodon dactylon* (Couch Grass), and *Chloris gayana* (Rhodes Grass).

Photograph 3.1 **Regenerating canopy species with some mature trees on the Subject Site**

Photograph 3.2 **Crown Bushland adjacent to regeneration on the Subject Site**

Chapter 4

Vegetation Management Strategy

This chapter outlines the major activities to be undertaken as part of the VMP. They include the following:

- Preliminary activities;
- Site Establishment;
- Primary Weeding;
- Secondary Weeding;
- Planting;
- Maintenance;
- Monitoring; and Reporting
- Occupational Health and Safety;

The roles and responsibilities of key personnel are identified and a schedule of activities provided for the first two years of implementation of the program.

ALDI will organise a Vegetation Management Contractor to undertake the required vegetation management activities under this VMP. The Vegetation Management Contractor will be primarily responsible for the implementation of this VMP, and will have appropriate qualifications in bushland management.

4.1 Stage One

4.1.1 Preliminary Activities

Submit VMP to DoP:	DoP review and endorsement
Contract documentation:	A paper copy of the survey area and this VMP should be included in the vegetation management tender/quote documents

Engage Contractor	Suitable Vegetation Management Contractor (Contractor) shall be employed
Insurance documentation:	The Contractor's Public Liability and Workers Compensation certificates of currency submitted to Principal.
Proof of qualification:	Contractor to submit company profile showing staff qualification details. A minimum of TAFE Certificate II in Bush Regeneration is required.
OH&S:	Risk assessment completed by Contractor and submitted to ALDI
WorkCover Green cards:	Contractor's and employee's cards sighted and numbers recorded.
Site induction:	All staff and visitors inducted to site.

4.1.2 Site Establishment

The following activities will be conducted in order to protect the VRA during construction:

OH&S:	Site assessment completed by Contractor and risk management plan submitted to ALDI.
Work Cover Green cards:	All employees cards sighted and numbers recorded.
Site induction:	All staff and visitors inducted to site.
Protection of vegetation:	No access will be provided to VRA by construction personnel and their vehicles, equipment, materials, waste, etc. Temporary sediment controls will be emplaced at strategic locations around the VRA to minimize the risk of erosion and sedimentation causing damage to VRA during development on the remainder of the site.
Site delineation:	VRA boundary will be delineated on the ground to ensure clear definition of this area and explanatory signs erected.
Temporary stockpile	Location of temporary stockpile of topsoil identified within the VRA

4.1.3 Pre-clearance Fauna Survey

The Conditions of Consent contain an obligation to minimise harm to the environment. Specifically, Condition 1 of the Conditions of Consent state that: *The Proponent shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction and/or operation of the project*.

In order to comply with this condition, pre-clearance fauna surveys will be undertaken prior to any clearance taking place within the development area, to move native fauna from the site to avoid impacts on these species. The following procedures will be implemented.

i. Habitat Search

Prior to clearance, suitably qualified ecologists will inspect the site thoroughly to locate any resident native fauna. If found, these will be removed and relocated to nearby areas of Crown Land that will not be cleared.

Trees bearing hollows or fissures may contain native vertebrates and so will be investigated during this survey. The ground around each tree will be inspected for scats, and the trees for scratch marks.

ii. During Clearing

An ecologist will be on call during clearing of the site. This person will be available to provide advice and take action if required when animals are found on the site and require relocating.

Provisions will be made to protect any immobile native fauna during clearing activities by the following means:

- All persons working on the vegetation clearing will be briefed about the possible fauna present and should avoid injuring any present;
- Animals disturbed or dislodged during the clearance but not injured should be assisted to move to nearby Crown Land; and
- If animals are injured during the vegetation clearance, appropriate steps will be taken to humanely treat the animal.

4.2 Stage Two

The following activities will be undertaken in order to enhance the VRA and rehabilitate it to high quality SGTF in accordance with the Conditions of Consent.

4.2.1 Primary Weeding

Primary weeding will be undertaken in the VRA. Initially, a reconnaissance will be conducted to identify the weed species that are present and the degree of infestation of each species. Then, based upon the full, known array of weeds present, weed control will be undertaken.

The weeds to be particularly targeted include the invasive *Asparagus plumosus* (Climbing Asparagus), *Pennisetum clandestinum* (Kikuyu Grass) and *Rubus fruticosus* (Blackberry) that have been recorded from the subject site. Although no noxious weeds have been recorded from the subject site, if any are subsequently recorded, they will be a priority for immediate control.

The main targeted weed species are tabulated below.

Weed Species	**Treatment Method**				
	Handweed	Cut & Paint	Scrape & Paint	Spot Spray	Comment
Rubus fruticosus (Blackberry)	✓	✓		✓	Remove from site
Asparagus plumosus (Climbing Asparagus)	✓			✓	Remove from site
Pennisetum clandestinum (Kikuyu Grass)	✓			✓	Remove from site
Senecio madagascariensis (Fireweed)	✓			✓	
Cynodon dactylon (Couch Grass)	✓			✓	
Eragrostis curvula (African Love-grass)	✓				
Cirsium vulgare (Spear Thistle)	✓			✓	

Other weed species recorded from the subject site will also be targeted including:

- *Sida rhombifolia* (Paddys Lucerne);
- *Chloris gayana* (Rhodes Grass);
- *Paspalum dilatatum* (Paspalum);
- *Paspalum urvillei* (Vasey Grass); and
- *Setaria gracilis* (Slender Pigeon Grass).

Note: Additional weed species may occur in this area that will emerge in relation to season and these will be treated using appropriate methods.

Weed removal will be compliant with the *Noxious Weeds Act 1993*. On-site destruction or removal from site will occur of all noxious weed propagules and biomass, as per specific action control categories for each species.

Rubus fruticosus (Blackberry) is a Weed of National Significance (WONS) that has been recorded from the site. This is regarded as one of the worst weeds in Australia because of its invasiveness, potential for spread and environmental impacts. Blackberries are a priority for removal and if removed by hand, all parts of the plant should be bagged, removed from the site and disposed of appropriately.

The significant environmental weeds listed above will initially be the main target of weed control as well as any other woody weeds that may be present. Larger woody weeds will usually be removed by cutting and painting with herbicide, however small seedlings may be removed by hand weeding.

Once the large weeds and significant environmental weeds have been removed, attention can then be given to the smaller, understorey weeds such as *Paspalum dilatatum* and *Eragrostis curvula*. These may be either hand weeded or sprayed carefully using herbicide. Weed species that grow readily from vegetative growth must be physically removed from the site to prevent these species spreading. Herbicides to be used will be suitable for use near waterways and environmentally sensitive areas such as “Roundup Bi-Active” ™.

4.2.2 Secondary Weeding

Secondary weeding will be undertaken approximately two weeks after completion of primary weeding. The secondary weeding will aim to remove the weed species remaining after the primary weeding and weed seedlings that have germinated since the previous site visit. This is likely to consist of hand weeding and selective spot-spraying with herbicide. At the completion of this stage, the greater majority of the weeds present in the VRA will be removed.

4.2.3 Planting

The VRA has been highly modified in some areas due to clearing, and supplementary planting of native species is desirable in this area to facilitate its rehabilitation, particularly in the clearings and after the temporary stockpile of topsoil is removed. Native species are able to colonise naturally from seeds stored in the soil or from seed from nearby plants, and to facilitate this process, any remaining topsoil from the stockpile will be spread thinly over areas of bare ground, to a depth of no greater than 8 cm. However, natural regeneration will be assisted by planting native seedlings in the areas most heavily impacted. Following removal of the stockpile, this area will be planted with native species to rehabilitate it into a condition similar to surrounding land in the VRA.

Species should be selected from the table below, which are native species typical of SGTF that have been recorded from the site and nearby areas. Native plants used in revegetation works must have been propagated from provenance specific seed collected from within the local area.

Table 4.1 SPECIES SUITABLE FOR PLANTING IN VRA

Species	Common Name
Casuarina glauca	Swamp Oak
Acacia decurrens	Green Wattle
Eucalyptus fibrosa	Broad-leaved Ironbark
E. globoidea	White Stringybark
E. longifolia	Woollybutt
E. moluccana	Grey Box
E. tereticornis	Forest Red Gum
Melaleuca decora	Feather Honey-myrtle
M. styphelioides	Prickly Paperbark
Exocarpos cupressiformis	Cherry Ballart
Olearia microphylla	
Ozothamnus diosmifolius	White Dogwood
Leucopogon juniperinus	Prickly Beard Heath
Daviesia ulicifolia	Gorse Bitter Pea
Dillwynia sieberi	Prickly Parrot Pea
Indigofera australis	Australian Indigo
Pultenaea villosa	
Acacia falcata	Sickle Wattle
Callistemon linearis	Narrow-leaved

Table 4.1 SPECIES SUITABLE FOR PLANTING IN VRA

Species	Common Name
	Bottlebrush
Melaleuca nodosa	Ball Honey-myrtle
Bursaria spinosa	Blackthorn
Cryptandra spinescens	
Dodonaea viscosa ssp cuneata	a Hop Bush
Brunoniella australis	Purple Trumpet
Centella asiatica	Pennywort
Vernonia cinerea	
Einadia hastata	
E. nutans ssp linifolia	
E. polygonoides	
Dichondra repens	Kidney Plant
Plectranthus parviflorus	Cockspur Flower
Veronica plebeia	Trailing Speedwell
Cyperus gracilis	
Lepidosperma laterale	Broad Sword-sedge
Lomandra filiformis ssp filiformis	Wattle Mat-rush
L. multiflora	Many-flowered Mat-rush
Dianella revoluta	Paroo Lily
Aristida ramosa	A Three-awn Grass
Dichelachne micrantha	Short-haired Plume Grass
Entolasia marginata	Margined Panic
E. stricta	Wiry Panic
E. leptostachya	Paddock Love-grass
Microlaena stipoides	Weeping Meadow-grass
Oplismenus aemulus	Basket Grass
Panicum simile	
Sporobolus creber	Rats Tail Grass
Stipa sp	a Spear Grass
Themeda australis	Kangaroo Grass
Glycine tabacina	
Cassytha pubescens	Devils Twine

In addition to planting native seedlings, native species are expected to colonise the VRA

from seed in the existing seed bank or from nearby bushland. This will be encouraged and care will be taken not to destroy such plants during weed control procedures.

4.3 Stage Three

4.3.1 Maintenance

Maintenance weeding will be carried out in the VRA for a minimum of one year after initial works. A minimum of one visit every three months is required, however additional visits should be conducted as seasonal conditions and site response dictates. The VRA must be inspected for weed regrowth on every visit to the site and hand weeded and spot sprayed with herbicide where required. Weed control activities should aim to keep weeds to less than 5% of the total vegetative cover.

It is not expected that supplementary planting will be required after the initial plantings in the VRA, however the Vegetation Management Contractor will ensure that a minimum of 80% of the original planted stock is maintained for the contract period. The plantings will be irrigated as required to ensure adequate survival rates.

In order to comply with the Conditions of Consent, ongoing management of the VRA will be required. After the initial 1 year period of maintenance, there is not expected to be the need to conduct extensive maintenance operations. However, the VRA will be inspected annually and weeding undertaken as required to maintain its ecological value. Weed control activities should aim to keep weeds to less than 5% of the total vegetative cover.

4.3.2 Monitoring and Reporting

Suitably qualified personnel will carry out a programme of regular monitoring and inspection work required for the VMP. This will ensure the measures outlined in this VMP are implemented and that the Conditions of Consent are complied with.

A monitoring report on the progress of the VMP's implementation shall be prepared upon completion of the primary planting and then at the end of the one year maintenance period.

The monitoring reports will:

- Report on the progress of the monitoring activities;
- Address the performance criteria set out in Table 4.2; and
- Discuss any problems encountered in implementing the VMP

Monitoring activities within the VRA are set out in Table 4.2 and will include:

- Estimates of the success rate of plantings and assessment of plant replacement requirements;
- Estimates of weeds present in the VRA; and
- Recommendations for corrective measures and/or vegetation management.

At the end of the 1 year maintenance period, annual monitoring will be conducted in the VRA to determine whether weed control is required to keep weed levels within the target levels outlined above. If these inspections reveal the need for weed control activities, then ALDI will commission a suitably qualified Vegetation Management Contractor to carry out the required activities to maintain weed levels at less than 5% of total vegetative cover.

4.3.3 Occupational Health & Safety (OH&S)

The appointed Vegetation Management Contractor will have a formal Occupational Health and Safety Program (OH&S Programme), set up in accordance with the *NSW Occupational Health & Safety Act 2000* (OH&S Act) and the *NSW Occupational Health & Safety Regulation 2001*, incorporating:

- workplace principles and policies relating to OH&S;
- reporting systems;
- project management system;
- training and education;
- workplace inspections, evaluations and audits; and
- staff manuals.

The contractor will ensure that the following OH&S issues are addressed:

- a hazard assessment is conducted for the site prior to commencement of works;
- preparation of a *Safe Work Method Statement* covering all vegetation management actions for the contract and all areas of the site;
- site induction for bush regeneration crews, identifying all relevant safety issues and environmental risks;
- ongoing reviews of safe work methods and hazards; and
- self-auditing of OH&S procedures.

Table 4.2 PROPOSED VEGETATION MANAGEMENT SCHEDULE OF ACTIVITIES

Action	Responsibility	Performance Criteria	Timing
VRA Preparation			
OH&S Hazard & risk assessment for vegetation management crews. Prepare Safe Work Method Statement. Conduct internal safety and environmental induction.	Vegetation Management Contractor	Safe Work Method Statement submitted and approved	Prior to commencement
Establish sediment fences around VRA to ensure it is not affected by adjacent development	ALDI	Sediment fence in place around perimeter of VRA	Prior to commencement of development
Development activities to be excluded entirely from VRA. No plant or equipment will be parked within VRA and no construction materials (or waste products) are to be stockpiled in these areas	ALDI	Vehicles and plant excluded from surrounding vegetation for duration of earthworks	Duration of development
Site Delineation – fence to be constructed around VRA and signage erected. Location of temporary stockpile within the VRA is to be identified and marked	ALDI	Fence and signage erected	Prior to commencement of development
Conduct pre-clearance survey	Ecologist	Pre-clearance surveys complete	Prior to clearance of development area
Weeding			
Carry out primary weeding.	Vegetation Management Contractor	Main weed infestations and targeted or noxious weeds removed	Following site preparation
If pesticides are used, contractors must ensure compliance with the *Pesticides Act 1999*,	Vegetation Management Contractor	Pesticides used as per the Pesticide Act provisions	Ongoing
Ensure use of herbicides that are suitable for use in environmentally sensitive areas such as Round up Bioactive®.	Vegetation Management Contractor	Vegetation Management Contractor has appropriate qualifications for herbicide	Ongoing

Table 4.2 PROPOSED VEGETATION MANAGEMENT SCHEDULE OF ACTIVITIES

Action	Responsibility	Performance Criteria	Timing
		use; Roundup Bi-Active (or equivalent) is used.	
Ensure compliance with *Noxious Weeds Act 1993*; i.e. organise removal from site of noxious weed propagules and biomass, as per specific action control categories for each species.	Vegetation Management Contractor	Noxious weeds controlled as per Noxious Weeds Act provisions	Ongoing
Carry out secondary weeding	Vegetation Management Contractor	Weed regrowth following primary weeding removed, secondary infestations removed	Approximately 2 weeks following primary weeding, before planting
Weed biomass to be either composted on-site or disposed of at an approved waste management centre, as appropriate for each weed species.	Vegetation Management Contractor	Evidence of receipts for disposal fees Weed biomass disposed of correctly – not stockpiled on site	Ongoing
Planting			
Only locally indigenous plant stock to be planted within VRA	Vegetation Management Contractor	Tubestock and cellstock comprise locally indigenous species Evidence of provenance of plant stock	Following secondary weeding
Distribute remaining topsoil to a depth of no greater than 8 cm on bare areas within VRA	Vegetation Management Contractor	No vegetetated areas covered with soil, maximum	After removal of stockpile from VRA

Table 4.2 PROPOSED VEGETATION MANAGEMENT SCHEDULE OF ACTIVITIES

Action	Responsibility	Performance Criteria	Timing
		soil depth 8 cm	
Maintenance			
Carry out maintenance weeding throughout VRA	Vegetation Management Contractor	Weed cover maintained at less than 5% of vegetation cover Regrowth following secondary weeding controlled No new weed species or infestations	Every three months for a period of one year from date of final planting
Carry out replacement of plant stock.	Vegetation Management Contractor	Minimum 80% original planted stock maintained No dead plant stock left in ground	Every three months for a period of one year from date of final planting
On-going management of VRA	ALDI	Weed levels in the VRA maintained at less than 5% of vegetation cover	Ongoing, as required
Monitoring and Reporting			
Regular inspections of VRA to check levels of weed regrowth following primary weeding	Vegetation Management Contractor	Levels of weed regrowth reported to ALDI	Every three months for a period of one year from date of primary

Table 4.2 PROPOSED VEGETATION MANAGEMENT SCHEDULE OF ACTIVITIES

Action	Responsibility	Performance Criteria	Timing
			weeding
Site inspections to ensure compliance with VMP and to record progress of works	ALDI	Inspection checklist completed and included in monitoring reports	Following primary planting and after one year maintenance period
Prepare monitoring reports on implementation of VMP	ALDI	Monitoring report completed	Upon completion of planting and on completion of contract, one year after planting
Ongoing monitoring of VRA	ALDI	Regular inspections of VRA conducted to determine management requirements	Annually - ongoing

Appendix A

Flora Species Recorded from the Site

Table A.1 FLORA SPECIES RECORDED FROM THE SITE

Family	Scientific Name	Common Name
Trees		
Casuarinaceae	*Casuarina glauca*	Swamp Oak
Fabaceae	*Acacia decurrens*	Green Wattle
Myrtaceae	*Eucalyptus fibrosa*	Broad-leaved Ironbark
	E. globoidea	White Stringybark
	E. longifolia	Woollybutt
	E. moluccana	Grey Box
	E. tereticornis	Forest Red Gum
	Melaleuca decora	Feather Honey-myrtle
	M. styphelioides	Prickly Paperbark
Santalaceae	*Exocarpos cupressiformis*	Cherry Ballart
Shrubs		
Asteraceae	*Olearia microphylla*	
	Ozothamnus diosmifolius	White Dogwood
Epacridaceae	*Leucopogon juniperinus*	Prickly Beard Heath
Fabaceae	*Daviesia ulicifolia*	Gorse Bitter Pea
	Dillwynia sieberi	Prickly Parrot Pea
	Indigofera australis	Australian Indigo
	Pultenaea villosa	
	Acacia falcata	Sickle Wattle
Myrtaceae	*Callistemon linearis*	Narrow-leaved Bottlebrush
	Melaleuca nodosa	Ball Honey-myrtle
Pittosporaceae	*Bursaria spinosa*	Blackthorn
Rhamnaceae	*Cryptandra spinescens*	
Rosaceae	*Rubus fruticosus*	Blackberry
Sapindaceae	*Dodonaea viscosa* ssp *cuneata*	a Hop Bush
Herbs - Fern		
Sinopteridaceae	*Cheilanthes sieberi*	Rock Fern
Herbs - Dicots		

Table A.1 FLORA SPECIES RECORDED FROM THE SITE

Family	Scientific Name	Common Name
Acanthaceae	*Brunoniella australis*	Purple Trumpet
Apiaceae	*Centella asiatica*	Pennywort
Asteraceae	**Senecio madagascariensis*	Fireweed
	Vernonia cinerea	
Chenopodiaceae	*Einadia hastata*	
	E. nutans ssp *linifolia*	
	E. polygonoides	
Convolvulaceae	*Dichondra repens*	Kidney Plant
Goodeniaceae	*Goodenia* sp	
Lamiaceae	*Plectranthus parviflorus*	Cockspur Flower
Malvaceae	**Sida rhombifolia*	Paddys Lucerne
Oxalidaceae	*Oxalis* sp	
Scrophulariaceae	*Veronica plebeia*	Trailing Speedwell
Verbenaceae	**Verbena* sp	
Herbs - Monocots		
Anthericaceae	*Arthropodium* sp	
Asparagaceae	**Asparagus plumosus*	Climbing Asparagus
Cyperaceae	*Cyperus gracilis*	
	C. sp 1	
	C. sp 2	
	Lepidosperma laterale	Broad Sword-sedge
Lomandraceae	*Lomandra filiformis* ssp *filiformis*	Wattle Mat-rush
	L. multiflora	Many-flowered Mat-rush
Phormiaceae	*Dianella revoluta*	Paroo Lily
Poaceae	*Aristida* sp	A Three-awn Grass
	**Chloris gayana*	Rhodes Grass
	**Cynodon dactylon*	Couch Grass
	Dichelachne micrantha	Short-haired Plume Grass
	Entolasia marginata	Margined Panic
	E. stricta	Wiry Panic
	**Eragrostis curvula*	African Love-grass

Table A.1 FLORA SPECIES RECORDED FROM THE SITE

Family	Scientific Name	Common Name
	E. leptostachya	Paddock Love-grass
	Microlaena stipoides	Weeping Meadow-grass
	Oplismenus aemulus	Basket Grass
	Panicum simile	
	Paspalidium sp	
	**Paspalum dilatatum*	Paspalum
	**P. urvillei*	Vasey Grass
	**Setaria gracilis*	Slender Pigeon Grass
	Sporobolus creber	Rats Tail Grass
	Stipa sp	a Spear Grass
	Themeda australis	Kangaroo Grass
Vines		
Fabaceae	*Glycine tabacina*	
Lauraceae	*Cassytha pubescens*	Devils Twine
Mistletoes		
Loranthaceae	*Amyema gaudichaudii*	Paperbark Mistletoe
	A. miquelii	

Key: * denotes introduced species