



Roxanna Reserve, Lot 17 CH312559

CLIENT: JETELD PTY LTD

PROJECT NO. J001796

STATUS FINAL

DATE 17/05/2024

TOOWOOMBA REGIONAL COUNCIL APPROVED DOCUMENT

referred to in Council's Decision Notice dated

10 October 2024

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Assessment Manager

TOOWOOMBA REGIONAL COUNCIL

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Assessment Manager

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Document Control

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1 Introduction

1.1 Background

Range Environmental was engaged by Jeteld Pty Ltd to prepare a Covenant Management Plan for ongoing management of a proposed environmental covenant (vegetation preservation) area at Roxanna Reserve, Highfields. The site is formally described as Lot 17 on Plan CH312559, with the location of the proposed environmental covenant in Figure 1.

This Covenant Management Plan is intended to be enacted following completion of works described under the site Revegetation Management Plan (RMP) (Range Environmental Consultants 17 May 2024) and following the entering into of the Vegetation Covenant with Toowoomba Regional Council under the Land Title Act 1994.

This document has been produced for the purpose of guiding property management of the covenant area following revegetation and immediate establishment works.

1.2 Scope and Objectives

The objectives of this CMP are to:

- Outline the utility of proposed weed management and vegetation replacement activities at the site;
- Identify the areas of vegetation that will be subject to weed management and vegetation replacement activities;
- Outline methods for weed management and vegetation replacement, including the composition and number of plants to be established at the site.
- Identify weed management methods for restricted and invasive weeds present; and
- Describe vegetation replacement/rehabilitation measures for the proposed rehabilitation area (species, density, planting methods and timing, maintenance etc.

Client: Jeteld Pty Ltd Cronin Road

Figure 1 Covenant

extent

Project: Ecological Assessment Report Reis Road, Highfields

Project No.: J001796

Compiled by: GabiLevay Date: 18/04/2024 Approved by: Will Gibson Date: 18/04/2024

Metres 40 20

Legend

Cadastre

- Roads

☐ Site boundary

Proposed covenant extent

The content of this document includes third party data. Range Environmental Consultants loes not guarantee the accuracy of such data.

Source: Cadastral data sourced from DNRME (2024). Aerial imagery sourced from NearMap (2024).



2 Existing Environment

2.1 The Site

The proposed revegetation area (as shown in Figure 1) is entirely contained within an area of mapped Category X (non-remnant) vegetation with sparse vegetation values dominated by the invasive weed, lantana, with a ground layer of pasture grasses (kikuyu), environmental weeds (purple top verbena, spear thistle, fireweed and cobblers pegs) and native grasses and low height shrubs (blady grass and bracken fern) (Photograph 1).

Adjacent areas of the site are also identified as Category X (due to an approved historic property map of assessable vegetation (PMAV)) however values are identified to align with the mapped preclear regional ecosystem RE 12.5.6 and RE 12.8.14 (Photograph 2).

Descriptions of RE 12.5.6 and RE 12.8.14 are provided in Table 1.

Table 1 Mapped pre-clear regional ecosystems

Description o	of site Regional Ecosystems
Regional eco	system 12.5.6
VMA Status	Endangered
Short description	Eucalyptus siderophloia, E. propinqua, E. microcorys and/or E. pilularis open forest on remnant Tertiary surfaces. Usually deep red soils
Structure code	Open Forest
Description	Eucalyptus siderophloia, E. propinqua and/or E. pilularis open forest +/- Corymbia intermedia, E. microcorys, E. acmenoides, E. tereticornis, E. biturbinata, Lophostemon confertus with E. saligna, E. montivaga at higher altitudes. Occurs on remnant Tertiary surfaces. Usually deep red soils. Not a Wetland. (BVG1M: 9a). Vegetation communities in this regional ecosystem include: 12.5.6a: Eucalyptus saligna or E. grandis open forest, often with vine forest understorey. Occurs on remnant Tertiary surfaces. Usually deep red soils. Not a Wetland. (BVG1M: 8a). 12.5.6b: Eucalyptus siderophloia, Corymbia intermedia, E. propinqua or E. major or E. longirostrata open forest +/- E. microcorys, E. acmenoides, E. tereticornis, E. biturbinata, E. pilularis, Lophostemon confertus. Occurs on remnant Tertiary surfaces. Usually deep red soils. Not a Wetland. (BVG1M: 9a). 12.5.6c: Eucalyptus pilularis open forest +/- E. siderophloia, E. propinqua, Corymbia intermedia, E. microcorys, E. acmenoides, E. tereticornis, E. biturbinata, Lophostemon confertus with E. saligna, E. montivaga at higher altitudes. Occurs on remnant Tertiary surfaces. Usually deep red soils. Not a Wetland. (BVG1M: 8b). 12.5.6d: Eucalyptus montivaga, Corymbia intermedia woodland +/- E. acmenoides,
	E. melliodora, Angophora subvelutina and E. eugenioides. Occurs on remnant Tertiary surfaces. Usually deep red soils at higher altitudes. Not a Wetland. (BVG1M: 8b).
Regional Eco	system 12.8.14
Short description	Eucalyptus eugenioides, E. biturbinata, E. melliodora +/- E. tereticornis, Corymbia intermedia open forest on Cainozoic igneous rocks
Structure code	Open Forest
Description	Eucalyptus eugenioides, E. biturbinata, E. melliodora +/- E. tereticornis, Corymbia intermedia, E. crebra open forest. Allocasuarina torulosa is a common understorey species. Localised occurrences of Eucalyptus Iaevopinea, E. quadrangulata and E. banksii may occur. Occurs on Cainozoic igneous rocks, especially basalt. Not a Wetland. (BVG1M: 11a).
	Vegetation communities in this regional ecosystem include:

12.8.14a: Eucalyptus moluccana open forest +/- E. tereticornis, Eucalyptus siderophloia or E. crebra. Understorey generally sparse but can become shrubby in absence of fire. Occurs on Cainozoic igneous rocks. Not a Wetland. (BVG1M: 13d). 12.8.14b: Eucalyptus quadrangulata, E. eugenioides +/- E. biturbinata tall open forest. Commonly has a moist ground layer dominated by ferns e.g. Blechnum neohollandicum. Occurs on Cainozoic igneous rocks, especially basalt usually at altitudes >800m. Not a Wetland. (BVG1M: 11a).

12.8.14x1: [RE not in use]²: This regional ecosystem is now mapped as 12.9-10.5d. Woodland of *Eucalyptus eugenioides*, *E. biturbinata/longirostrata*, *E. crebra*, *and Corymbia trachyphlo*ia. Occurs on Cainozoic and Mesozoic sediments. Not a Wetland. (BVG1M: 8a).



Photograph 1 Proposed revegetation area



Photograph 2 Adjacent areas of RE 12.5.6 (in distance)

3 Covenant Area Details

A covenant is proposed under the *Land Title Act 1994*, section 97A. The covenant is proposed with the following details:

- Proposed Covenantor: Jeteld Pty Ltd
- Proposed Covenantee: Toowoomba Regional Council (TRC)
- Purpose: Aimed at preserving a native animal or plant
- Location: Approximately as shown in Figure 1.
 - A surveyed plan of covenant is to be provided and endorsed in association with the covenant terms document

3.1 Covenant terms

The Owner's Obligations stipulated in the endorsed covenant terms document are to reference this document. In the event that an exercise of the obligations of the covenant terms are found to be inconsistent with the terms of this Covenant Management Plan the requirements of this Covenant Management Plan are to prevail.

Section 5.4 outlines the required maintenance works over the covenant area. Maintenance works for a period of four (4) years following the establishment of the covenant area are to support the establishment of a minimum of 600 native trees. Following the completion of the four (4) year maintenance period ongoing covenant management is to be undertaken to meet State legislative obligations or local law requirements.

4 Weed Management

4.1 Pest Flora

Two (2) weed species listed as Weeds of National Environmental Significance (WoNS) and two (2) listed as restricted matter under the Queensland *Biosecurity Act 2014* (Biosecurity Act) were recorded within the site (Table 2) prior to completion of revegetation works.

Table 2 Weed species recorded within the site

Species	Common name	Weeds of National Environmental Significance	Biosecurity Act 2014 status
Lantana camara	Lantana	Y	Category 3
Senecio madagascariensis	Fireweed	Y	Category 3
Chloris gayana	Rhodes grass	N	Other invasive
Melinis repens	Red natal	N	Not listed
Cenchrus clandestinus	Kikuyu	N	Not listed
Bidens Pilosa	Cobblers pegs	N	Not listed
Cirsium vulgare	Spear thistle	N	Not listed
Gomphocarpus physocarpus	Balloon cotton	N	Not listed
Verbena bonariensis	Purple top verbena	N	Not listed
Jacaranda sp.	Jacaranda	N	Not listed
Solanum mauritianum	Wild tobacco	N	Other invasive
Verbena aristigera	Maynes pest	N	Not listed

4.1.1 Weed Control Techniques

Weed control techniques applicable to the rehabilitation area is provided in Table 3. These techniques generally fall into two broad weed control methods; mechanical removal and chemical treatment.

Mechanical controls are generally the first actions implemented during weed control. Mechanical control should be restricted to areas not susceptible to soil erosion. Mechanical control methods include:

- Forestry mulching;
- Slashing;
- Manual removal by hand or grubbing using loppers, hatchets or small saws to remove the weed (including roots); and
- Lopping of the weed using an axe or chainsaw.

Chemical control should be used when mechanical controls are not appropriate (i.e. is too costly or within erosion prone areas). Chemical control should only be undertaken by a suitably qualified person (i.e. Agriculture Chemical Distribution Control certified) in accordance with the Safety Data Sheet (SDS). Herbicides used in the vicinity of waterways should be designed accordingly (e.g. Roundup® BioactiveTM Herbicide or Weedmaster® Herbicide) and no broad scale spraying or overspray methods should be used. Mixing of chemicals or rinsing of equipment should never occur adjacent to water bodies.

Table 3 Weed Control Techniques

Plant form	Examples	Method
Woody weeds	Lantana	Control of smaller woody weeds observed within the site, including lantana, through the cutscrape-paint technique, where stems are cut near the ground and are immediately painted with herbicide. Juvenile woody weeds may be removed by hand or treated with chemical spraying.
Herbs	Purple top verbena Fireweed	Herbaceous plants may be controlled through manual hand weeding, crowning or spraying with herbicide such as in the spot-spray technique.
Grasses	Rhodes grass Red natal	Dense infestations of grasses may require mechanical slashing before applying herbicide to regrowth. Isolated individual plants may be hand pulled or crowned.

Detailed methodology for weed control techniques discussed in Table 3 and herbicide application rates can be found in:

- Queensland Government fact sheets for Biosecurity Act-listed weeds, available at https://www.business.qld.gov.au/industry/agriculture/species/declared-pests/weeds; and
- South-east Queensland Ecological Restoration Framework Manual (Prepared on behalf of SEQ Catchments and South East Queensland Local Governments by Chenoweth EPLA and Bushland Restoration Services, 2012).

4.1.2 Weed Disposal

Where offsite disposal of non-native vegetative material is required, weeds should be disposed of at a suitable waste facility.

5 Maintenance of Revegetation Works

In association with the covenant area a minimum of 600 native trees are to be established and maintained under until one of the following has been achieved:

- The trees are established to a height of 4m
- Tree trees are established to a diameter of 10cm at 1.3m height; or
- Maintenance has been provided for a minimum of four (4) years

Tree species utilised in revegetation works are included in Table 4. Where replacement plantings are required to be made to maintain a minimum of 600 native trees

Table 4 Species for revegetation

Species	Common name
Eucalyptus saligna	Sydney blue gum
Corymbia intermedia	Pink bloodwood
Eucalyptus tereticornis	Forest red gum
Eucalyptus biturbinata	Grey gum
Eucalyptus pilularis	Blackbutt
Eucalyptus eugenoides	Thin-leaved stringybark
Lophostemon confertus	Brush box

5.1.1.1 Species substitutions for replacement plantings

Where species within Table 4 are required to be substituted due to supply issues, alternative species from RE 12.5.6/12.8.14 are to be utilised on a like-for like basis (i.e. canopy tree replaced by canopy tree). Where canopy trees are required to be substituted, koala habitat trees of similar species utility are required to be utilised. Prior to purchasing substitute plants, the revegetation contractor must seek approval from the supervising ecologist.

5.2 Roles and Responsibilities

Contractors undertaking rehabilitation works must be instructed directly of the requirements of this plan.

The project manager will ensure that all relevant contractual documents specify the rehabilitation plan as a responsibility to be implemented. The roles and responsibilities assigned to individuals are outlined in Table 5.

Table 5 Roles and Responsibilities

Position	Responsibilities	Activities
Project proponent (Jeteld Pty Ltd)	Facilitation of the project	 Engagement of a project manager (supervising ecologist) Engagement of rehabilitation contractor
Supervising ecologist and project manager	Ensure the requirements of the rehabilitation plan has been implemented throughout the	 Management of tender process in consultation with proponent

	replanting phase and menitoring	1111
	replanting phase and monitoring period.	 Liaison with Local Government Agency in relation to works
		 Supervision of restoration works and sign off of each rehabilitation stage
		 Monitoring of rehabilitation works to ensure compliance with the rehabilitation works plan
		 Sign off at end of maintenance period.
Rehabilitation contractor (must be suitably qualified and	Rehabilitation works	 Implement the requirements of the rehabilitation plan throughout the replanting phase and monitoring period
competent		 Conduct on-going maintenance works

5.3 Rehabilitation Performance Criteria

The performance criteria for rehabilitation works is outlined in Table 6. Works are considered complete upon the fulfilment of the below criteria.

Table 6 Rehabilitation Performance Criteria

Element	Years 1-4
Treatment Area - Biosecurity Act listed weeds	Absent or controlled (90% removal)
Revegetation Area - Environmental weeds (excluding grasses)	Absent or controlled within 3m of native tree (90% removal)
Revegetation area - Plant survival and plant density (infill planting only)	Replace mortalities as required to maintain 85% survival rate for a period of up to 4 years, subject to meeting additional success criteria*.
Erosion and Sediment control	Maintain ground cover of 80%. Ground cover can include grass, ground cover vegetation, mulch or jute matting

^{*}It is noted that while 690 native trees are to be planted in association with the compensatory environmental works scope, an allowance for up to 15% mortality has been allowed. On this basis a minimum of 600 native trees are to be established to non-juvenile status (4m height or 10cm DBH), or for a period of 4 years.

5.4 Maintenance Schedule

The proposed maintenance schedule including monitoring, maintenance and reporting requirements, is outlined in Table 7. This maintenance schedule is to be enacted following initial planting and establishment works document under the Revegetation Management Plan (Range Environmental 17 May 2024). Following the completion of a four (4) year maintenance period ongoing management of the covenant area in accordance with the provisions of the Toowoomba Regional Council Biosecurity Plan is to be provided by the landowner.

Table 7 Schedule for Rehabilitation Works, Monitoring and Maintenance

Stage of works	Frequency	Task	Action	Responsibility
		Monitor seedling health	 Replace damaged seedlings to maintain rehabilitation plan densities/adequate coverage 	Rehabilitation contractor
	Monthly (12)	Check for disturbance (e.g. pest fauna, weed incursion, erosion, etc.)	 Treat and manage environmental and Biosecurity Act- listed weeds Slash grassed areas within the covenant management area 	Rehabilitation contractor
Year 1	Quarterly (4)	Monitoring	 Undertake monitoring of the revegetation area to confirm the success criteria are being met. Instruct the rehabilitation contractor of any required changes 	Ecologist
	Annually (1)	Reporting	 to management Prepare an annual monitoring report Provide the annual monitoring report to Council 	Ecologist
		Monitor seedling health	 Replace damaged seedlings to maintain rehabilitation plan densities/adequate coverage 	Rehabilitation contractor
Year 2	Bi-Monthly (6)	Check for disturbance (e.g. pest fauna, weed incursion, erosion, etc.)	 Treat and manage environmental and Biosecurity Actlisted weeds Slash grassed areas within the covenant management area 	Rehabilitation contractor
	Quarterly (4)	Monitoring	 Undertake monitoring of the revegetation area 	Ecologist

1				
			to confirm the success criteria are being met. Instruct the rehabilitation contractor of any required changes to management	
	Annually (1)	Reporting	 Prepare an annual monitoring report Provide the annual monitoring report to Council 	Ecologist
		Monitor seedling health	 Replace damaged seedlings to maintain rehabilitation plan densities/adequate coverage 	Rehabilitation contractor
	Quarterly (4)	Check for disturbance (e.g. pest fauna, weed incursion, erosion, etc.)	 Treat and manage environmental and Biosecurity Act- listed weeds Slash grassed areas within the covenant management area 	Rehabilitation contractor
Year 3	Biannual (2)	Monitoring	 Undertake monitoring of the revegetation area to confirm the success criteria are being met. Instruct the rehabilitation contractor of any required changes to management 	Ecologist
	Annually (1)	Reporting	 Prepare an annual monitoring report Provide the annual monitoring report to Council 	Ecologist
Year 4		Monitor seedling health	 Replace damaged seedlings to maintain rehabilitation plan densities/adequate coverage 	Rehabilitation contractor
	Quarterly (4)	Check for disturbance (e.g. pest fauna, weed incursion, erosion, etc.)	 Treat and manage environmental and Biosecurity Actlisted weeds Slash grassed areas within the covenant management area 	Rehabilitation contractor
	Biannual (2)	Monitoring	Undertake monitoring of the	Ecologist

			revegetation area to confirm the success criteria are being met. Instruct the rehabilitation contractor of any required changes to management	
	Annually (1)	Reporting	 Prepare an annual monitoring report Provide the annual monitoring report to Council 	Ecologist
Ongoing	As required to meet State legislative obligations or local law requirements	Management of the area in accordance with the provisions of the Toowoomba Regional Council Biosecurity Plan	 Pest management, as required by the provisions of the local Biosecurity Plan to you're your General Biosecurity Obligation 	Landowner
		Slashing	 Permitted as a management tool to maintain fuel load levels at 8t/ha or less Slashing (where undertaken) is to avoid native vegetation regrowth where reasonably possible 	Landowner
		Grazing (cattle or sheep)	 Permitted as a management tool to maintain fuel load levels at 8t/ha or less Goats are to be excluded from the area 	Landowner
		Ecological burning	 Permitted in accordance with the regional ecosystem fire guidelines 	Landowner

5.5 Rehabilitation Monitoring, Maintenance and Reporting

The rehabilitation monitoring schedule provided in Table 7 outlines actions required to ensure that rehabilitation objectives are fulfilled. The monitoring schedule may be altered to account for changes to rehabilitation success, methods and/or timeframes. Regular monitoring is to be undertaken by the Rehabilitation Contractor with the assistance of a restoration ecologist at the initial pre-planting period and regular intervals (i.e. quarterly) until completion of the rehabilitation schedule.

At a minimum, the following should be monitored:

- Effectiveness of weed control measures;
- Indicators of growth and survival of all plantings;
- Effectiveness of erosion and sediment controls; and
- Adequacy of site preparation, mulching, tree (and plant) protection and maintenance.

Monitoring reports are to be prepared by the rehabilitation contractor and submitted to the project manager. These reports should summarise the findings of monitoring events and identify the performance of rehabilitation activities with reference to the objectives of this plan. Where the objectives are not being achieved, the report should recommend relevant actions required to amend this situation.



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