



**McLevie Grain Storage Site, Dalwallinu**

# **Revegetation Plan**

**Prepared for  
CBH Group**

**April 2022**

● people ● planet ● professional

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# 1 Introduction

## 1.1 Background

360 Environmental Pty Ltd (360 Environmental) was commissioned by Co-operative Bulk Handling Group (CBH Group) to prepare a Revegetation Plan for the revegetation of a 1.26 ha site located in the CBH McLevie Grain Storage Site ('the Site') (Figure 1).

This Revegetation Plan has been prepared to support Clearing Permit application (CPS 9236/1) which was submitted to DWER in March 2021 for the removal of up to 1.9 ha of vegetation to enable upgrades to the CBH Access Road intersection with Great Northern Highway, located approximately 5 km north of the Dalwallinu townsite (Appendix A).

The site nominated above for the revegetation works is located on vacant land inside the CBH McLevie Grain Storage Site located less than 1 km from the clearing site. The 1.26 ha revegetation area is to be placed in Conservation Covenant under section 30B of the *Soil and Land Conservation Act 1945* for protection in perpetuity following successful completion of the revegetation works.

The Revegetation Plan outlines a revegetation approach designed to counteract the impact of the proposed clearing.

## 1.2 Revegetation Requirements

### 1.2.1 Clearing Permit Conditions

Outcomes from a preliminary assessment of Clearing Permit application CPS 9236/1 by DWER was provided to the proponent on 22 October 2021 which identified areas in which information was insufficient (Appendix B). A requirement outlined by DWER is the identification of a satisfactory environmental offset to counteract the impact of clearing native vegetation significant in the area. This Revegetation Plan has been prepared in accordance with this advice, with the objective to demonstrate a revegetation approach that satisfactorily counteracts the residual impacts of the proposed clearing.

An environmental offset calculation was undertaken to confirm the requirements for this Revegetation Plan and was further refined following email correspondence with Officers from DWER's Clearing branch. As a result, it was agreed that an area of 1.26 hectare was sufficient to satisfy the environmental offset requirements (Appendix C).

## 1.3 Objectives and Concepts

The objectives of this Revegetation Plan are as follows:

- Contribute to a suitable offset for Clearing Permit CPS 9236/1
- To provide a stable, non-eroding landform
- To re-establish 1.26 ha of native vegetation in the site listed above.

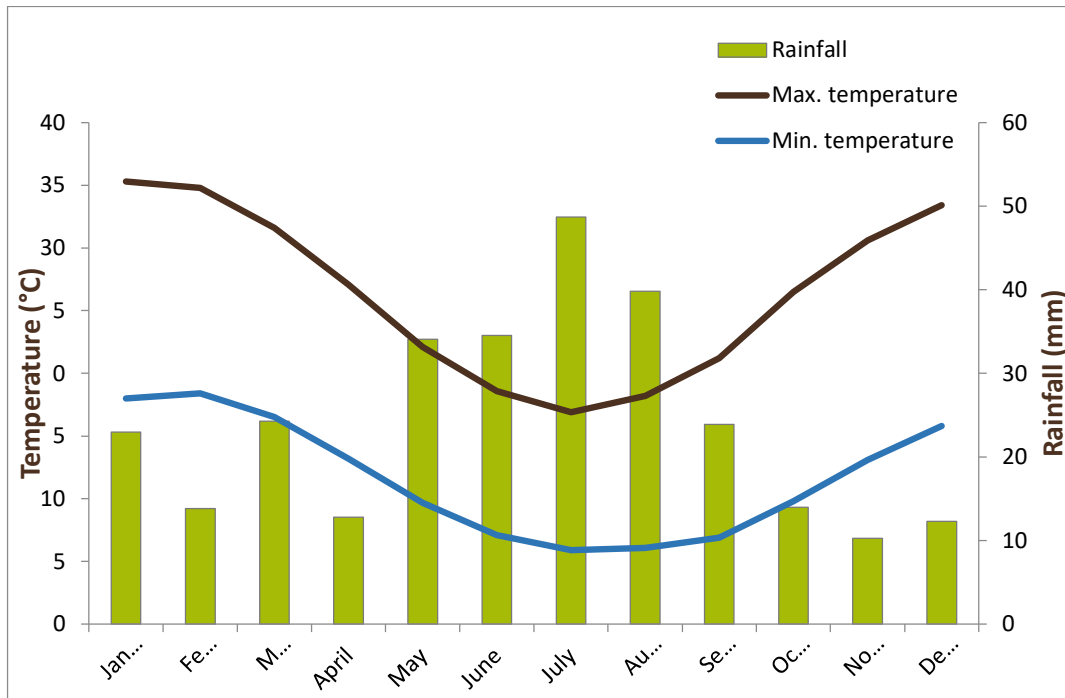
## 2 Existing Environment

### 2.1 Climate

The closest Bureau of Meteorology (BoM) weather station with a complete dataset is Dalwallinu (8297), located approximately 5 km north of the Site.

Weather observations for Dalwallinu based on data from 1997 to 2020 are summarised in Graph 1 (Bureau of Meteorology, 2020):

- Mean minimum temperatures are 5.4°C in July to 16.9°C in February
- Mean maximum temperature ranges from 16.9°C in July to 35.3°C in January
- Average annual rainfall is 284.5 mm.



Graph 1: Long-term and Monthly total Rainfall, Maximum and Minimum Temperatures for Dalwallinu (8297) 1997-2020 (Bureau of Meteorology, 2022)

### 2.2 Current and Historic Land Use

The site is located within the CBH Group McLevie Reveal Site for receiving, storing, and exporting grain. The site has intermittently been used for grain storage and agriculture in the past, however, has primarily been left as bare soil.

### 2.3 Topography

The topography of the site is relatively flat, varying between 333 m Australian Height Datum (AHD) and 335 m AHD.

## 2.4 Soils and Geology

Soil landscapes and land system mapping of Western Australia describes broad soil and landscape characteristics from regional to local scales, and has been captured at scales ranging from 1:20,000 to 1:250,000 (Department of Agriculture and Food WA, 2012). The site occurs within the Ballidu System and the Ballidu 2 Subsystem described as colluvium on hill slopes from weathered granite, comprising of red and brown clays, shallow loamy duplex, and minor sandy earths (Figure 4) (Department of Agriculture and Food WA, 2012).

## 2.5 Wetlands and Hydrology

The site does not intersect any major watercourses or water bodies (Department of Water and Environmental Regulation 2016); however, it is within the Avon River Management Area gazetted under the Waterways Conservation Act 1976. The Avon River System is approximately 17 km south of the site and will not be impacted.

No geomorphic wetlands are identified within the Site or within 5 km (Department of Biodiversity Conservation and Attractions, 2019b).

The site is not located within any Surface Water Areas or Irrigation Districts (Department of Water and Environmental Regulation, 2019). The site is not located within any Proclaimed Groundwater Areas (Department of Water and Environmental Regulation, 2018b).

## 2.6 Flora and Vegetation

### 2.6.1 Broad Vegetation Associations

Mapping of pre-European broad vegetation within Western Australia was completed on a broad scale (1:1,000,000) by (Beard, 1976). Given the revegetation site is completely cleared, the vegetation complex for the clearing site (CPS 9236/1) is most relevant in informing the revegetation approach, which is mapped as:

- Jibberding 142, which is described as medium woodland: york gum (*Eucalyptus loxophleba*) and salmon gum (*E. salmonophloia*) (Figure 5).

The vegetation complexes will be used to inform the proposed species mix for revegetation works on the site.

### 2.6.2 Conservation Areas

The site is not located within an Environmentally Sensitive Areas (ESA) (Department of Water and Environmental Regulation, 2018a) or within any DBCA Managed Lands (Department of Biodiversity Conservation and Attractions, 2019a). The closest ESA is approximately 800 m southwest of the site.

### 2.6.3 Flora

The site and adjacent land are currently cleared, no significant flora species are expected to be within the revegetation area or impacted by revegetation works. A reference site surveyed by

Phoenix Environmental Sciences (2016) has been used to assist in informing revegetation works (Appendix D).

#### 2.6.4 TECs and PECs

One Threatened Ecological Community (TEC) listed under the Environment Protection Biodiversity and Conservation Act 1999 (EPBC Act) was identified as occurring within a 20 km radius of the site, however as the site is completely cleared therefore there is little risk of impacts to this community (DAWE 2022). This community includes:

- Eucalypt woodlands of the Western Australian Wheatbelt (Priority 3 [DBCA], Critically Endangered [EPBC Act]).

#### 2.6.5 Weeds

Weed occurrence on the site is unknown, however PMST database identified weeds in Table 1 to occur within 20 km of the site (DAWE 2022).

**Table 1: Declared weeds that may occur within the site**

Species	Common Name	Weeds of National Significance
<i>Asparagus asparagoides</i>	Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus	Yes
<i>Carrichtera annua</i>	Ward's Weed	No
<i>Cenchrus ciliaris</i>	Buffel-grass, Black Buffel-grass	No
<i>Chrysanthemoides monilifera</i>	Bitou Bush, Boneseed	Yes
<i>Tamarix aphylla</i>	Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar	Yes

## 2.7 Fauna

The site and adjacent land are cleared and developed or used for agriculture, there is no suitable fauna habitat. No significant fauna species are expected to be within the revegetation area or impacted by revegetation works.



## **3           Revegetation Plan Implementation**

### **3.1           Ripping and Site Preparation**

Ripping of the soil will be required prior to revegetation activities to relieve soil compaction created by past land use activities. Ripping loosens soil aggregates and provides a softer soil surface for the establishment of plant roots. Ripping also promotes aeration of soil, assisting in the breakdown of organic matter and water infiltration. Loam and clay soils are more susceptible to compaction due to their lower porosity. Ripping will be undertaken to approximately 0.5 -1 m in late summer or early winter when the soil is dry to maximise fracturing.

Pre planting weed control will be undertaken within at least 2 months prior to planting through herbicide application or if required scalping of topsoil to remove seed burden (refer to Section 4.6).

### **3.2           Fencing**

The site sits within the CBH McLevie Grain Storage Facility which is currently fenced with rural style post and rail fencing. This is sufficient to protect the revegetation site from most potential risks, however temporary fencing to deter kangaroos and rabbits may be considered based on monitoring results (and evidence of grazing) to ensure completion criteria are achieved.

### **3.3           Infill Planting**

Infill planting of tubestock will be undertaken between June and July when sufficient soil moisture is present to support the establishment of tubestock. Timing of planting should occur following good rains and prior to expected good rains to maximise soil moisture levels. Tubestock will be hardened, vigorous and free of disease and insect pests at the time of planting and will have adequate and healthy root mass readily evident when removed from the tube, sufficient to hold the potting medium together. Small augers and drills will be used to install tubestock and will adhere to the following planting method specifications:

- Individual seedlings will be removed from their container as to minimise damage to leaves, stem and root ball
- The root ball shall not be exposed or left to dry out and will be planted immediately
- Fertiliser will be placed in the bottom of the hole and cover with soil to ensure there is no contact between the roots and fertiliser
- The plant will be placed into the hole and backfilled with soil free from weeds, stones, clods of sub soil and other extraneous matter
- The soil will be lightly compacted by hand or foot to remove air pockets
- Plants will be set plumb and level with the adjacent soil - ensuring no soil is placed against the stem of the root crown
- Tree guards to be installed around the seedlings to protect seedlings and help with moisture retention.

### 3.4 Revegetation Species

The clearing area vegetation condition was assessed as being degraded to completely degraded and therefore is not a suitable reference site for the revegetation area. The revegetation species list will therefore be modelled off a site identified as being in pristine vegetation condition located 4 km north of the site, surveyed by Phoenix Environmental Sciences (2016). A species list has been abstracted from Phoenix Environmental Sciences (2016) (Appendix D).

The survey was completed in 2016 and may not be an accurate representation of the site’s current state, however it is an excellent reference site as at the time of the survey it was undisturbed and in a pristine condition. The site’s vegetation structure is described as “isolated Eucalyptus sp. mallee over tall open *Allocasuarina campestris* and *Allocasuarina acutivalvis* subsp. *acutivalvis* shrubland over mid open *Ecdeiocolea monostachya* sedgeland.”

The final planting list will be subject to nursery availability at the time of ordering. All efforts will be made to ensure there is as much species variety as possible from the attached list (Appendix D) with a mixture of lower, mid, and upper storey species with the objective to replace the values lost from the clearing site.

The final species list will be provided to DWER for endorsement before planting commences following liaison with accredited nurseries.

#### 3.4.1 Planting Density

The site will be planted at planting densities identified in the quadrats within the reference site mapped as being in excellent to pristine condition, with an added margin of 25% to allow for plants not establishing, listed in Table 2.

**Table 2: Planting Densities**

Site	Lifeform	Planting Density	Total Number
1.26 ha	Tree > 2 m	0.13	1,638
	Shrub < 2 m	0.16	2,016
	Grass	0.25	3,150
	Herb	0.006	76

## 3.5 Revegetation Design

### 3.5.1 Mulching

Mulching will help suppress weeds, retain moisture, and provide nutrients for seedlings when decomposing. Certified mulch shall be spread to an optimum depth of between 100 – 120 mm where appropriate with the use of a positrack / bobcat with a Harley rake (or equivalent) attachment, or by hand in more sensitive / unstable areas. Mulch will be supplied from a dieback and weed free accredited source (i.e. Biowise). Where practical, mulch will be sourced from the clearing site.

## 3.6 Weed Control

The site is mostly free of any vegetative matter including weeds; however, weeds have the potential to severely limit the success of revegetation works if left uncontrolled. A site visit will be conducted prior to the commencement of revegetation works to confirm whether a pre-planting control program is required and to determine likely weed species and appropriate control measures to be undertaken post revegetation.

### 3.6.1 Timing of Treatment

Weeds have varying lifecycles and are more susceptible to weed control at different times. It is important to implement weed control at the suggested optimal time to ensure the most effective treatment of weeds at site. Weeds will be treated prior to and post revegetation activities.

### 3.6.2 Control Methods

Weed control will be carried out at all revegetation areas prior to (if required), and post revegetation works. Methods utilised for weed control may include:

- Spot Spraying
- Cutting and Painting
- Broad Application in large areas containing no natives.

### 3.6.3 Herbicide Application

Herbicide application will commence up to two months prior to the revegetation program if the site visit determines this is required. The aim of herbicide application will be to prepare the site for revegetation activities and ensure planted seedlings are not competing with weeds for establishment. Following completion of the works, regular herbicide application will be undertaken to increase chances of seedling survival.

Herbicide application will cease immediately under the following weather conditions:

- Wind stronger than 10 km per hour
- Heavy rain.

Where necessary, a wetting agent or other adjuvant such as spray oil will be mixed into the herbicide in accordance with the herbicide manufacturer's recommendation.

A non-toxic, water-soluble, biodegradable coloured dye will be added to the herbicide spray mix that will be clearly visible for at least 48 hours after the herbicide application.

The pressure of application will be kept to a level that prevents excessive spray drift, accordingly, avoiding damage to surrounding vegetation. Extreme care will be taken during works to avoid off-target damage to trees, shrubs, and other native vegetation. The choice of nozzle should be selected based on the manufacturer's specifications for herbicide use.

#### 3.6.4 Weed Control Procedures and Safety Measures

All persons engaged in spraying herbicides will have a current Pesticide Operator's license in accordance with the Health Pesticide Regulations 1956. The following operating procedures and processes will be used while applying herbicide from a motorised pump:

- Ensure weather conditions are suitable for the spray technique, site, and chemicals to be used
- Erect suitable signage at all major entrances and access ways prior to spraying
- Select the least toxic chemical to perform the work and the most suitable chemical for the weed species to be controlled
- Use measuring containers for all liquid herbicides and scales for accurately measuring granulated herbicides
- Ensure the presence/absence of susceptible, non-target species is known prior to commencing work
- Ensure the location of target species is understood to reduce the time spent searching and the amount of chemical used pointlessly blanket spraying.

Preventable procedures will be followed to minimise the risk of accidental spills of hydrocarbons or other hazardous material. However, remediation procedures are in place to contain, and if possible, remove the spill from the site.

The main risk associated with the revegetation project is accidental herbicide spill. The procedures to minimise this and any other accidental spill are as follows:

- All chemical containers are to be regularly inspected for leaks to avoid the possibility of environmental or cross contamination. Leaking containers should have their contents transferred to an intact empty container of the same type, or if none is available, a thoroughly rinsed container which is then clearly labelled and used as soon as possible.
- Attapulgate, a shovel and a recovery drum will be present on all vehicles to clean up any spills.
- A chemical spill must be reported to the Department of Health if it involves more than one Litre (L) of concentrate chemical or 10 L of mix.

### **3.7 Hygiene Measures**

Dieback is unlikely to be an issue in this region, however, there is the potential for weeds to be introduced to the revegetation site via machinery. It is important that all machinery brought to site to assist in revegetation works and ongoing maintenance are inspected prior to first use to ensure that machinery is clean and weed free.

## 4 Monitoring

A revegetation monitoring programme will be implemented to assess revegetation against the agreed completion criteria.

The following will be assessed as part of the monitoring programme:

- Vegetation condition
- Plant species diversity
- Plant density
- Plant cover and abundance
- Weed cover.

### 4.1 Quadrat Establishment

Following completion of revegetation activities, three permanent monitoring plots, along with a permanent photographic monitoring point, will be established within the site. The location of the three plots can be seen in Figure 2. Each plot will be 10 x 10 m wide and established in accordance with the *Standard Operating Procedure Establishing Vegetation Quadrats* (Department of Environment and Conservation 2009), the EPA's *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (2016) and the requirements specified in the clearing permit (DWER 2018).

A survey site from Phoenix Environmental Sciences (2016) will be used as a baseline for pre-clearing vegetation type and includes species composition, structure, and density. Baseline data will be used to qualitatively compare the diversity of pre-cleared areas with revegetated areas.

Data acquired from the monitoring plots will be compared against the completion criteria documented in Section 6.

### 4.2 Monitoring Frequency

Monitoring will be undertaken annually during Spring for a period of 5 years post revegetation works occurring or until the completion criteria have been met (within the timeframe of the clearing permit) (Table 5).

### 4.3 Reporting

A monitoring report will be compiled following each formal monitoring event (annually) and provided to the CEO, according to the requirements of the clearing permit. Each report will include the following:

- Summary of the revegetation site
- Monitoring outcomes
- Progress against completion criteria
- Maintenance and contingency measures
- Updated schedule.

Any clearing permit conditions or requirements will also be included.

## **5 Maintenance**

### **5.1 Pest Management**

Monitoring of revegetation may indicate a requirement of seedlings to be protected from foraging of herbivores such as rabbits and kangaroos. Management measures may include rabbit baiting. If required additional fencing will be considered to protect the seedlings.

### **5.2 Weed Control**

Follow up weed control may be required if weeds are observed to be impeding seedling establishment. Weed control will be carried out as outlined in Section 4.6 and as per the Schedule of Activities in Section 8.



## 6 Completion Criteria

Completion criteria include species diversity, density, composition, structure and weed cover. The completion criteria are outlined in Table 3 below. The progress of revegetation will be assessed against the completion criteria and will determine if contingency measures are required. All measures will be within the quadrats and presented as an average taken across the three quadrats.

**Table 3: Completion Criteria**

Criterion	Baseline data	Target	Completion Criteria
Total species richness	Species richness was 15	Minimum of 60% of native species returned, based on reference sites.	The revegetation site needs a minimum of 9 native species, as recorded at the reference sites (Phoenix, 2016)
Tree species richness	There are 3 tree species.	Return tree species present at reference sites.	The revegetation site needs to have the 3 tree species ( <i>Allocasuarina campestris</i> , <i>Allocasuarina acutivalvis</i> subsp. <i>acutivalvis</i> , and <i>Eucalyptus</i> sp. <i>mallee</i> ) recorded at the reference site.
Tree cover	Tree/ shrub species > 2 m cover was 30%	Minimum of 60% of cover for tree species returned, based on reference sites	The revegetation site needs a minimum of 18% cover for tree/ shrub cover > 2 m
Shrub cover	Shrub species < 2 m cover was 13%	Minimum of 60% of cover shrub species returned, based on reference sites	The revegetation site needs a minimum of 7.8% cover for shrub cover < 2 m
Weed cover	No weeds present	Weed cover to not exceed 10%	The revegetation site should have a maximum of 10% weed cover

## 7 Contingency Measures

Table 4 lists possible items and actions proposed to address or mitigate issues where monitoring indicates that revegetation is not trending towards meeting completion criteria, or has failed, or has been vandalised.

**Table 4: Contingency Measures**

Item	Issue	Possible Actions
Weeds	Excessive weeds in revegetation areas	Employ weed control contractor before weeds set seed. Undertake weed control as required until targeted species effect on native seedling establishment is minimised.
Grazing	Excessive grazing of seedlings by rabbits or kangaroos	Consider need for fencing or installation of replacement tree guards. Undertake rabbit baiting if required.
Species diversity	Species diversity completion criterion is not met by Year 5	Undertake infill planting at 30% of the initial planting rate ensuring that species selected for planting are based on approved species list.
Plant cover and abundance	Plant cover and abundance completion criterion is not met by Year 5	Undertake infill planting at 30% of the initial planting rate ensuring that species selected for planting are based on the approved species list

## 8 Timing and Scheduling of Activities

Timing and scheduling of revegetation activities will be undertaken as per Table 5. Monitoring and maintenance activities will occur in Years 1-5.

**Table 5: Revegetation Schedule**

Activity	Initial Revegetation Works				Year 1			Year 2			Year 3			Year 4			Year 5			
	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter
Ripping and Site Preparation																				
Initial Weed Control (if required)																				
Infill Planting																				
Mulching																				
Follow up weed control (as required)																				
Monitoring and Reporting																				

## 9 Summary of Management Commitments

CBH Group will be responsible for the implementation of the Revegetation Plan. Table 6 outlines the responsibilities assigned to each component of the Revegetation Plan.

**Table 6: Summary of Management Commitments**

Parameter	Control Measures	Person Responsible for Implementation
Weeds	Weed control by a licence contractor	CBH Group / Weed Contractor
	Follow up weed control by a licenced contractor	CBH Group / Weed Contractor
Pests	Deterring vermin and herbivores from grazing revegetation through installation of fencing on site	CBH Group
Access	Prevent unauthorised vehicular access through installing a fence and access gates around revegetation area	CBH Group
Revegetation	Soil ripping, mulch spreading, tubestock installation and seeding	CBH Group / Revegetation Contractor
Monitoring	Monitor revegetation success against completion criteria (up to 7 events)	CBH Group / Monitoring consultant
Maintenance	Undertake additional infill planting, fence repair, pest control where required	CBH Group/ Revegetation Contractor

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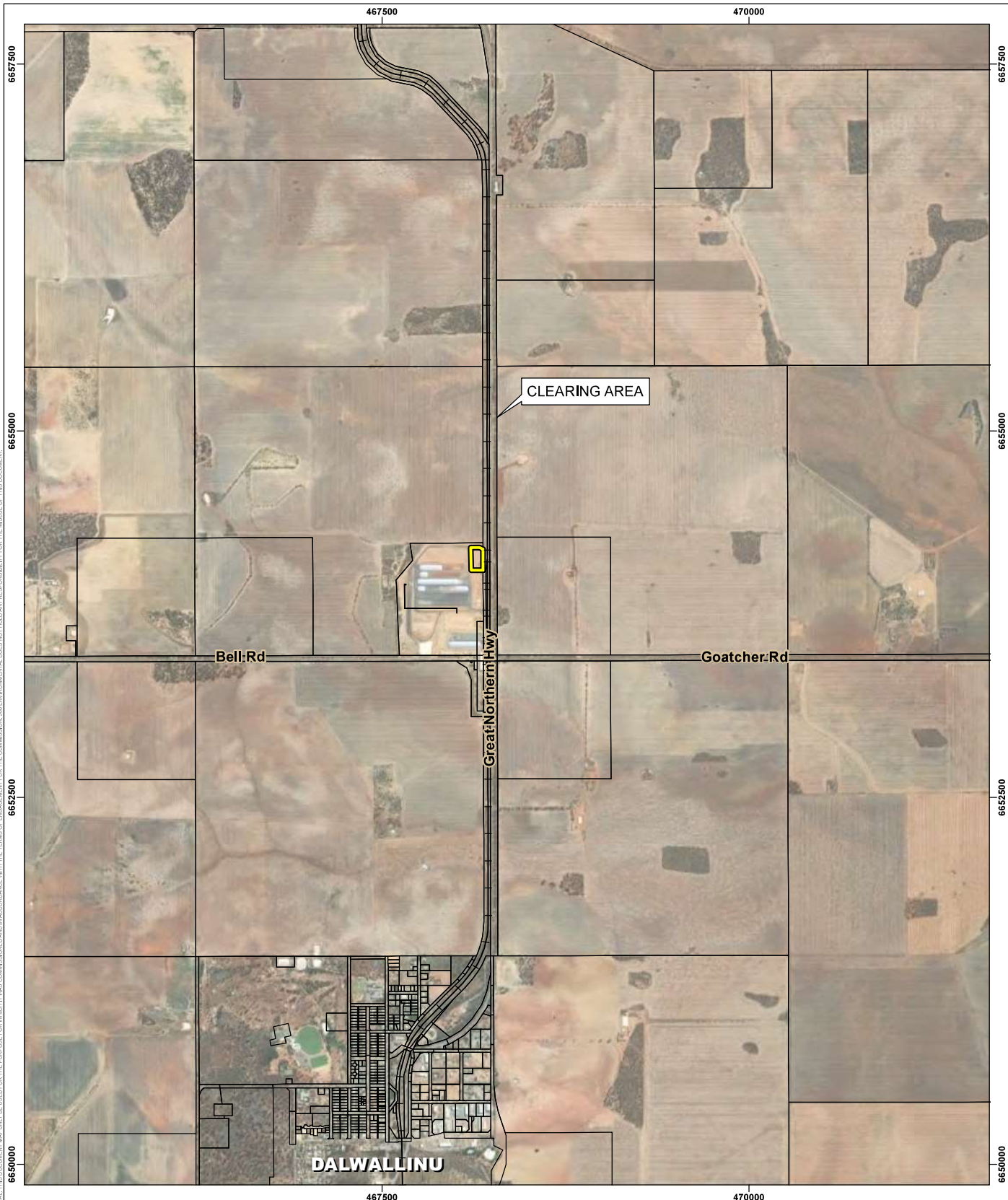
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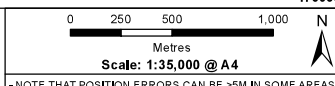
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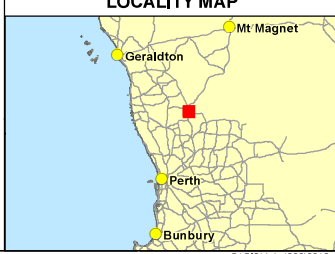
# Figures



- Legend**
- Site Boundary
  - Cadastre
  - Railway



-NOTE THAT POSITION ERRORS CAN BE >5M IN SOME AREAS



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**HORIZONTAL DATUM AND PROJECTION**  
 GDA 1994 MGA Zone 50

CREATED	CHECKED	APPROVED	REVISION
ENVIRONMAPS	LR	LR	0

**CBH Group**  
**McLevie Intersection Dalwallinu**  
**NVCP**

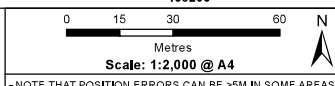
**Dalwallinu Revegetation Plan**

**Figure 1**  
**Site Locations**

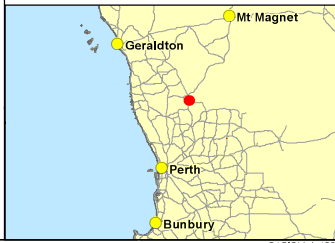




- Legend**
- Site Boundary
  - Cadastre
  - Railway
  - 10m x 10m Plot



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HORIZONTAL DATUM AND PROJECTION GDA 1994 MGA Zone 50			
CREATED ENVIRONMAPS	CHECKED LR	APPROVED LR	REVISION 0

**CBH Group**  
**McLevie Intersection Dalwallinu**  
**NVCP**

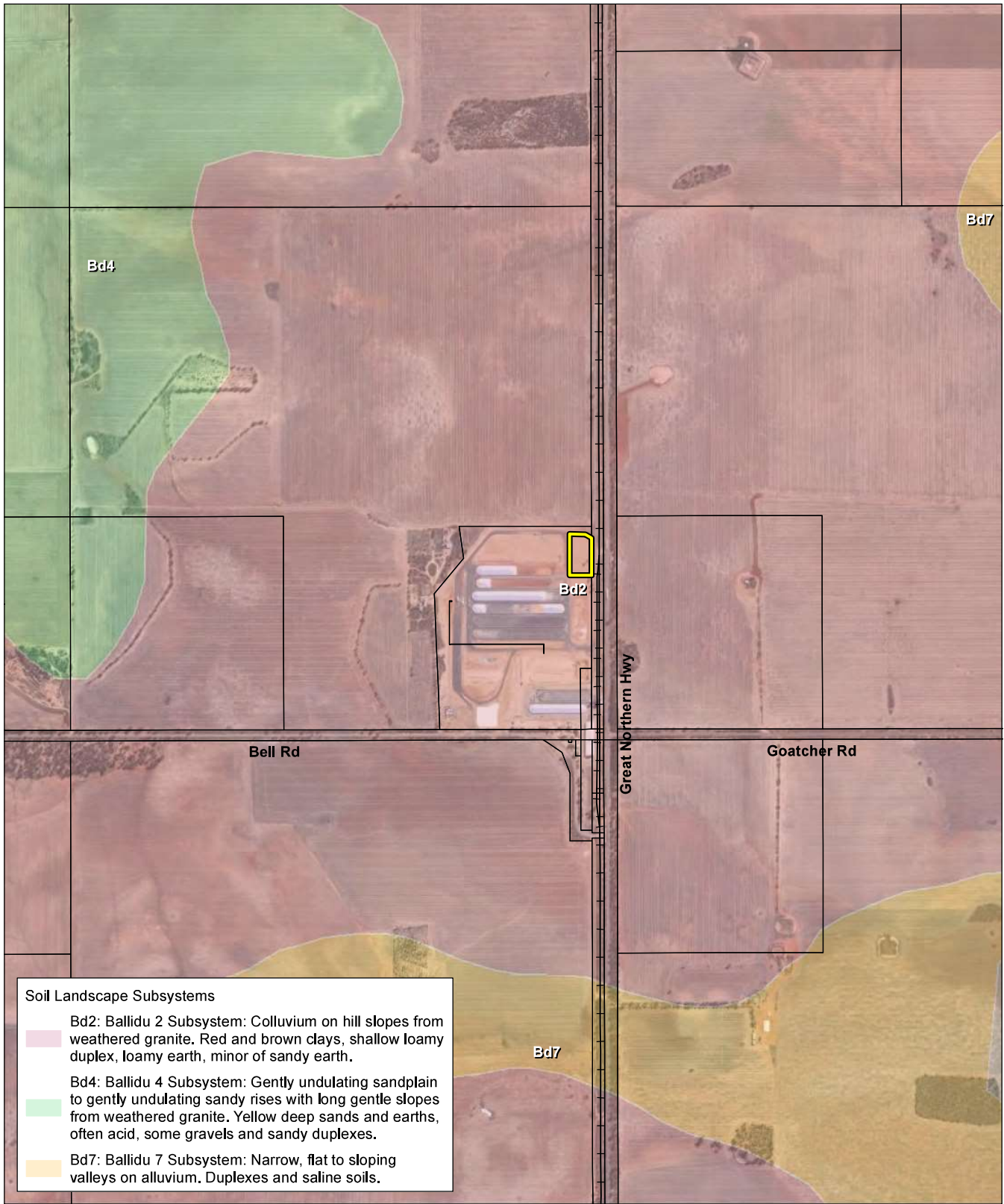
**Dalwallinu Revegetation Plan**

**Figure 2**  
**Site 1**

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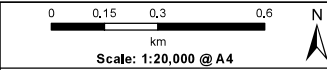
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**Soil Landscape Subsystems**

- Bd2:** Ballidu 2 Subsystem: Colluvium on hill slopes from weathered granite. Red and brown clays, shallow loamy duplex, loamy earth, minor of sandy earth.
- Bd4:** Ballidu 4 Subsystem: Gently undulating sandplain to gently undulating sandy rises with long gentle slopes from weathered granite. Yellow deep sands and earths, often acid, some gravels and sandy duplexes.
- Bd7:** Ballidu 7 Subsystem: Narrow, flat to sloping valleys on alluvium. Duplexes and saline soils.

- Legend**
- Site Boundary
  - Cadastre
  - Railway



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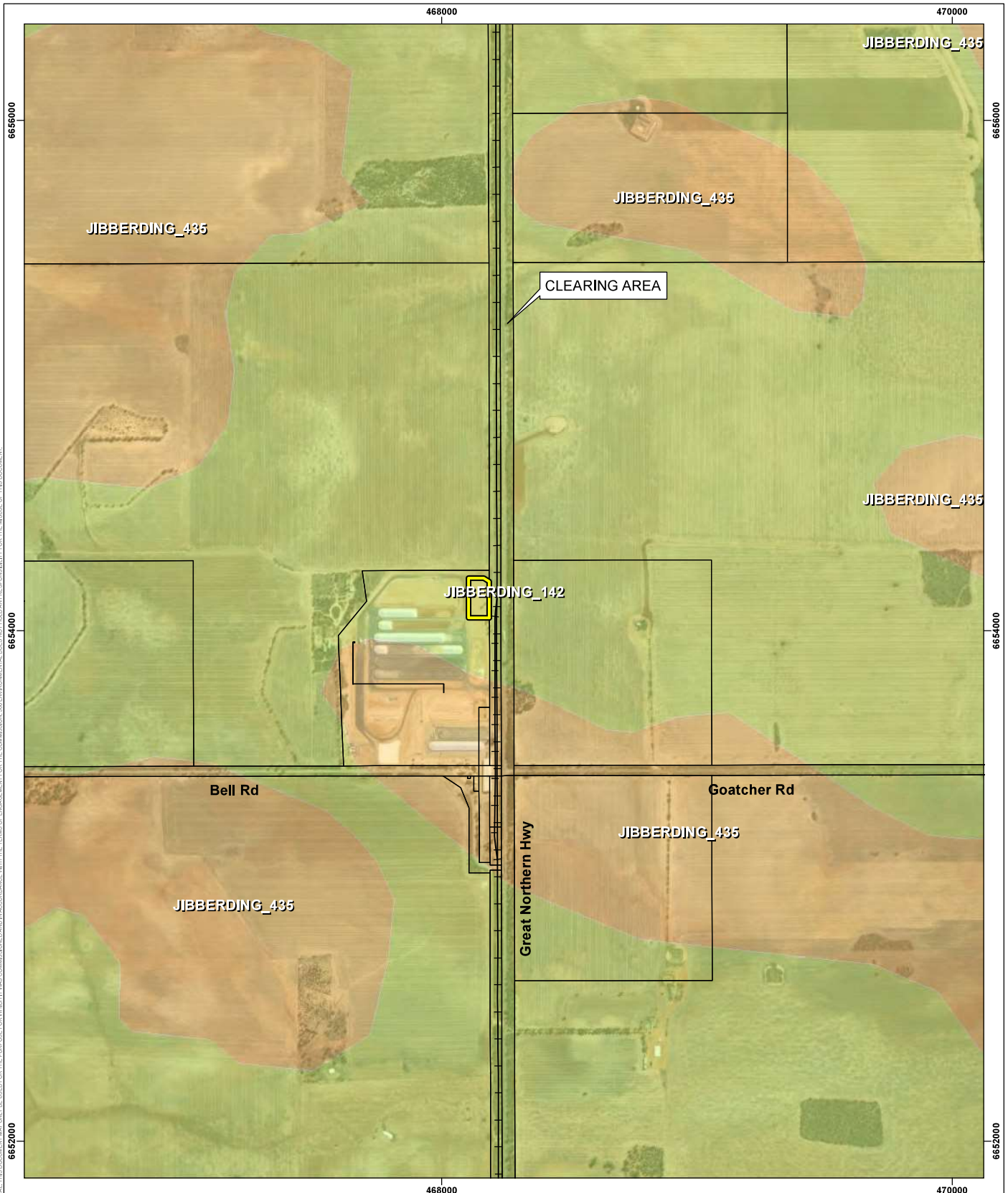
**PROJECT ID** 3812      **DATE** 5/04/2022

**HORIZONTAL DATUM AND PROJECTION**  
 GDA 1994 MGA Zone 50

CREATED	CHECKED	APPROVED	REVISION
ENVIRONMAPS	LR	LR	0

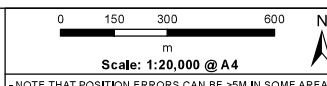
**CBH Group**  
**McLevie Intersection Dalwallinu NVCP**  
**Dalwallinu Revegetation Plan**  
**Figure 3**  
**Soil Type**

• AERIAL PHOTOGRAPHY OPEN SOURCED  
 • SOIL LANDSCAPE SUBSYSTEMS DAFWA



- Legend**
- Site Boundary
  - Cadastre
  - Railway
- Vegetation**
- JIBBERDING\_142: Wheatbelt; York gum, salmon gum etc. *Eucalyptus loxophleba*, *E. salmonophloia*. Goldfields; gimlet, redwood etc. *E. salubris*, *E. oleosa*. Riverine; rivergum *E. camaldulensis*.
  - JIBBERDING\_435: Wattle, casuarina and teatree *acacia-allocasuarina-melaleuca* alliance.

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 • PRE-EUROPEAN VEGETATION • DPHRD



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**LOCALITY MAP**



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<b>HORIZONTAL DATUM AND PROJECTION</b> GDA 1994 MGA Zone 50			
<b>CREATED</b> ENVIRONMAPS	<b>CHECKED</b> LR	<b>APPROVED</b> LR	<b>REVISION</b> 0

**CBH Group**  
**McLevie Intersection Dalwallinu**  
**NVCP**

**Dalwallinu Revegetation Plan**

**Figure 4**  
**Vegetation Complex Mapping**

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<b>Site:</b>	GAP010	<b>Type:</b>	Quadrat (10 m x 10 m)
<b>Date(s):</b>	07/09/2016	<b>Position:</b>	-30.205383, 116.662396
<b>Total vegetation cover (%):</b>	30	<b>Topography:</b>	plain
<b>Tree/shrub cover &gt;2 m (%):</b>	10	<b>Soil colour:</b>	yellow,
<b>Shrub cover &lt;2 m (%):</b>	13	<b>Soil:</b>	sandy clay,
<b>Grass cover (%):</b>	20	<b>Rock type:</b>	none
<b>Herb cover (%):</b>	0.5	<b>Fire age:</b>	not evident
<b>Disturbance details:</b>	none		
<b>Vegetation condition:</b>	pristine, Keighery (1994)		
<b>Vegetation description:</b>	Isolated <i>Eucalyptus</i> sp. mallee over tall open <i>Allocasuarina acutivalvis</i> subsp. <i>acutivalvis</i> and <i>A. campestris</i> shrubland over mid open <i>Ecdeiocolia monostachya</i> sedgeland.		



Species	Cover (%)	Height (m)	Weeds	Conservation status
<i>Ecdeiocolea monostachya</i>	20.0	00.60		
<i>Allocasuarina campestris</i>	15.0	02.50		
<i>Melaleuca atroviridis</i>	05.0	01.80		
<i>Allocasuarina acutivalvis</i> subsp. <i>acutivalvis</i>	02.0	03.00		
<i>Eucalyptus</i> sp.	01.0	04.50		
<i>Platysace maxwellii</i>	01.0	00.40		
<i>Drosera macrantha</i> subsp. <i>macrantha</i>	00.1	00.40		
<i>Chrysitrix distigmatica</i>	00.1	00.30		
<i>Gahnia drummondii</i>	00.1	00.20		
<i>Waitzia acuminata</i> var. <i>acuminata</i>	00.1	00.15		
<i>Schoenus hexandrus</i>	00.1	00.15		
<i>Borya sphaerocephala</i>	00.1	00.05		
<i>Velleia cynopotamica</i>	00.1	00.05		
<i>Hyalosperma demissum</i>	00.1	00.01		
<i>Actinobole uliginosum</i>	00.1	00.01		