



# Clearing Permit Decision Report

## 1 Application details and outcome

### 1.1 Permit application details

<b>Permit number:</b>	CPS 8357/1
<b>Permit type:</b>	Purpose permit
<b>Applicant name:</b>	Shire of Victoria Plains
<b>Application received:</b>	9 May 2019
<b>Application area:</b>	2.46 hectares of native vegetation
<b>Purpose of clearing:</b>	Road realignment and upgrade
<b>Method of clearing:</b>	Mechanical Removal
<b>Property:</b>	Mogumber Road West road reserve (PINs 11673201, 11673199, 11673200, 11673198) Calingiri-New Norcia road reserve (PINs 11501331, 11501322, 11501334, 11453185, 11453187, 11501328, 11501324, 11501327, 11721792) Lot 9001 on Deposited Plain 43363 Lot 3962 on Deposited Plan 173619 Railway Reserve (PIN 1052969) Railway Reserve (PIN 569692) Bindi Bindi – Toodyay Road reserve (PINs 11478636, 11478637)
<b>Location (LGA area/s):</b>	Shire of Victoria Plains
<b>Localities (suburb/s):</b>	Mogumber, Calingiri, New Norcia

### 1.2 Description of clearing activities

The vegetation proposed to be cleared is distributed across four separate areas within Mogumber West Rd Reserve, Calingiri-New Norcia Road reserve and Calingiri – New Norcia Road reserve and Bindi- Bindi-Toodyay Road reserve intersection (intersection realignment) for the purpose of road upgrade (see Figure 1, 2, 3, 4 and 5 Section 1.5).

The size of the areas and amount of clearing proposed was increased by 0.48 ha during assessment within the Calingiri intersection realignment area.

### 1.3 Decision on application

<b>Decision:</b>	Granted
<b>Decision date:</b>	7 April 2021
<b>Decision area:</b>	2.46 hectares of native vegetation as depicted in Section 1.5, below.

### 1.4 Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental

Regulation (DWER) advertised the application for 21 days and one submission was received. Consideration of matters raised in the public submission is summarised in Appendix B.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix C), relevant datasets (see Appendix H.1), the findings of a the flora and fauna assessment surveys and a site inspection (see Appendix G), the clearing principles set out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration that the purpose of the clearing is to improve road safety.

The assessment identified that the proposed clearing will result in the following:

- Loss of 2.46 ha of significant remnant of native vegetation containing highly cleared vegetation communities Beard 4 and Beard 7, within a highly cleared landscape.
- Impact on one occurrence of the P3 species *Eucalyptus sargentii subsp. onesis*.
- Potential spread of weeds to adjacent conservation areas.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures, the Delegated Officer determined that the impacts of the proposed clearing could be minimised, managed and offset to be environmentally acceptable.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- Avoid, minimise to reduce the impacts and extent of clearing;
- Take hygiene steps to minimise the risk of the introduction and spread of weeds;
- Offset the clearing through the fencing of a 22.49 ha offset site to prevent stock access from adjoining farmland, revegetating 0.99 ha of cleared area within the offset site from Completely Degraded to Good condition, rehabilitating 3.88 ha of upland vegetation through weed control and infill planting to improve vegetation condition from Degraded to Good and planting of *Eucalyptus sargentii subsp. onesis* within the offset site to mitigate the impacts to this species. The offset site will be protected in perpetuity through a change in zoning to "Conservation".

1.5. Site map(s)



Figure 1 Map of the application areas hatched yellow along Mogumber West Rd Reserve.



Figure 2 Map of application area hatched yellow along Calingiri -New Norcia Rd Reserve

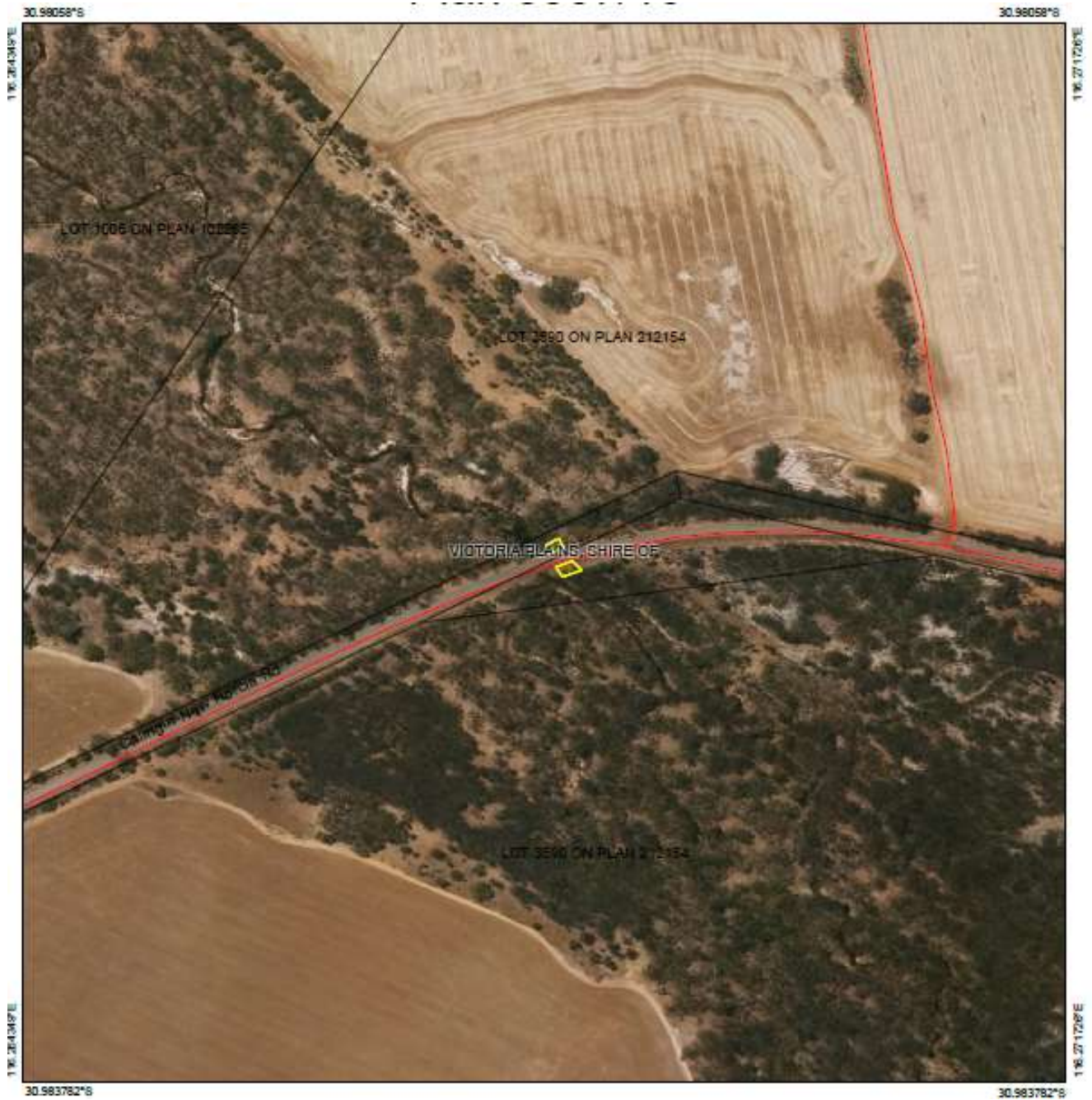


Figure 3 Map of application area hatched yellow along Calingiri – New Norcia Rd Reserve

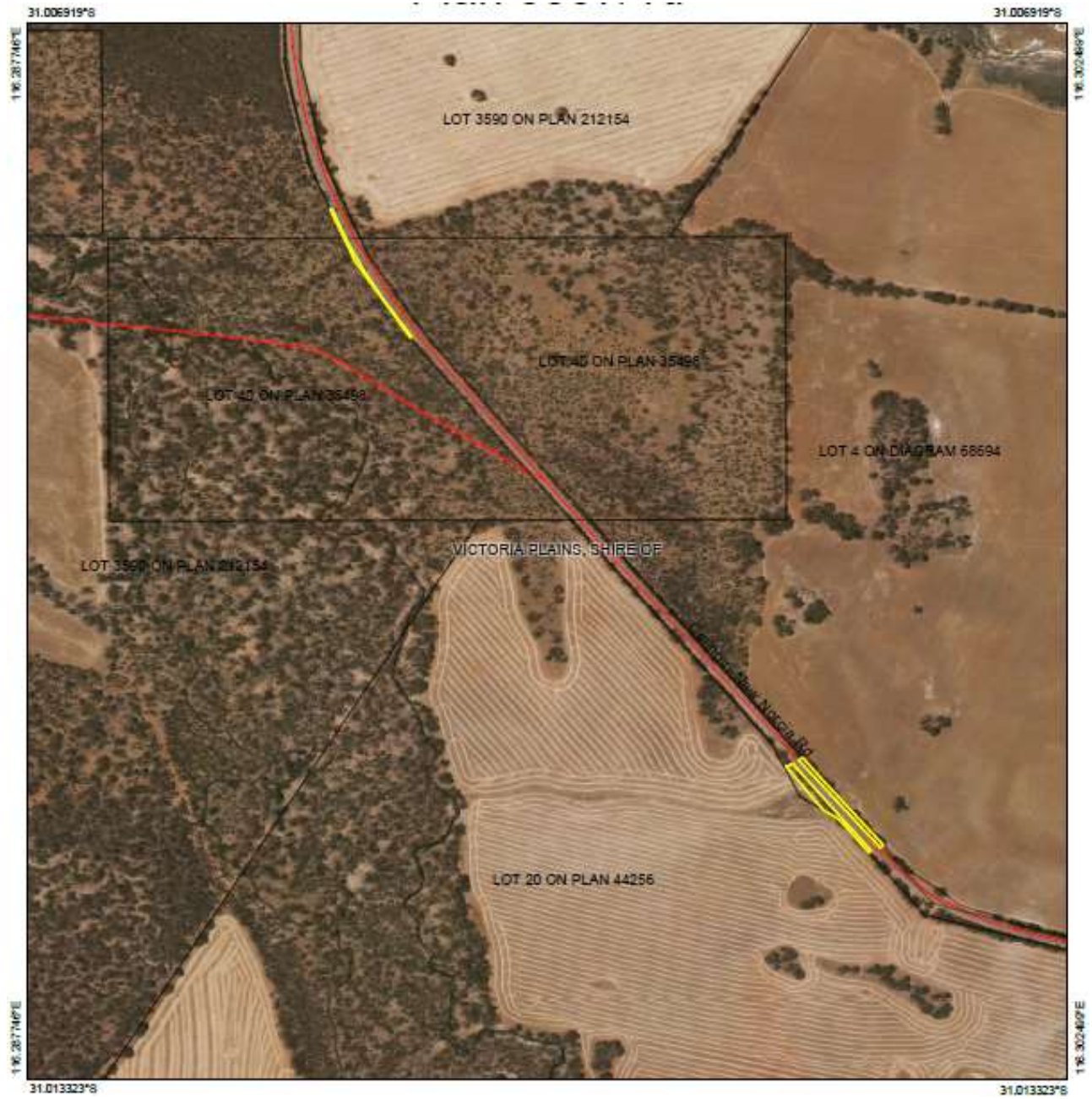


Figure 4 Map of application area hatched yellow along Calingiri – New Norcia Rd Reserve



Figure 5 Map of application area hatched yellow along Calingiri – New Norcia Rd Reserve  
 The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

## 2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the polluter pays principle
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016 (WA) (BC Act)*
- *Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)*

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy (2011)*

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- *Environmental Offsets Guidelines* (August 2014)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)

### 3 Detailed assessment of application

#### 3.1. Avoidance and mitigation measures

The applicant has advised that all efforts have been made to accurately delineate the areas proposed to be cleared on site and where possible, clearing proposed in these areas has been minimised as far as possible. Pruning of overhanging vegetation will be undertaken wherever possible to prevent clearing.

The applicant has advised that the following mitigation strategies have been implemented in the road design to minimise clearing requirements :-

- The widening has been done to the minimum amount allowed by the standards to cater for the swept path of the vehicles without risk of collisions or side swipes.
- The batters have been reduced to the steepest allowable by the standards 1:4 which is steeper than recommended 1:6. This will reduce the footprint and hence the clearing.
- The widening is being undertaken both sides to take advantage of existing cleared areas.
- Realignment route of Calingiri New Norcia road intersection selected to utilise as much existing cleared land as possible while maintaining safety standards.
- Guard rails in some locations were considered however was rejected due to safety concerns and that guardrails would also require clearing to install guardrail posts for structural reasons in some areas.

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

After consideration of avoidance and mitigation measures, it was determined that an offset to counterbalance the significant residual impacts to flora, vegetation, fauna, significant remnant, and conservation areas were necessary. In accordance with the Government of Western Australia's *Environmental Offsets Policy* and *Environmental Offsets Guidelines*, these significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit. The nature and suitability of the offset provided are summarised in Section 4.

#### 3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix C) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see **Error! Reference source not found.**) identified that the impacts of the proposed clearing present a risk to biological values (fauna, flora and vegetation), significant remnant vegetation and conservation areas. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

##### 3.2.1. Flora and Vegetation Clearing Principles (a) (c) (d) and (h)

###### Assessment

###### Biodiversity and Flora

The vegetation within the application area is considered to range from completely degraded to very good (Keighery, 1994) condition and includes five different vegetation communities (DWER, 2019, Coterra Environment, 2019a).

A total of 176 native flora species have been identified during the flora surveys (Coterra Environment, 2019a, 2019b, 2019c), including several range extensions of species, with species recorded or collected outside of their known range. These include, *Alexgeorgea nitens*, *Chordifex microcodon*, *Hakea costata*, *Jacksonia nutans*, *Leptocarpus*



*canus* and *Melaleuca teretifolia*. The number of flora species identified and that five different vegetation communities occur within the application area suggest a high level of floral diversity.

The following Priority listed flora have been recorded within the local area:

- *Banksia dallanneyi* subsp. *pollostia* P3
- *Banksia pteridifolia* subsp. *vernalis* P3
- *Calothamnus pachystachyus* P4
- *Eucalyptus sargentii* subsp. *onesis* P3
- *Petrophile plumosa* P3
- *Stylidium scabridum* P3
- *Acacia anarthros* P3
- *Gastrolobium rotundifolium* P3
- *Isopogon autumnalis* P3
- *Stylidium sacculatum* P3
- *Synaphea rangiferops* P2

The following Threatened flora species listed under the BC Act have been recorded within the local area. They being;

- *Acacia ataxiphylla* subsp. *magna*
- *Acacia chapmanii* subsp. *australis*
- *Acacia cochlocarpa* subsp. *velutinosa*
- *Banksia mimica*
- *Darwinia acerosa*
- *Darwinia carnea*
- *Grevillea bracteosa* subsp. *bracteosa*
- *Hemiandra gardneri*
- *Roycea pycnophylloides*
- *Spirogardnera rubescens*,
- *Acacia vassalii*
- *Banksia serratuloides* subsp. *serratuloides*
- *Conospermum densiflorum* subsp. *unicephalatum*
- *Eremophila glabra* subsp. *chlorella*
- *Gastrolobium hamulosum*
- *Lepidosperma rostratum*
- *Thomasia* sp. *Green Hill* (S. Paust 1322)

A submission received on the application raised concerns regarding the potential for the Threatened *Thelymitra stellata* to occur within the application area. This species flowers in late September to November and occurs on gravelly loam among low scrub in Jarrah and Wandoo woodland and in low health on lateritic hill tops (Brown et al, 1998). This species has been recorded 27km to the southwest of the proposed clearing areas within different mapped soil and vegetation types to the proposed clearing areas. Given this, it is not considered for the application areas to provide suitable habitat for this species.

The flora surveys of the application area occurred during November 2018 and December 2019 and did not identify threatened flora species occurring within the application areas (Coterra Environment, 2019a, 2019c).

DBCA advice was sort on the timing of the flora survey to ensure that the surveys were conducted at an appropriate time to identify the species listed above. DBCA (2019) advised that the flora surveys did not occur within the flowering period for many of these species. In addition, of the flora recorded during the targeted flora surveys, some were not able to be identified to species level and some have a level of uncertainty associated with the species identification. Of these, there are several that may have the potential to represent Threatened flora listed as potentially occurring within the proposed clearing area.

Further advice was sort from the Applicant who provided an analysis, conducted by senior botanist at the WA Herbarium, on the likely occurrence of Threatened and Priority flora known to occur in the vicinity of the application areas and the reliability to locate them in a November survey (Coterra Environment 2019b). This analysis determined that the surveys conducted were conducted during a time period that was sufficient to identify priority and threatened flora that may occur within the application area (Coterra Environment, 2019b). This analysis also conducted a re-examination of indeterminate specimens collected during the November 2018 survey which were compared to threatened and priority flora identified within the local area. It was established that none of the re-examined indeterminate species are threatened or priority flora (Coterra Environment, 2019b).

One priority 3 flora species, *Eucalyptus sargentii* subsp. *onesis* was identified within the Calingiri road intersection area of the application. One individual was recorded (Coterra Environment, 2019a, 2019c). DBCA (2019) advised

that the occurrence of this species within the application area is in the northern extent of the species range. Given this and that only a few recorded populations exist for this species, any loss of individuals within the northern extent of the range is potentially of conservation significance at both the local and regional scale.

Further advice was sought from the applicant in regard to avoiding this species. The Applicant advised due to safety standards, this individual cannot be avoided. Noting the occurrence of this P3 flora species is at its most northern extent of its range and that there are only a few recorded populations that exist, this population is considered to have conservation significance at a local and regional level.

#### Conservation Significant ecological communities

Flora surveys of the application areas identified that approximately 0.07 ha of the Commonwealth listed threatened ecological community (TEC) (under the *Environmental Protection Biodiversity Conservation Act 1998*) (EPBC Act), "Eucalypt woodlands of the Western Australian Wheatbelt" in good condition, within the Calingiri road intersection area of the application is proposed to be cleared. The application area passes through a 0.48 ha patch of this TEC and 86 per cent of this TEC will remain in this location post clearing.

The total number of occurrences of the TEC as mapped by the Commonwealth Department of the Environment and Energy is 87,224 hectares, with a total area of about 633,914 hectares. The proposed clearing of 0.07 hectares of this TEC is not considered to significantly impact the occurrence of this TEC at a regional or local level. The disturbance caused by the proposed clearing may increase the risk of weeds being spread into this occurrence of the TEC. Hygiene management practices will assist in minimising the risk of spread of weeds.

One state listed priority ecological community (PEC) under the *Biodiversity Conservation Act 2016* (BC Act) has been mapped within the local area. This PEC is also listed as a TEC under the EPBC Act being Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region. The flora surveys did not identify this community as occurring within the application area nor any state listed TECs. It is not considered for the proposed clearing to impact any state listed PECs or TECs.

#### Conservation Areas

A small portion of the application area along Mogumber west road is adjacent to Department of Biodiversity Conservation and Attractions (DBCA)'s land owned for conservation. The disturbance caused by the proposed clearing may increase the risk of weeds being spread into this conservation area. Hygiene management practices will assist in minimising the risk of spread of weeds.

#### Conclusion

Based on the above assessment, the proposed clearing will result in potential species of weeds to adjacent conservation areas and have a significant residual impact to a population of the P3 species *Eucalyptus sargentii subsp. onesis*.

It is considered that the impacts of the proposed clearing on adjacent conservation areas can be managed by taking steps to minimise the risk of the introduction and spread of weeds.

It is considered for the impact of the proposed clearing on priority flora to constitute a significant residual impact and an offset is required. The applicant has agreed to plant *Eucalyptus sargentii subsp. onesis* within a revegetation offset site to mitigate the impacts to this P3 species. Please refer to section 4.

#### Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- Weed management measures
- Offset proposal to include planting of P3 species.

### **3.2.2 Fauna - Clearing Principle (b)**

#### Assessment

A fauna habitat assessment undertaken by Coterra Environment (2019a and 2019b) considered three fauna species as likely to occur within the application area. They being Carnaby's cockatoo (*Calyptorhynchus latirostris*), listed as endangered under the EPBC Act, Shield-backed trapdoor spider (*Idiooma nigrum*) listed as vulnerable under the EPBC Act and the Rainbow Bee-eater (*Merops ornatus*) (Marine under EPBC Act).

Carnaby's cockatoo have been recorded within the local area of the proposed clearing with the closest recorded roost site being 13 km south of the application areas. Black Cockatoos breed in large hollow-bearing trees,

generally within woodlands or forests or in isolated trees (Commonwealth of Australia, 2012). These species nest in hollows in live or dead trees of wandoo, salmon gum, jarrah, flooded gum, York gum, powder bark, bullich and blackbutt (Commonwealth of Australia, 2012).

The proposed clearing occurs within a confirmed Carnaby's cockatoo breeding area. The fauna habitat assessment identified that all trees proposed to be cleared had a trunk breadth of less than 500 mm diameter at breast height (DBH) and less than 300mm for salmon gums and are not considered to consist of suitable breeding habitat for Carnaby's cockatoo (Coterra Environment, 2019a).

One potential breeding and roosting tree for black cockatoos were identified within the Calingiri road realignment area. The applicant has advised that this tree will be avoided and pruned instead (Coterra Environment, 2019c).

A site visit by DWER identified two trees within the Calingiri - New Norcia road reserve and Mogumber west road reserve application areas with medium size hollows and one tree within the Mogumber west road reserve area with a medium sized hollow (DWER, 2019). It is not considered for the hollows to be of suitable size for Carnaby's cockatoos (Coterra Environment, 2019a).

Common foraging items for Carnaby's cockatoo includes seeds, flowers and nectar of Proteaceous plant species, Eucalyptus spp. and Callistemon spp. (Commonwealth of Australia, 2012). The DWER site visit noted a small area (approximately 0.08 hectares) of *Banksia hewardiana* and *Banksia fraseri* var. *fraseri* shrubland within the application which would be suitable foraging habitat for Carnaby's cockatoo (DWER, 2019). Given the small size of the suitable foraging habitat and that it is adjacent to a large remnant of native vegetation which is considered likely to consist of similar or better condition vegetation, it is not considered for the proposed clearing to impact on significant foraging habitat for Carnaby's cockatoo.

The Shield-backed trapdoor spider has been recorded within the local area, however little of the proposed clearing area contains the preferred habitat for this species (open York gum, Salmon gum and Wheatbelt Wandoo woodland, where *Acacia acuminata* forms a sparse understorey in heavy clay soils) (DSEWPC, 2013). Therefore, it is not considered for the application areas to contain significant habitat for this species.

The Rainbow bee-eater occurs in a range of habitats and are found in open forests, woodlands and cleared areas near water where it nests in sandy ground. It is not considered for the application area to contain the preferred habitat for this species (Coterra Environment, 2019a).

The proposed clearing is not considered to impact significant habitat for fauna.

### **3.2.3 Significant remnant - Clearing Principle (e)**

#### Assessment

Aerial imagery and available GIS datasets indicate that the local area retains approximately 20 per cent of remnant vegetation remaining which is considered a highly cleared landscape.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). As indicated in Appendix C.2, the mapped IBRA bioregion and both of the mapped Beard vegetation associations retain less than the recommended 30 per cent representation threshold.

It is considered for the vegetation within the application areas to represent the highly cleared mapped vegetation associations. Therefore, the proposed clearing is considered likely to impact a significant remnant of native vegetation in an area that has been extensively cleared. The disturbance caused by the proposed clearing may increase the risk of weeds being spread into adjacent vegetation. Hygiene management practices will assist in minimising the risk of spread of weeds.

It is considered for the impact of the proposed clearing on a significant remnant of vegetation in a highly cleared landscape, including on vegetation associations that have been highly cleared, constitute a significant residual impact and an offset is required. Please refer to section 4.

#### Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- Weed management measures
- Offset proposal

### 3.3. Relevant planning instruments and other matters

The Applicant has advised that the delivery of lime sand from Lancelin to the Central Wheatbelt is undertaken by road trains using 'Agricultural Lime Sands Route 2 – Lancelin to Goomalling' (Route 2). This route traverses the Shire of Victoria Plains, and utilises Mogumber Road West and Calingiri- New Norcia Road. It is proposed that modifications to this route be undertaken, applying State-allocated funding to improve and maintain this transport corridor. The program of works over short sections of the roads by Roads West will include:

- Road shoulder widening
- Minor road curve improvement
- Intersection pavement widening
- Culvert and roadside drainage improvements
- Pavement repairs (localised)
- Vegetation clearing on both verges to restore general safety for the road user (Shire of Victoria Plains, 2019).

No Aboriginal sites of significance have been mapped within the application area. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

The proposed clearing has been referred to Department of Agriculture, Water and the Environment (EPBC 2019/8609) as it may impact Matters of National Significance under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). A decision on the proposed clearing was made on 20 March 2020 under Section 75 of the EPBC Act that the proposed clearing was not a controlled action.

## 4 Suitability of offsets

Through the detailed assessment outlined in Section 3.2 above, the Delegated Officer has determined that the following significant residual impacts remain after the application of the avoidance and mitigation measures summarised in Section 3.1:

- 2.46 ha of significant remnant vegetation that contains highly cleared vegetation associations and a high level of biodiversity within a landscape that has been extensively cleared.
- Clearing 1 individual of the priority 3 flora species *Eucalyptus sargentii subsp. onesis*.

The applicant proposed an environmental offset located at Lot 28905 Old Plains Rd Old Plains (Reserve 402), consisting of:

- Fencing the 22.49 ha site to prevent stock access from adjoining farmland which will help promote natural regeneration in the Reserve
- Revegetate 0.99 ha of cleared area within the Reserve from Completely Degraded to Good condition
- Rehabilitate 3.88 ha of the upland vegetation through weed control and infill planting to improve vegetation condition from Degraded to Good
- Planting of *Eucalyptus sargentii subsp. onesis* within the offset site to mitigate the impacts to this species
- Protecting a 6 ha portion of the watercourse Gavin Gully within the Reserve from the impacts of grazing and increasing vegetation cover in the surrounding upland vegetation which may assist in the management of increasing salinity affecting the watercourse.
- Changing the zoning of the Reserve from "Watering place for travellers and stock" to "Conservation". An additional 0.99 hectare of vegetation within this Reserve will be set aside as 'land acquisition' offset for the proposed clearing under CPS 8357/1. The remaining 21.49 ha of Lot 28905 Old Plains Rd, Old Plains will be 'banked' for future offsets within the Shire of Victoria Plains.

The proposed offset site has been found to contain seven different vegetation units, one riparian unit, four woodland units and two shrublands. It is a relatively large area of remnant vegetation within an extensively cleared farming landscape. The condition of the site ranges from Completely Degraded to Good, with the majority of the site having been degraded through past clearing and/or grazing practices.

Regional mapping and subsequent botanical survey indicate that the dominant species within the vegetation units site are representative of Beard Vegetation Associations 4 or 7.

A Revegetation Plan for the offset proposal has been received (Revegetation Plan, Lot 28905 Old Plains Rd, Old Plains, March 2021). The Delegated Officer considers that this adequately counterbalances the significant residual impacts listed above. The justification for the values used in the offset calculation is provided in Appendix F.

**End**

## Appendix A. Additional information provided by applicant

Summary of comments	Consideration of comment
Applicant provided offset and revegetation plan (Coterra Environment, 2021)	Offset and revegetation plan considered in Section 4
Applicant provided information on avoid and minimisation measures that have been undertaken and consideration of alternatives (Coterra Environment, 2019b)	Avoid and minimisation measures considered in Section 3.
Applicant provided further information regarding likelihood of priority and threatened flora occurring within application area (Coterra Environment, 2019b).	Impacts to priority and threatened flora are addressed in the assessment against the clearing principles (see Appendix D) and assessment of impacts on environmental values (see Section 3.2.1).

## Appendix B. Details of public submissions

The clearing permit application was advertised on the DWER website on 12 June 2019 with a 21-day submission period. One public submission has been received.

Summary of comments	Consideration of comment
<p>The submission outlined concerns regarding clearing of a Commonwealth listed TEC and that the application should be referred to the Commonwealth. The submission also suggested alternatives to clearing including reducing speed limits, installing w beam steel road safety barriers, painting white lines on the edges of the road, installing guideposts, signs and reflectors.</p> <p>It was also suggested that if clearing is required, then cleared land adjacent to the existing road reserve should be used as the new road reserve in lieu of clearing the vegetation.</p> <p>The submission also raised concerns regarding clearing of habitat for threatened and priority flora including <i>Thelymitra stellata</i> recorded within the local area of the proposed clearing. The flora survey was not done during the appropriate time to identify this species and other significant orchid species.</p> <p>The submission also raised concerns regarding the fauna assessment done for the application and stated that a targeted search for the vulnerable shield backed trapdoor spider done by a specialist should have been done to establish impact to this species.</p>	<p>The Applicant has advised that alternatives such as installing road barriers have been considered and the extent of clearing has been minimised to the extent possible. A decision on the proposed clearing was made on 20 March 2020 under Section 75 of the EPBC Act that the proposed clearing was not a controlled action. Please see section 3.1 and section 3.3 for more detail.</p> <p>Impact to threatened and priority flora, including <i>Thelymitra stellata</i> has been address under section 3.2.1.</p> <p>Impact to shield backed trapdoor spider has been address under section 3.2.2.</p>

## Appendix C. Site characteristics

### C.1. Site characteristics

Characteristic	Details
Local context	The areas proposed to be cleared area part of isolated patches of vegetation occurring within long and linear road reserves within the intensive land use zone of Western Australia. The application areas are surrounded by agricultural land and small, isolated patches of remnant vegetation within a highly cleared landscape.

Characteristic	Details
	Aerial imagery indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 19 per cent of the original native vegetation cover.
Ecological linkage	No formal ecological linkages occur within the application areas.
Conservation areas	<p>A small portion of the application area along Mogumber west road is adjacent to Department of Biodiversity Conservation and Attractions (DBCA)'s land owned for conservation.</p> <p>The closest nature reserves from the remaining application areas are Mogumber West Nature Reserve and Lake Wannamal Nature Reserve, located 1.9 kilometres and 2.0 kilometres from the proposed clearing.</p>
Vegetation description	<p>DWER site inspection indicate the vegetation within the proposed clearing area consists of:</p> <ul style="list-style-type: none"> <li>• Calingiri - New Norcia road reserve: <i>Banksia hewardiana</i> and <i>Banksia fraseri</i> var. <i>fraseri</i> heath with grassy weeds in good condition, areas with Open York Gum shrubland over grassy weeds in degraded condition and Wandoo woodland in a degraded condition over grassy weeds and scattered small native shrubs.</li> <li>• Mogumber west road reserve: Eucalyptus wandoo over scattered <i>Acacia</i> sp and grassy weeds in a degraded to completely degraded condition. Areas of Eucalyptus wandoo woodland over grassy weeds and native shrubs in a completely degraded to degraded condition and Wandoo woodland with York Gum over native shrubs and grassy weeds and areas of <i>Adenanthos cygnorum</i> shrub land in a degraded to very good condition.</li> <li>• The Calingiri railway intersection area consisted of two areas. Area one within the railway reserve consisting of scattered shrubs of <i>Grevillea biternata</i>, <i>Gastrolobium spinosum</i>, <i>Dianella revoluta</i>, <i>Ericomyrtus serpyllifolia</i> in a degraded to good condition and areas of Eucalyptus wandoo woodland in good condition. Area two along Toodyay – Bindi – Bindi road consists of low <i>Ericomyrtus serpyllifolia</i> Shrubland <i>Banksia armata</i>, <i>Calothamnus quadrifidus</i> subsp. <i>angustifolius</i> and <i>Beaufortia bracteosa</i> and scattered emergent Eucalyptus <i>macrocarpa</i> subsp. <i>macrocarpa</i> in very good condition.</li> </ul> <p>A target flora and vegetation survey undertaken in November 2018 of the areas under application identified the following broad vegetation communities (Coterra Environment 2019);</p> <ul style="list-style-type: none"> <li>• Open to Closed <i>Leptospermum erubescens</i> Heath;</li> <li>• Shrubland of Tall Shrubland of <i>Meleleuca teretifolia</i>;</li> <li>• Wandoo Woodland;</li> <li>• Scattered low shrubs to low shrubland of <i>Grevillea biternata</i>, <i>Gastrolobium spinosum</i>, <i>Dianella revolute</i>, <i>Ericomyrtus serpyllifolia</i></li> <li>• Low <i>Acacia dilatata</i>, <i>Leptospermum erubescens</i> shrubland</li> <li>• Low <i>Ericomyrtus serpyllifolia</i> Shrubland. Associated species: <i>Dianella revoluta</i>, <i>Dampiera lavandulacea</i>, with *<i>Avena barbata</i> and <i>Austrostipa ?flavescence</i> grasses, <i>Podolepis lessonii</i> herbs and scattered emergent <i>Eucalyptus macrocarpa</i> subsp. <i>macrocarpa</i>;</li> <li>• <i>Banksia hewardiana</i>, <i>Banksia fraseri</i> var. <i>fraseri</i>, <i>Banksia ?polycephala</i> Open Low Heath to Open Heath</li> <li>• Degraded <i>Acacia microbotryra</i> Shrubland to Tall Open Scrub; and</li> <li>• Degraded <i>Adenanthos cygnorum</i> heath.</li> </ul> <p>This is consistent with the mapped vegetation type(s):</p> <ul style="list-style-type: none"> <li>• Beard 4, which is described as Medium woodland; marri &amp; wandoo (Shepherd et al, 2001)</li> </ul>

Characteristic	Details
	<ul style="list-style-type: none"> <li>Beard 7 which is described as Medium woodland; York gum (<i>Eucalyptus loxophleba</i>) &amp; wandoo (Shepherd et al, 2001).</li> </ul> <p>The mapped vegetation types retain approximately 11 per cent and 18 per cent of the original extent, respectively (Government of Western Australia, 2019).</p>
Vegetation condition	<p>The flora survey (Coterra, 2019) and DWER site inspection indicate the vegetation within the proposed clearing area is in (Keighery, 1994):</p> <ul style="list-style-type: none"> <li>Completely Degraded: The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.</li> </ul> <p>To</p> <ul style="list-style-type: none"> <li>Very Good: Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.</li> </ul> <p>The full Keighery (1994) condition rating scale is provided in Appendix E. Representative photos and survey descriptions and mapping are available in Appendix G.</p>
Soil description	<p>Eight soil types have been mapped within the application area (Department of Primary Industries and Regional Development (DPIRD), 2019):</p> <ul style="list-style-type: none"> <li>Wannamal 1 Subsystem subsystem is described as alluvial plain; loamy earths</li> <li>Wannamal 3 Subsystem subsystem is described as alluvial plain and fans; sandy duplexes and earths and deep sands, some wet soil</li> <li>Capitella 1 minor rises Phase: as small to very small rises, dunes or sandsheets common in vicinity; pale sandy gravels, gravelly pale deep sand</li> <li>Capitella 3 gentle slope Phase subsystem described as very gently inclined slopes, plain, some dunes; pale deep and gravelly deep sand</li> <li>Ewarts 3 Phase: Gradual rises with numerous shallow drainage lines. Shallow gravel, loamy gravel, deep sand, yellow to brown sandy earth, sandy &amp; loamy duplex, pale to yellow shallow sand.. Wandoo, Melaleuca, Acacia spp with some Jarrah &amp; Yorkgum</li> <li>Ranfurly 4 Subsystem: alluvial plain; loamy earth and saline</li> <li>Glentrome 2 typical Phase: very gently to gently inclined generally upper to middle hillslopes; loamy gravel, shallow loams over rock, loamy and sandy duplexes, loamy earths, clays, some wet soil</li> <li>Ewarts 1 Phase: Hillslopes containing sand and loamy sand over yellowish clay soils, with some gravel ridges, and some heavier soils that often occur immediately below a breakaway.</li> </ul>
Land degradation risk	<p>The majority of the mapped soil types have a low risk of water erosion, flood risk and water logging (DPIRD, 2019) and a high to extreme risk of wind erosion (DPIRD, 2019).</p>
Waterbodies	<p>The application area along Calingiri – New Norcia road reserve intersects a minor non perennial watercourse that is a tributary of Fletcher Gully, a minor river that occurs 120 metres to the south.</p> <p>No wetlands occur within the application areas</p>

## C.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Avon Wheatbelt	9,517,110	1,761,187	18	10	
Vegetation complex					
Beard vegetation association 4 *	10,333	1,855	18	5	0.84
Beard vegetation association 7 *	144,189	15,279	11	1	0.11
Local area					
10km radius	31,412	5,947	20	-	-

\*Government of Western Australia (2019)

## C.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix H.1), and biological survey information, impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]
<i>Acacia ataxiphylla</i> subsp. <i>magna</i>	Threatened	Y	Y	Y	20 km	Y
<i>Acacia cochlocarpa</i> subsp. <i>velutinos</i>	Threatened	Y	Y	Y	45 km	Y
<i>Banksia mimica</i>	Threatened	Y	Y	Y	0.5 km	Y
<i>Darwinia acerosa</i>	Threatened	Y	Y	Y	2 km	Y
<i>Darwinia carnea</i>	Threatened	Y	Y	Y	5 km	Y
<i>Grevillea bracteosa</i> subsp. <i>bracteosa</i>	Threatened	Y	Y	Y	1 km	Y
<i>Hemiandra gardneri</i>	Threatened	Y	Y	Y	40 km	Y
<i>Roycea pycnophylloides</i>	Threatened	N	Y	N	50 km	Y
<i>Spirogardnera rubescens</i> ,	Threatened	Y	Y	Y	19 km	Y
<i>Acacia vassalii</i>	Threatened	Y	Y	Y	0.5 km	Y
<i>Banksia serratuloides</i> subsp. <i>serratuloides</i>	Threatened	Y	Y	Y	3 km	Y
<i>Conospermum densiflorum</i> subsp. <i>unicephalatum</i>	Threatened	Y	Y	Y	2 km	Y
<i>Eremophila glabra</i> subsp. <i>chlorella</i>	Threatened	N	Y	Y	1 km	Y
<i>Gastrolobium hamulosum</i>	Threatened	Y	Y	Y	0.2 km	Y
<i>Lepidosperma rostratum</i>	Threatened	N	Y	N	3.5 km	Y
<i>Thomasia</i> sp. <i>Green Hill</i> (S. Paust 1322)	Threatened	N	Y	Y	3.0 km	Y



Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]
<i>Banksia pteridifolia</i> subsp. <i>vernalis</i>	P3	Y	Y	Y	10 km	Y
<i>Banksia dallanneyi</i> subsp. <i>pollostata</i>	P3	Y	Y	Y	0.09 km	Y
<i>Calothamnus pachystachyus</i>	P4	Y	Y	Y	0.35 km	Y
<i>Eucalyptus sargentii</i> subsp. <i>onesis</i>	P3	Y	Y	Y	6.5 km	Y
<i>Petrophile plumosa</i>	P3	Y	Y	Y	0.65 km	Y
<i>Stylidium scabridum</i>	P3	Y	Y	Y	3.1 km	Y
<i>Acacia anarthros</i>	P3	Y	Y	Y	0.02 km	Y
<i>Gastrolobium rotundifolium</i>	P3	Y	Y	Y	0.3 km	Y
<i>Isopogon autumnalis</i>	P3	Y	Y	Y	5.4 km	Y
<i>Stylidium sacculatum</i>	P3	Y	Y	Y	0.24 km	Y
<i>Synaphea rangiferops</i>	P2	Y	Y	Y	0.2 km	Y

#### C.4. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]
Carnaby's cockatoo ( <i>Calyptorhynchus latirostris</i> ),	Endangered under the EPBC Act,	Y	Y	180 m	Y
Shield-backed trapdoor spider ( <i>Idiooma nigrum</i> )	vulnerable under the EPBC Act	N	N	1.5 km	N/A
Rainbow Bee-eater ( <i>Merops ornatus</i> )	Marine under EPBC Act	Y	Y	10 km	Y

#### C.5. Ecological community analysis table

Community name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]
Eucalypt woodland of the WA wheatbelt	Endangered under EPBC Act	Y	Y	Y	Within application area	Y
Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region	Priority 3 Endangered under EPBC Act	Y	Y	Y	700 m	Y

## Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
<b>Environmental value: biological values</b>		
<p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared contains locally and regionally significant flora and vegetation associations, including a range extension occurrence of a Priority 3 flora species and 0.07 ha of a federal listed TEC.</p>	At variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (b):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain significant foraging, roosting, breeding, habitat for conservation significant fauna that have been recorded within the local area.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>Sufficient flora surveys did not identify threatened flora within the area proposed to be cleared. The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (d):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.”</i></p> <p><u>Assessment:</u></p> <p>The areas proposed to be cleared does not contains species that can indicate a threatened ecological community listed under the BC Act.</p>	Not likely to be at variance	No
<b>Environmental value: significant remnant vegetation and conservation areas</b>		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The extent of the mapped vegetation type and native vegetation in the local area is inconsistent with the national objectives and targets for biodiversity conservation in Australia.</p>	At variance	Yes <i>Refer to Section 3.2.3, above.</i>
<p><u>Principle (h):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p><u>Assessment:</u></p> <p>Given the distance to the nearest conservation area, the proposed clearing may have an impact on the environmental values of adjacent conservation areas through the introduction and spread of weeds.</p>	May be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<b>Environmental value: land and water resources</b>		

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>The application area along Calingiri – New Norcia road reserve intersects a minor non perennial watercourse that is a tributary of Fletcher Gully, a minor river that occurs 120 metres to the south. No wetlands occur within the application areas. A site visit of the areas under application did not identify riparian vegetation (DWER, 2019).</p> <p>Given the limited clearing in the vicinity of watercourse it is not considered for the proposed clearing to significantly impact vegetation growing in association with a wetland or watercourse.</p>	At variance	No
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The majority of the mapped soil types have a low risk of water erosion, flood risk and water logging and a high to extreme risk of wind erosion. Therefore, the proposed clearing may cause wind erosion.</p> <p>Given the small size of the proposed clearing, the linear shape of the application areas, their location adjacent to an existing road and that the presence of bare soils will be minimal due to the construction of the road, the proposed clearing is not likely to cause appreciable land degradation in the form of wind erosion</p>	Not likely to be at variance	No
<p><u>Principle (i):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p><u>Assessment:</u></p> <p>The application area intersects one minor perennial watercourse. Given that the watercourse mapped within the application area may contain surface water, the proposed clearing may increase sedimentation in the watercourse, thus potentially degrading the quality of surface water. Although the proposed clearing may cause sedimentation of surface water within the watercourse, the impact is likely to be minimal and short term during the clearing process. Surface water will be managed through the drainage design of the road.</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>The risk of flooding caused by the proposed clearing is minimal. Based on this relatively low risk of flooding the proposed clearing is not likely to cause or exacerbate, the incidence or intensity of flooding.</p>	Not likely to be at variance	No

## Appendix E. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

**Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)**

<b>Condition</b>	<b>Description</b>
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.



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### Appendix F. Offset calculator value justification

<i>Offset Calculation 1 - Revegetation - Infill Planting</i>		
Note: Complete the following calculation for each relevant residual impact.		
Field Name	Description	Justification for value used
<i>IUCN Criteria</i>	The IUCN criteria for the value being impacted	Significant remant - Highly cleared Beard vegetation association 4 and 7.
<i>Area of impact (habitat/community) or Quantum of impact (features/individuals)</i>	The area of habitat/community impacted or number of features/individuals impacted	2.46 hectares
<i>Quality of impacted area (habitat/community)</i>	The quality score for area of habitat/community being impacted - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	4 - Application area is in a completely degraded to very good (Keighery, 1994) condition within a long and linear road reserve. Predominantly less than good (Keighery, 1994) condition.
<i>Time over which loss is averted (habitat/community)</i>	This describes the timeframe over which changes in the level of risk to the proposed offset site can be considered and quantified	20 years is a standard figure used by DWER to represent the expectation that offset sites are protected in perpetuity.
<i>Time until ecological benefit (habitat/community) or Time horizon (features/individuals)</i>	This describes the estimated time (in years) that it will take for the main benefit of the quality (habitat/community) or value (features/individuals) improvement of the proposed offset to be realised	10 - It is expected that the offset site to be revegetated to a good condition should occur within 10 years.
<i>Start area (habitat/community) or Start value (features/individuals)</i>	The area of habitat/community or number of features/individuals proposed to offset the impacts	3.88 - The area required to offset the significant residual impacts.
<i>Start quality (habitat/community)</i>	The quality score for the area of habitat/community proposed as an offset - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	2 - Area proposed for revegetation in a degraded (Keighery, 1994) condition.
<i>Future quality without offset (habitat/community) or Future value without offset (features/individuals)</i>	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site without the offset	2 - It is assumed that the condition of the vegetation will remain the same with no revegetation or management actions undertaken.
<i>Future quality with offset (habitat/community) or Future value with offset (features/individuals)</i>	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site with the offset	4 - It is assumed that the proposed infill planting, weed management and fencing will result in good condition vegetation across the offset site should it be placed under a conservation covenant.
<i>Risk of loss (%) without offset (habitat/community)</i>	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future without an offset	10% - The vegetation in the potential revegetation site which is assumed to be in a degraded condition is considered unlikely to regenerate to a good condition without revegetation efforts.
<i>Risk of loss (%) with offset (habitat/community)</i>	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future with an offset	30% - Securing the land parcel within conservation estate should reduce the risk of loss to 30%. The risk of catastrophic events (fire, dieback etc.) remain.
<i>Confidence in result (%) – risk of loss (habitat/community)</i>	The capacity of measures to mitigate risk of loss of the proposed offset site	90% - there is a high level of confidence that securing in conservation estate would mitigate the risk of loss.
<i>Confidence in result (%) – Change in quality (habitat/community) or Change in value (features/individuals)</i>	The level of certainty about the successful achievement of the proposed change in quality (habitat/community) or value (features/individuals)	90% - there is a reasonably high level of confidence that the revegetated offset site would remain in a good condition if entered into conservation estate.
<i>% of impact offset</i>	% of the significant residual impact that would be offset by the proposed offset (note: the offset calculations combined should equate to 100% for each residual impact)	72.55% - Obtained through the input of variables explained above.
<i>Other comments</i>	Include here any relevant additional comments (e.g. the size of offset required to offset 100% of the residual impacts)	



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### Offset Calculation 1 - Full Revegetation

Note: Complete the following calculation for each relevant residual impact.

Field Name	Description	Justification for value used
<i>IUCN Criteria</i>	The IUCN criteria for the value being impacted	Significant remant - Highly cleared Beard vegetation association 4 and 7.
<i>Area of impact (habitat/community) or Quantum of impact (features/individuals)</i>	The area of habitat/community impacted or number of features/individuals impacted	2.46 hectares
<i>Quality of impacted area (habitat/community)</i>	The quality score for area of habitat/community being impacted - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	4 - Application area is in a completely degraded to very good (Keighery, 1994) condition within a long and linear road reserve. Predominantly less than good (Keighery, 1994) condition.
<i>Time over which loss is averted (habitat/community)</i>	This describes the timeframe over which changes in the level of risk to the proposed offset site can be considered and quantified	20 years is a standard figure used by DWER to represent the expectation that offset sites are protected in perpetuity.
<i>Time until ecological benefit (habitat/community) or Time horizon (features/individuals)</i>	This describes the estimated time (in years) that it will take for the main benefit of the quality (habitat/community) or value (features/individuals) improvement of the proposed offset to be realised	10 - It is expected that the offset site to be revegetated to a good condition should occur within 10 years.
<i>Start area (habitat/community) or Start value (features/individuals)</i>	The area of habitat/community or number of features/individuals proposed to offset the impacts	0.99 - The area (hectares) required to offset the significant residual impacts.
<i>Start quality (habitat/community)</i>	The quality score for the area of habitat/community proposed as an offset - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	0 - Area proposed for revegetation in a completely degraded (Keighery, 1994) condition, with little to no native vegetation present.
<i>Future quality without offset (habitat/community) or Future value without offset (features/individuals)</i>	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site without the offset	0 - It is assumed that the condition of the vegetation will remain the same with no revegetation or management actions undertaken.
<i>Future quality with offset (habitat/community) or Future value with offset (features/individuals)</i>	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site with the offset	4 - It is assumed that revegetation and fencing to exclude stock will result in good condition vegetation across the offset site should it be placed under a conservation covenant.
<i>Risk of loss (%) without offset (habitat/community)</i>	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future without an offset	0% - Given the lack of vegetation present within the proposed offset site and the current designated purpose 'Watering place for travelers and stock' there is a negligible risk that the site in respect to its value for significant remnant vegetation would be lost in the absence of revegetation.
<i>Risk of loss (%) with offset (habitat/community)</i>	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future with an offset	10% - Securing the land parcel within conservation estate should result in the risk of loss of the proposed revegetation to 10%. The risk of catastrophic events (fire, dieback etc.) remain.
<i>Confidence in result (%) - risk of loss (habitat/community)</i>	The capacity of measures to mitigate risk of loss of the proposed offset site	90% - there is a high level of confidence that securing in conservation estate would mitigate the risk of loss.
<i>Confidence in result (%) - Change in quality (habitat/community) or Change in value (features/individuals)</i>	The level of certainty about the successful achievement of the proposed change in quality (habitat/community) or value (features/individuals)	60% - there is a medium to high level of confidence that the revegetated offset site would remain in a good condition if entered into conservation estate.
<i>% of impact offset</i>	% of the significant residual impact that would be offset by the proposed offset (note: the offset calculations combined should equate to 100% for each residual impact)	20.52% - Obtained through the input of variables explained above.
<i>Other comments</i>	Include here any relevant additional comments (e.g. the size of offset required to offset 100% of the residual impacts)	

Offset Calculation 3 - land acquisition

Note: Complete the following calculation for each relevant residual impact.

Field Name	Description	Justification for value used
<i>IUCN Criteria</i>	The IUCN criteria for the value being impacted	Significant remant - Highly cleared Beard vegetation association 4 and 7.
<i>Area of impact (habitat/community) or Quantum of impact (features/individuals)</i>	The area of habitat/community impacted or number of features/individuals impacted	2.46 hectares
<i>Quality of impacted area (habitat/community)</i>	The quality score for area of habitat/community being impacted - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	4 - Application area is in a completely degraded to very good (Keighery, 1994) condition within a long and linear road reserve. Predominantly less than good (Keighery, 1994) condition.
<i>Time over which loss is averted (habitat/community)</i>	This describes the timeframe over which changes in the level of risk to the proposed offset site can be considered and quantified	20 years is a standard figure used by DWER to represent the expectation that offset sites are protected in perpetuity.
<i>Time until ecological benefit (habitat/community) or Time horizon (features/individuals)</i>	This describes the estimated time (in years) that it will take for the main benefit of the quality (habitat/community) or value (features/individuals) improvement of the proposed offset to be realised	1 - It is expected that the offset site to be revegetated to a good condition should occur within 10 years.
<i>Start area (habitat/community) or Start value (features/individuals)</i>	The area of habitat/community or number of features/individuals proposed to offset the impacts	0.99 - The area required to offset the significant residual impacts.
<i>Start quality (habitat/community)</i>	The quality score for the area of habitat/community proposed as an offset - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	4 - Area proposed to be vested as conservation is in a good (Keighery, 1994) condition.
<i>Future quality without offset (habitat/community) or Future value without offset (features/individuals)</i>	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site without the offset	4 - It is assumed that the vegetation is likely to remain in a good (Keighery, 1994) condition without any rehabilitation or management practices occurring.
<i>Future quality with offset (habitat/community) or Future value with offset (features/individuals)</i>	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site with the offset	4 - It is assumed that it is assumed that without intensive rehabilitation the vegetation is likely to remain in a good (Keighery, 1994) with the proposed fencing to exclude stock and vehical access and changing the vesting the tenure as conservation.
<i>Risk of loss (%) without offset (habitat/community)</i>	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future without an offset	10% - The vegetation in the potential revegetation site which is assumed to be in a degraded condition is considered unlikely to regenerate to a better condition without revegetation efforts.
<i>Risk of loss (%) with offset (habitat/community)</i>	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future with an offset	30% - Securing the land parcel within conservation estate should reduce the risk of loss to 30%. The risk of catastrophic events (fire, dieback etc.) remain.
<i>Confidence in result (%) – risk of loss (habitat/community)</i>	The capacity of measures to mitigate risk of loss of the proposed offset site	90% - there is a high level of confidence that securing in conservation estate would mitigate the risk of loss.
<i>Confidence in result (%) – Change in quality (habitat/community) or Change in value (features/individuals)</i>	The level of certainty about the successful achievement of the proposed change in quality (habitat/community) or value (features/individuals)	80% - there is a reasonably high level of confidence that the revegetated offset site would remain in a good condition if entered into conservation estate.
<i>% of impact offset</i>	% of the significant residual impact that would be offset by the proposed offset (note: the offset calculations combined should equate to 100% for each residual impact)	7.24% - Obtained through the input of variables explained above.
<i>Other comments</i>	Include here any relevant additional comments (e.g. the size of offset required to offset 100% of the residual impacts)	



## Clearing Permit Decision Report

### Appendix G. DWER site inspection report photographs



Fig 1. Eastern end of the application area along Mogumber -West Road. Scattered Wandoo over weeds in a completely degraded condition.



Fig 2. Central area of the application area along Mogumber -West Road. Scattered Wandoo over weeds in a completely degraded condition.



Fig 3. Tree with medium sized hollow within western portion of Mogumber west road.



Fig 4. *Adenanthos cygnorum* shrub land within the western section of the area under application along Mogumber west road.





Fig 5. Western portion of Calingiri - New Norcia road reserve application area containing *Banksia hewardiana* and *Banksia fraseri* var. *fraseri* heath with grassy weeds in good condition.



Fig 6. Western portion of Calingiri - New Norcia road reserve application area containing *Banksia hewardiana* and *Banksia fraseri* var. *fraseri* heath with grassy weeds in good condition.



Fig 7. Open York Gum shrubland over grassy weeds in degraded condition along the central portion of the application area within Calingiri - New Norcia road reserve.



Fig 8. Wandoo woodland within eastern portion of the application area within Calingiri - New Norcia road reserve.



Fig 9. Calingiri railway reserve consisting of scattered shrubs of *Grevillea bitemata*, *Gastrolobium spinosum*, *Dianella revoluta*, *Ericomyrtus serpyllifolia* in a degraded to good condition



Fig 10. Calingiri railway reserve consisting of York gum over grassy weeds in a degraded condition.



Fig 11. Calingiri railway reserve consisting of scattered shrubs of *Grevillea bitemata*, *Gastrolobium spinosum*, *Dianella revoluta*, *Ericomyrtus serpyllifolia*



Fig 12. Calingiri railway reserve showing *Eucalyptus wandoo* woodland in good condition.



Fig 13. Toodyay – Bindi – Bindi road consists of low *Ericomyrtus serpyllifolia* Shrubland *Banksia armata*, *Calothamnus quadrifidus* subsp. *angustifolius* and *Beaufortia bracteosa* and scattered emergent *Eucalyptus macrocarpa* subsp. *macrocarpa* in very good condition.



Fig 18. Toodyay – Bindi – Bindi road. Vegetation in very good condition.

## Appendix H. Sources of information

### H.1. GIS databases

Publicly available GIS Databases used (sourced from [www.data.wa.gov.au](http://www.data.wa.gov.au)):

- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- DBCA Legislated Lands and Waters (DBCA-011)
- Environmentally Sensitive Areas (DWER-046)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities

### H.2. References

Shire of Victoria Plains (2020) *Clearing permit application CPS8357/1*, received May 2019 (DWER Ref: A1787324).

Coterra Environment (2021) Offset proposal and Revegetation Plan for CPS 8357/1. DWER ref AA1974507 and A1974508

Coterra Environment (2019a) Native Vegetation Clearing Permit Application CPS 8357/1 Supplementary information including flora survey- May 2019. DWER ref A1787324

Coterra Environment (2019b) Further information including flora analysis and avoid and minimise measures for clearing permit application CPS 8357/1 Dec 2019. DWER ref A1849327

Coterra Environment (2019c) Native Vegetation Clearing Permit Application CPS 8357/1 -Addition to Proposed Clearing Area – flora survey – Calingiri Railway Crossing Dec 2019. DWER ref DWERDT239501

Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.

Department of Biodiversity, Conservation and Attractions (DBCA) (2020) *Species and Communities Branch flora advice for clearing permit application CPS 8357/1*, received April 2020. Department of Biodiversity, Conservation and Attractions, Western Australia (DWER Ref: A1888315)..

- Department of Primary Industries and Regional Development (DPIRD) (2019). *NRInfo Digital Mapping. Department of Primary Industries and Regional Development*. Government of Western Australia. URL: <https://maps.agric.wa.gov.au/nrm-info/> (accessed 30 June 2020).
- Department of Water and Environmental Regulation (DWER) (2020) *Site Inspection Report for Clearing Permit Application CPS 8357/1*, August 2020. Department of Water and Environmental Regulation, Western Australia (DWER Ref: A1816543).
- Government of Western Australia. (2019) *2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019*. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) *Vegetation Complexes of the Darling System, Western Australia*. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Schoknecht, N., Tille, P. and Purdie, B. (2004) *Soil-landscape mapping in South-Western Australia – Overview of Methodology and outputs* Resource Management Technical Report No. 280. Department of Agriculture.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Submission (2020) *Public submission in relation to clearing permit application CPS 8357/1*, received 1 July 2020 (DWER Ref: A1801760)
- Valentine, L.E. and Stock, W. (2008) *Food Resources of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) in the Gnangara Sustainability Strategy Study Area*. Edith Cowan University and Department of Environment and Conservation. December 2008.
- Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed March 2021)



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

<b>Purpose Permit number:</b>	CPS 8357/1
<b>Permit Holder:</b>	Shire of Victoria Plains
<b>Duration of Permit:</b>	30 April 2021 to 30 April 2031

In regards to conditions 8 and 9, it is noted that the permit holder has allocated 5.8 hectares of its banked offset site at Lot 28905 on Deposited Plan 188138 (Crown Reserve 224981), Old Plains, to this project. The nominated 5.8 hectare area contains, or will be revegetated with, similar environmental values to the application area, being; significant remnant vegetation that has been extensively cleared and representative of Beard vegetation associations 4 and 7.

The permit holder is authorised to clear native vegetation subject to the following conditions of this permit.

### **PART I – CLEARING AUTHORISED**

#### **1. Clearing authorised (purpose)**

The permit holder is authorised to clear native vegetation for the purpose of road realignment and widening.

#### **2. Land on which clearing is to be done**

Mogumber Road West road reserve (PINs 11673201, 11673199, 11673200, 11673198), Mogumber

Calingiri-New Norcia road reserve (PINs 11501331, 11501322, 11501334, 11453185, 11453187, 11501328, 11501324, 11501327, 11721792), New Norcia, Old Plains and Calingiri

Unnamed rail reserve (PIN 1052969), Mogumber

Unnamed rail reserve (PIN 569692), Calingiri

Lot 9001 on Deposited Plain 43363, Calingiri

Lot 3962 on Deposited Plan 173619, Calingiri

Bindi Bindi-Toodyay Road reserve (PINs 11478636, 11478637), Calingiri

#### **3. Clearing authorised**

The permit holder must not clear more than 2.46 hectares of native vegetation within the area cross-hatched yellow in attached Plan 8357/1a, Plan 8357/1b, Plan 8357/1c, Plan 8357/1d and Plan 8357/1e.

**4. Duration of clearing**

This Permit does not authorise the Permit Holder to clear native vegetation after 30 April 2026.

**5. Type of clearing authorised**

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law

**PART II – MANAGEMENT CONDITIONS**

**6. Avoid, minimise, and reduce impacts and extent of clearing**

In determining the native vegetation authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

**7. Weed management**

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known weed-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

**8. Offset - Land acquisition**

Within 12 months of the commencement of clearing and no later than 30 April 2022, unless advised otherwise by the CEO, the permit holder shall provide the CEO a copy of the executed change in purpose of Lot 28905 on Deposited Plan 188138 (Crown Reserve 224981), Old Plains, from ‘watering place for travellers and stock’ to ‘conservation’, including 5.8 hectares within the areas shaded red on attached Plan 8357/1f, Plan 8357/1g and Plan 8357/1h.

**9. Offset – Revegetation**

Within 12 months of the commencement of clearing and no later than 30 April 2022, the permit holder shall implement and adhere to the *revegetation* and *rehabilitation* commitments in ‘*Revegetation Plan Lot 28905 Old Plains Road, Old Plains*’ Rev 1 March 2021, including but not limited to the following actions;

- (a) commence *revegetating* and *rehabilitating* 1 hectare within the area hatched red on Plan 8357/1g by:

- (i) ripping the ground on the contour to remove soil compaction;
  - (ii) deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to the *control sites*;
  - (iii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
- (b) commence *rehabilitating* 3.88 hectares within the area hatched red on Plan 8357/1h by:
- (i) undertaking infill planting that will result in a similar species composition, structure and density of native vegetation to the *control site*; and
- (c) establishing a minimum of six 5 x 5 metre quadrat monitoring sites within the *revegetated and rehabilitated* areas crossed hatched read on attached Plan 8357/1g and 8357/1h;
- (d) implementing hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the *revegetated and rehabilitated* area;
- (e) undertaking annual weed control activities to maintain a minimum 80 per cent *weed free state* by the end of the project monitoring period;
- (f) achieve the following completion criteria within a three year monitoring period for the area *revegetated and rehabilitated* under this Permit:

Criterion	Baseline floristic data	Completion targets	Completion Criteria	Monitoring
1	Total site species richness is 28 (native species only).	Minimum of 60% of native species returned, based on reference site.	Minimum of 16 native flora species (trees, shrubs and herbs) to be present in the <i>revegetation and rehabilitation</i> areas.	Monitor the revegetation site in years 1, 2 and 3.
2.	Quadrat species richness (average) is 9 (native species only).	Minimum of 100% of native species returned, based on reference site.	Minimum of 0.09 native species per square metre, to be present on average per monitoring quadrat.	Monitor the revegetation site in years 1, 2 and 3.
3.	Existing <i>weed</i> cover within the <i>revegetation</i> areas is high (over 40 per cent cover).	Reduction in <i>weed</i> cover to significantly lower than <i>revegetation and rehabilitation</i> areas.	Maximum of 20 per cent <i>weed</i> cover in the <i>revegetation and rehabilitation</i> areas.	Monitor the revegetation site in years 1, 2 and 3.
4.	No declared weeds are present.	No declared weeds to be present within <i>revegetation and rehabilitation</i> areas.	Absence of declared <i>weeds</i> .	Monitor the revegetation site in years 1, 2 and 3.

5.	<i>Eucalyptus sargentii</i> subsp. <i>onesis</i> is present in clearing area.	<i>Eucalyptus sargentii</i> subsp. <i>onesis</i> is present within <i>revegetation</i> and <i>rehabilitation</i> areas.	<i>Eucalyptus sargentii</i> subsp. <i>onesis</i> is present within <i>revegetation</i> and <i>rehabilitation</i> areas.	Monitor the revegetation site in years 1, 2 and 3.
6.	Vegetation condition is in Good condition at the reference site.	The entirety of the <i>revegetation</i> and <i>rehabilitation</i> areas is in a Good condition or higher.	The entirety of the <i>revegetation</i> and <i>rehabilitation</i> areas is in a Good condition or higher.	Vegetation condition to be assessed in years 1, 2, and 3.

- (g) undertake remedial actions for areas *revegetated* and *rehabilitated* where monitoring indicates that *revegetation* has not met the completion criteria, outlined in 9(f), including;
- (i) *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in the minimum targets detailed in 9(e) and ensuring only *local provenance* seeds and propagating material are used;
  - (ii) undertake further *weed control* activities; and
  - (iii) annual monitoring of the *revegetated* and *rehabilitated* site, until the completion criteria, outlined in 9(e) are met.

**10. Vegetation management - fencing**

Within 12 months of the commencement of clearing and no later than 30 April 2022, the permit holder shall construct a fence on the north and eastern boundaries of Lot 28905 on Deposited Plan 188138 (Crown Reserve 224981), Old Plains, along the area cross-hatched red on attached Plan 8357/1i.

**PART III - RECORD KEEPING AND REPORTING**

**11. Records that must be kept**

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

**Table 1: Records that must be kept**

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	<ul style="list-style-type: none"> <li>(a) the species composition, structure, and density of the cleared area;</li> <li>(b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;</li> <li>(c) the date that the area was cleared;</li> <li>(d) the size of the area cleared (in hectares);</li> <li>(e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in</li> </ul>



No.	Relevant matter	Specifications
		accordance with condition 6; and (f) actions taken to minimise the risk of the introduction and spread of weeds in accordance with condition 7.
2.	In relation to offset management pursuant to condition 8	(a) The date of the executed change in purpose of Lot 28905 on Deposited Plan 188138 (Crown Reserve 224981), Old Plains, from 'watering place for travelers and stock' to conservation.
3.	In relation to offset and revegetation pursuant to condition 9	(a) a description of the <i>revegetation</i> and <i>rehabilitation</i> activities undertaken; (b) the size of the area <i>revegetated</i> and <i>rehabilitated</i> (in hectares); (c) the date that the area was <i>revegetated</i> and <i>rehabilitated</i> ; (d) actions taken to <i>revegetate</i> and <i>rehabilitate</i> in accordance with condition 9; (e) actions taken to control weeds in <i>revegetated/rehabilitated</i> areas in accordance with condition 9; and (f) a description of the monitoring and remedial activities undertaken within the <i>revegetation</i> and <i>rehabilitation</i> area.
4.	In relation to constructing a fence pursuant to condition 10	(a) The date the construction of the fence was finalised.

## 12. Reporting

- (a) The Permit Holder must provide to the *CEO* on or before 30 June of each year, a written report:
- (i) of records required under condition 11 of this Permit; and
  - (ii) concerning activities done by the permit holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar, a written report confirming that no clearing under this permit has been carried out, must be provided to the *CEO* on or before 30 June of each year.
- (c) Prior to 30 January 2031, the Permit Holder must provide to the *CEO* a written report of records required under condition 11 of this Permit where these records have not already been provided under condition 12(a) of this Permit.

## DEFINITIONS

In this permit, the terms in Table 3 have the meanings defined.

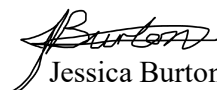
**Table 3: Definitions**

Term	Definition
<i>CEO</i>	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental</i>

<b>Term</b>	<b>Definition</b>
	<i>Protection Act 1986.</i>
<b>control site</b>	means the 10 x 10 metre quadrat control site that was identified as R04 within the 'Revegetation Plan Lot 28905 Old Plains Road, Old Plains' Rev 0 November 2020' to identify remnant native vegetation species composition and structure, condition, density and weed cover.
<b>direct seeding</b>	means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species.
<b>fill</b>	means material used to increase the ground level, or to fill a depression.
<b>local provenance</b>	means native vegetation seeds and propagating material from natural sources within 100 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.
<b>EP Act</b>	<i>Environmental Protection Act 1986 (WA).</i>
<b>mulch</b>	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
<b>planting</b>	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
<b>regenerate/ed/ion</b>	means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing <i>mulch</i> .
<b>rehabilitate/ed/ion</b>	means actively managing an area containing native vegetation in order to improve the ecological function of that area.
<b>revegetate/ed/ion</b>	means the re-establishment of a cover of <i>local provenance</i> native vegetation in an area using methods such as natural <i>regeneration</i> , <i>direct seeding</i> and/or <i>planting</i> , so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
<b>weeds</b>	means any plant – <ul style="list-style-type: none"> <li>(a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i>; or</li> <li>(b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or</li> <li>(c) not indigenous to the area concerned.</li> </ul>

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**END OF CONDITIONS**



Jessica Burton  
A/MANAGER  
NATIVE VEGETATION REGULATION

*Officer delegated under Section 20  
of the Environmental Protection Act 1986*

7 April 2021

# Plan 8357/1a

31.030084°S

31.030084°S

116.013623°E

116.051242°E







116.013623°E

116.051242°E

31.046412°S

31.046412°S

## Legend

-  Cadastre
-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority



0 1km

1:19,023

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Date 7 April 2021

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986



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# Plan 8357/1b

30.980349°S

30.980349°S

116.235931°E

116.240633°E








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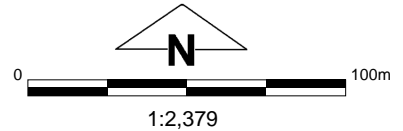
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30.98239°S

## Legend

-  Cadastre
-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority
-  Roads



(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Date 7 April 2021

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986







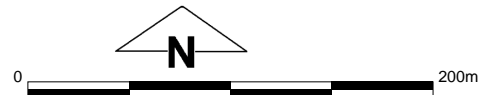
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# Plan 8357/1c



## Legend

-  Cadastre
-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority
-  Roads



1:3,732

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Date 7 April 2021

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# Plan 8357/1d



## Legend

-  Cadastre
-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority
-  Roads



1:7,462

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Date 7 April 2021

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986



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# Plan 8357/1e

31.080294°S

31.080294°S

116.431564°E

116.446317°E








31.086697°S

31.086697°S

116.431564°E

116.446317°E

## Legend

-  Imagery
-  Railways
-  Clearing Instruments Activities
-  Local Government Authority
-  Roads



1:7,456

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

*Burton*

Date 7 April 2021

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986



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# Plan 8357/1f

116°21'50.400"E

116°22'1.200"E

31°12'21.600"S

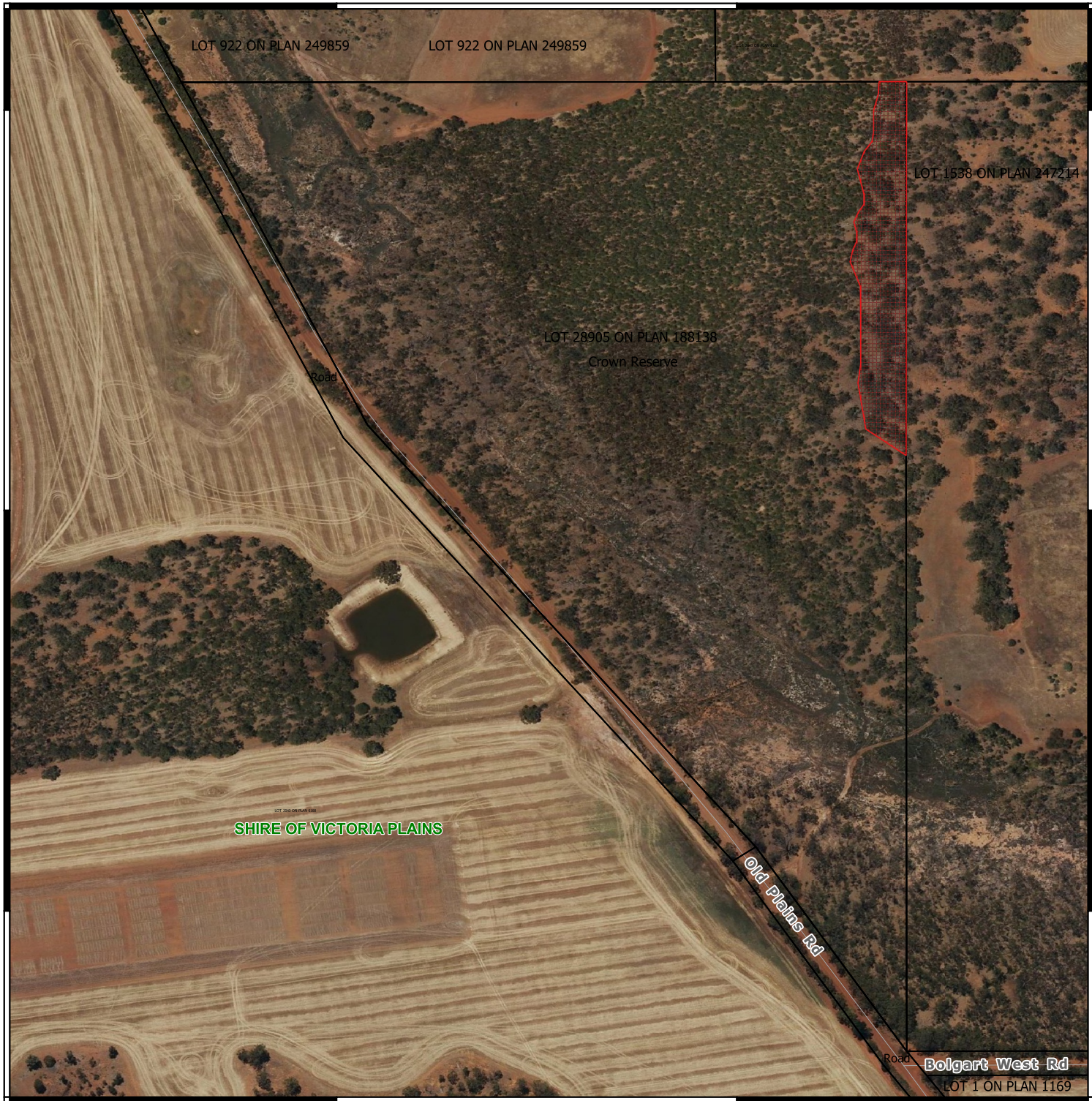
31°12'21.600"S

31°12'32.400"S

31°12'32.400"S

31°12'43.200"S





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116°21'50.400"E

116°22'1.200"E

## Map Layers

-  CPS subject to conditions
-  Local Government Authorities
-  Land Tenure
- Road Centrelines
  -  Local Rd - Other



0 50 100 150 200 m



1:3000

MGA Zone 50  
Geocentric Datum of Australia 1994

7 April 2021

Date .....

Officer delegated under section 20 of the  
Environmental Protection Act 1986



GOVERNMENT OF  
WESTERN AUSTRALIA



# Plan 8357/1g

116°21'50.400"E

116°22'1.200"E

116°22'12.000"E

31°12'21.600"S

31°12'21.600"S

31°12'32.400"S

31°12'32.400"S

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31°12'43.200"S







116°21'50.400"E

116°22'1.200"E

116°22'12.000"E

## Map Layers

-  CPS subject to conditions
-  Local Government Authorities
-  Land Tenure
- Road Centrelines
  -  Local Rd - Other



0 50 100 150 200 m



1:3000

MGA Zone 50  
Geocentric Datum of Australia 1994

7 April 2021

.....Date .....

Officer delegated under section 20 of the  
Environmental Protection Act 1986



GOVERNMENT OF  
WESTERN AUSTRALIA

# Plan 8357/1h

116°21'50.400"E

116°22'1.200"E

116°22'12.000"E

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31°12'21.600"S

31°12'32.400"S

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31°12'43.200"S





31°12'43.200"S

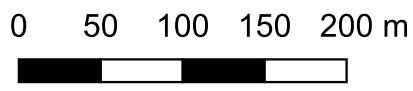


116°21'50.400"E

116°22'1.200"E

116°22'12.000"E

-  Local Government Authorities
-  Land Tenure
- Road Centrelines
-  Local Rd - Other
-  **CPS subject to conditions**



1:3000

MGA Zone 50  
Geocentric Datum of Australia 1994

*Burton* 7 April 2021  
..... Date .....

Officer delegated under section 20 of the  
Environmental Protection Act 1986



# Plan 8357/1i

116°21'50.400"E

116°22'1.200"E

31°12'21.600"S

31°12'21.600"S

31°12'32.400"S

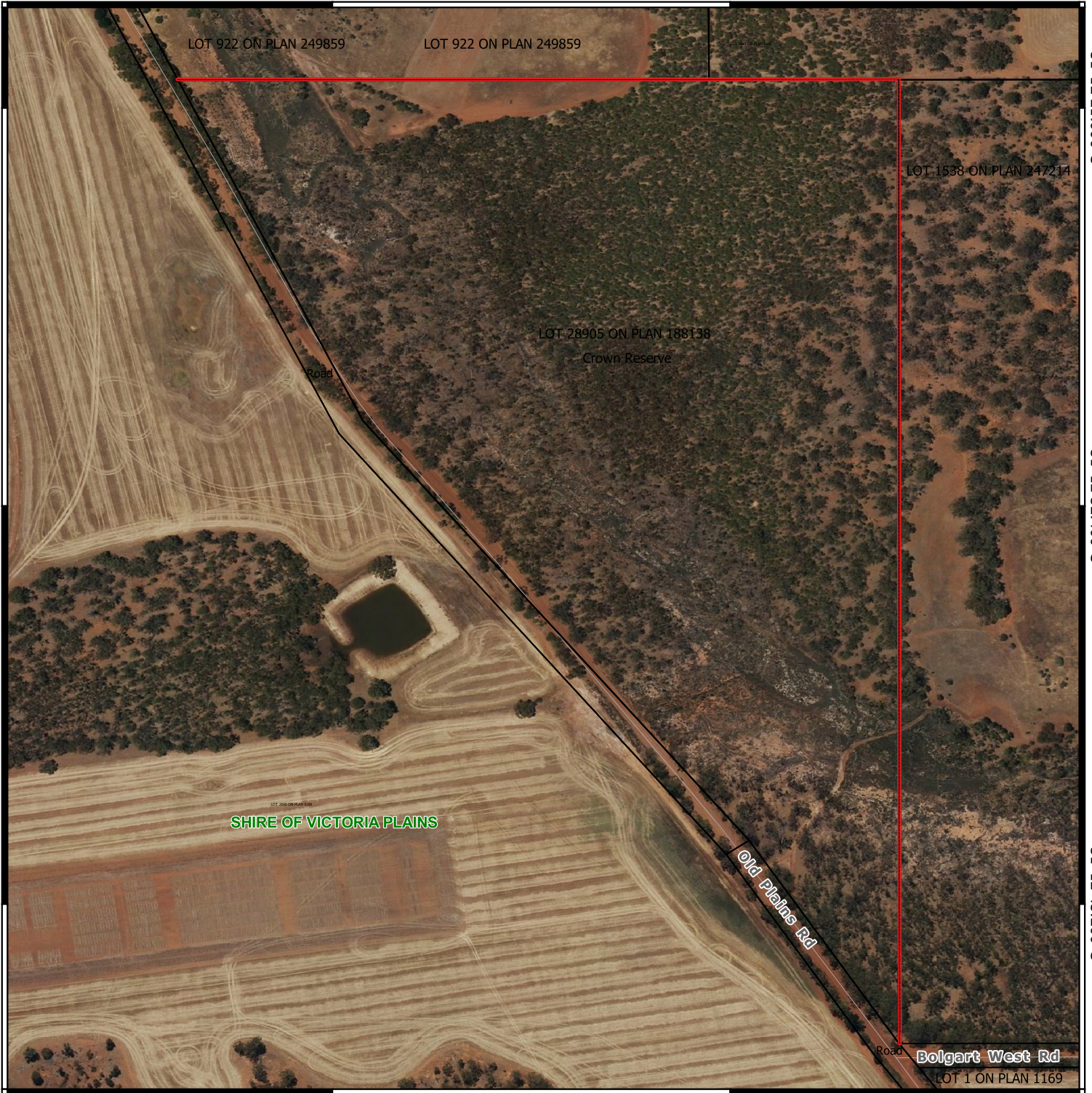
31°12'32.400"S

31°12'43.200"S





31°12'43.200"S

116°21'50.400"E

116°22'1.200"E



## Map Layers

-  CPS subject to conditions
-  Local Government Authorities
-  Land Tenure
- Road Centrelines
  -  Local Rd - Other



*Burton*

7 April 2021

..... Date .....

0 50 100 150 200 m



1:3000

MGA Zone 50  
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GOVERNMENT OF  
WESTERN AUSTRALIA