GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: 8917/1
File Number: DWERVT5818
Duration of Permit: From 28 July 2020 to 28 July 2022

PERMIT HOLDER
Shire of Toodyay

LAND ON WHICH CLEARING IS TO BE DONE
Julimar Road reserve, (PIN 11440887 and PIN 11536027), West Toodyay.

AUTHORISED ACTIVITY
The Permit Holder shall not clear more than 0.477 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8917/1.

CONDITIONS

1. Avoid, minimise and reduce the impacts and extent of clearing
In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in 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.

2. Weed and dieback control
When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *dieback* and *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 *dieback* or *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.

3. Records must be kept
The Permit Holder must maintain the following records for activities done pursuant to this Permit, in relation to the clearing of native vegetation authorised under this Permit:
(a) 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 or decimal degrees;
(b) the date that the area was cleared;
(c) the size of the area cleared (in hectares);
(d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit; and
(e) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 2 of this Permit.

4. Reporting

The Permit Holder must produce the records required under condition 3 of this Permit when required by the *CEO*.

DEFINITIONS

The following meanings are given to terms used in this Permit:

CEO: means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

dieback means the effect of *Phytophthora* species on native vegetation;

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weed/s means any plant -

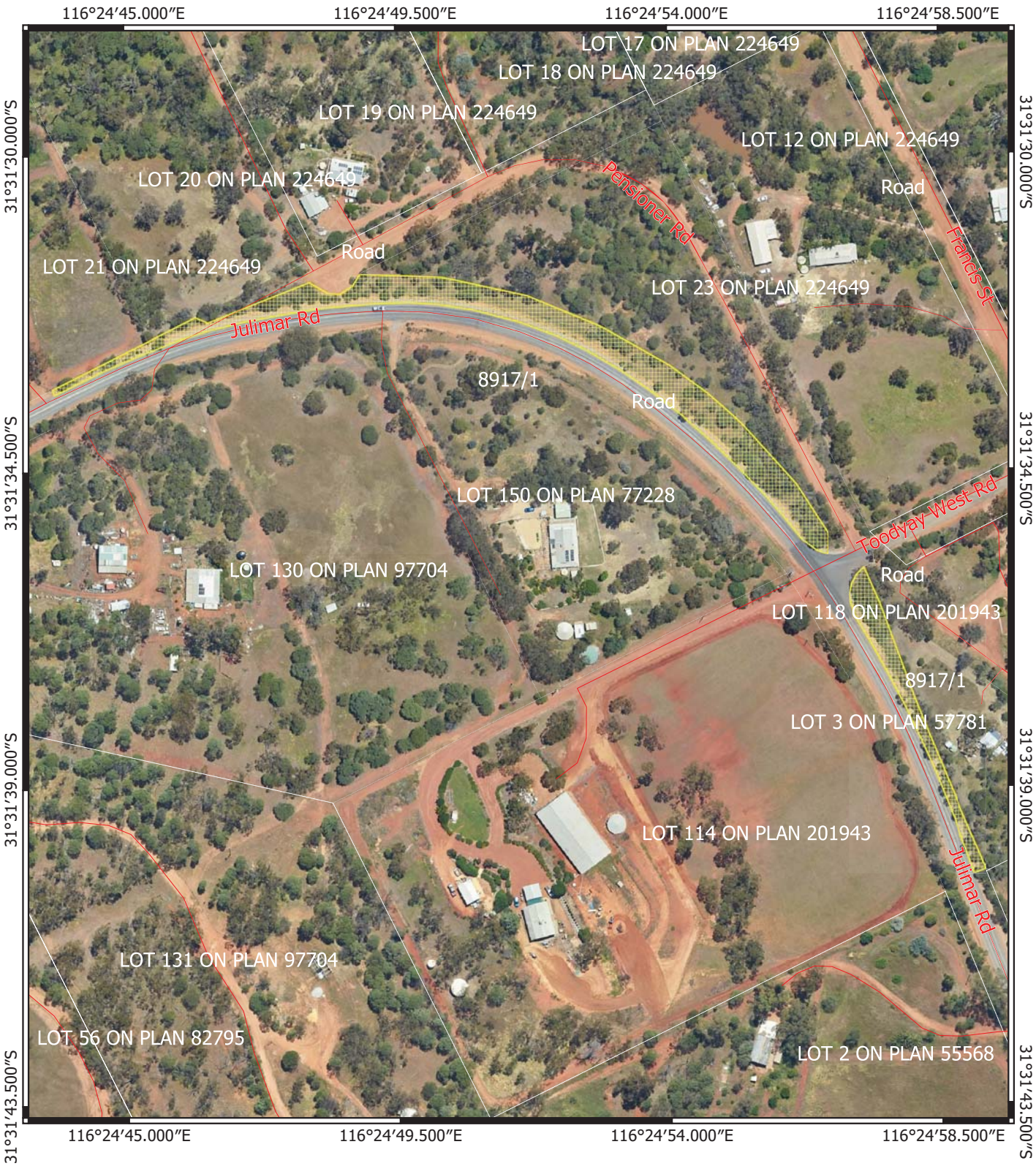
(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
(b) published in a Department of Biodiversity, Conservation and Attractions Regional Weed Rankings Summary, regardless of ranking; or
(c) not indigenous to the area concerned.

Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

3 July 2020

Plan 8917/1



Legend

CPS layers

CPS areas approved to clear

base layers

Road Centrelines

Cadastre - LGATE 218

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Officer delegated under section 20 of the Environmental Protection Act 1986

GOVERNMENT OF WESTERN AUSTRALIA

Clearing Permit Decision Report

1. Application details and outcome

1.1. Permit application details

Permit number:	CPS 8917/1
Permit type:	Area permit
Applicant name:	Shire of Toodyay
Application received:	22 May 2020
Application area:	0.477 hectares (ha) of native vegetation
Purpose of clearing:	Road widening and safety upgrades
Method of clearing:	Mechanical
Property:	Julimar Road Reserve (PINS 11440887 and 11536027)
Location (LGA area/s):	Shire of Toodyay
Localities (suburb/s):	West Toodyay

1.2. Description of clearing activities

The vegetation applied to be cleared is distributed across two separate areas, totalling 0.477 ha (see Figure 1, Section 1.5).

The application is to clear vegetation for the purpose of widening Julimar Road, West Toodyay. Vegetation will be removed to allow for road widening. The proposed clearing area is an approximately 517 metre strip on the northern side of the road reserve.

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	3 July 2020
Decision area:	0.477 ha of native vegetation and three native trees as depicted in Section 1.5 below.

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Water and Environmental Regulation (DWER) on 22 May 2020. DWER advertised the application for public comment and no submissions were received.

for the site characteristics (see Appendix A), relevant datasets (see Appendix E), photos of the application area (see Appendix D), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the purpose of the clearing to improve community safety by widening a corner of Julimar Road.

The Delegated Officer determined that the proposed clearing may increase the spread of weeds and dieback into adjacent vegetation. To minimise this risk, a condition has been placed on the permit requiring the implementation of weed and dieback management practices. The Delegated Officer determined that given the small area and location of the proposed clearing, the degraded condition of the vegetation present, and the management measures implemented, the proposed clearing is not likely to lead to an unacceptable risk to the environment.

1.5. Site map

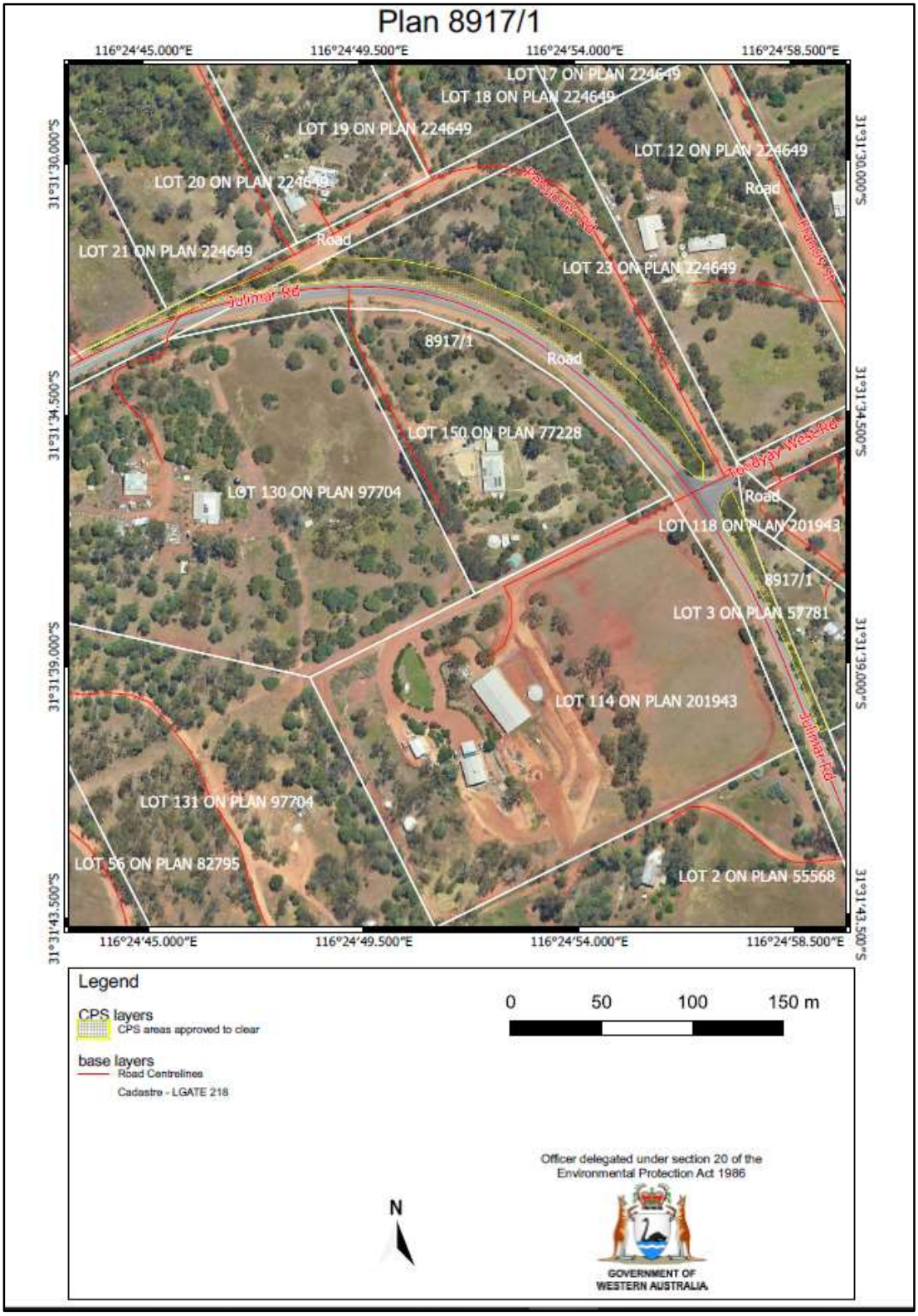

Figure 1. Map of the area approved to clear.

The area cross-hatched yellow indicates 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 1.3), 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; and
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include the:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Soil and Land Conservation Act 1945* (WA)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that clearing has been limited to the minimum required for the project. Whilst the total clearing footprint is 0.477ha, only three trees are to be removed, with the remainder comprised of scattered shrubs.

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.

3.2. Assessment of environmental impacts

In assessing the application in accordance with section 51O of the EP Act, the Delegated Officer has examined the application and site characteristics (Appendix A) and considered whether the clearing poses a risk to environmental values and whether these can be managed to be environmentally acceptable. The assessment against the Clearing Principles is contained in Appendix B.

This assessment identified that the clearing may pose a risk to fauna and adjacent flora and vegetation. 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. Environmental value: biological values (fauna) – Clearing Principle (b)

Assessment: The vegetation proposed to be cleared represents the general habitat requirements of the Conservation Dependant South-western Brush-tailed Phascogale *(Phascogale tapoatafa wambenger)* and the Vulnerable Chuditch *(Dasyurus geoffroii).* That is, sclerophyll forests and open woodlands that contain hollow-bearing trees (DEC 2012). Both these dasyurid species are 'critical weight range' (CWR) mammals (with a weight between 35 grams and 5,500 grams) whose distribution and abundance have declined severely, most likely due to fox and feral cat predation (Burbidge and McKenzie 1989). Both are wide-ranging with large home ranges. These species require large areas of habitat such as the Julimar State Forest approximately four kilometres north-west of the application area where feral predator control is being implemented (DPAW 2016). These species are unlikely to occur due to distance from large areas of suitable habitat, proximity to an existing road, fragmented condition of the vegetation, and absence of large trees with potential to form hollows.

The vegetation proposed to be cleared potentially represents breeding and foraging habitat for the three species of threatened Black Cockatoo, and there are numerous unconfirmed roosts within the local area. The three trees proposed to be cleared are likely to be *Eucalyptus loxophleba,* and from the photographs supplied, no breeding habitat is present (Appendix D).

In regard to foraging preferences, Baudin's Cockatoo *(Calyptorhynchus baudinii)* and the Forest Red-tailed Black Cockatoo *(Calyptorhynchus banksii naso)* do not have a preference for York Gum (DoEE 2020a; DoEE 2020b). Carnaby's Cockatoo *(Calyptorhynchus latirostris)* may forage on York Gum blossom, however, York Gum is not considered a high-value foraging species (Groom 2011). Given the amount of potential foraging habitat present

locally (10,473 hectares) and the lack of other foraging sources within the application area (that is, limited to three trees at a single stratum), the potential foraging habitat within the application area is not considered to be significant. Furthermore, based on the absence of suitable breeding and roosting trees (as determined based on-site photos), the application areas is not considered to contain breeding or roosting habitat for the three species of black cockatoo.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable in relation to this environmental value.

Conditions: No fauna management conditions required.

3.2.2. Environmental value: biological values (flora) – Clearing Principles (a) to (d)

Assessment: The application area intersects an area mapped as Eucalypt woodlands of the Western Australian Wheatbelt (Wheatbelt Woodland) Threatened Ecological Community (TEC)/Priority Ecological Community (PEC). The vegetation within the application area does contain *Eucalyptus loxophleba,* a component of the Wheatbelt Woodland TEC/PEC. However, based on the condition of the vegetation (considered to be Degraded based on site photos provided), and the density of mature trees within the application area (< 3 trees per 0.5 hectare), the condition criteria for the vegetation to meet this TEC/PEC has not been met. Furthermore, based on aerial imagery, the crown cover of the tree canopy within the application area is less than 10 per cent, which is less than the required cover as per the key diagnostic characteristics (Department of the Environment 2015). Given the above, the vegetation within the application area is not considered part of the Wheatbelt Woodlands TEC/PEC.

The application area occurs within the same mapped soil type on which existing known records of the Threatened species, *Grevillea flexuosa* occurs, with the nearest record 0.9 kilometres away. The vegetation in which local records of the species have been recorded (Wandoo/ Powderbark Wandoo and Marri woodland) (WAH 1998-) is inconsistent with the vegetation within the application area. Furthermore, the existing records occur on breakaways and upper slopes, inconsistent with the landform of the application area (lower slopes). Given the above, *Grevillea flexuosa* is unlikely to occur within the application area.

The application area occurs within the same mapped soil type on which existing known records of the Priority 2 flora species, *Grevillea candolleana* occurs, with the nearest record 1.85 kilometres away. The vegetation in which local records of the species have been recorded (*Eucalyptus marginata* woodland) (WAH 1998-) is inconsistent with the vegetation within the application area. Given the above, *Grevillea candolleana* is unlikely to occur within the application area.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable in relation to this environmental value.

Conditions: No flora and/or vegetation management conditions required.

3.3. Relevant planning instruments and other matters

The Shire of Toodyay advised DWER that local government approvals under the *Planning and Development Act 2005*, or any other Act, are not required and that the clearing is consistent with the Shire's Local Planning Scheme (Shire of Toodyay 2020). The Shire did not have any objections to the clearing.

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 application area is located adjacent to an area that contains remnant native vegetation. The proposed clearing may increase the incidence of weeds and dieback spreading into this remnant. Weed and dieback management practices will assist in mitigating this risk.

Appendix A – Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix B.

1. Site characteristics

<table>
<tr><th>Site characteristic</th><th>Details</th></tr>
<tr><td>Local context</td><td>The proposed clearing area is a 0.477 hectare isolated patch of native roadside vegetation adjacent to Julimar Road. The proposed clearing area is associated with roadside vegetation designated as rural residential. Aerial imagery indicates the local area (10 kilometre radius of the proposed clearing area) retains approximately 33 per cent of the original native vegetation cover.</td></tr>
<tr><td>Vegetation description</td><td>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of medium height shrubs (Acacia sp.) up to 2 metres, and three Eucalypt trees (likely Eucalyptus loxophleba based on site photos) to 10 metres. Representative photos are available in Appendix D

This is consistent with mapped vegetation type:

• The Bindoon Vegetation Complex, which is described as woodland of Eucalyptus loxophleba on the slopes, flanked by woodlands of Eucalyptus wandoo-Eucalyptus accedens on the breakaways and upper slopes in the perarid zone (Mattiske and Havel 1998).</td></tr>
<tr><td>Vegetation condition</td><td>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in a degraded condition, based on the scale described by Keighery (1994) (See Appendix C). Representative photographs are available in Appendix D.</td></tr>
<tr><td>Soil description</td><td>The soils within the application area are mapped as:

• Steep Rocky Hills 2 Subsystem - Areas of steep, rocky hills.
• Jelcobine York Subsystem - Areas of soils derived from freshly exposed rock. This unit is typified by the red soils of the Avon Valley but also includes areas of similar, but often greyer and lighter textured soils to the east of the valley.</td></tr>
<tr><td>Land degradation risk</td><td>
<table>
<tr><th rowspan="2">Aspect</th><th colspan="4">Degradation risk</th></tr>
<tr><th colspan="2">Jelcobine York Subsystem 256JcYO 1</th><th colspan="2">Steep Rocky Hills 2 Subsystem 256JcR2</th></tr>
<tr><th></th><th>Risk</th><th>Hazard Rating</th><th>Risk</th><th>Hazard Rating</th></tr>
<tr><td>Wind Erosion</td><td>10%</td><td>High - Extreme</td><td>11%</td><td>High - Extreme</td></tr>
<tr><td>Waterlogging</td><td>2%</td><td>Very High</td><td>0%</td><td>Moderate - Very High</td></tr>
<tr><td>Water Erosion</td><td>7%</td><td>Very High - Extreme</td><td>34%</td><td>Very High - Extreme</td></tr>
<tr><td>Salinity</td><td>1%</td><td>Moderate - Extreme</td><td>0%</td><td>Moderate - Extreme</td></tr>
<tr><td>Flood Risk</td><td>2%</td><td>Moderate - Very High</td><td>2%</td><td>Moderate - Very High</td></tr>
</table>
</td></tr>
<tr><td>Waterbodies</td><td>The desktop assessment and aerial imagery indicated that no watercourses or wetlands transect the area.</td></tr>
<tr><td>Conservation areas</td><td>The proposed clearing is not located within any conservation areas. The nearest Conservation area to the proposed clearing area is located approximately 1.8 kilometres north-west (Rugged Hills Nature Reserve – R21429).</td></tr>
<tr><td>Climate and landform</td><td>The proposed clearing is located within the Jelcobine System 256Jc. This system is typified by isolated steep low hills with undulating low granite hills and isolated lateritic remnants in the Zone of Rejuvenated Drainage. Gravels, and grey shallow to deep sandy duplexes. Wandoo, york gum, Jam and Casuarina woodland</td></tr>
</table>

Site characteristic	Details
	predominate. Undulating low hills to rolling hills, resulting from dissection of the Jimperding Metamorphic belt by the Avon river (DPIRD 2017). The climate in of the proposed clearing area is warm and temperate. The winter months have higher rainfall than summer months with an annual rainfall (BOM 2020).

2. Flora, fauna and ecosystem analysis

With consideration for the site characteristics set out above, and relevant datasets (see Appendix E), an analysis of relevant ecosystem, flora, and fauna factors are presented below.

Ecological Linkages: No significant mapped linkages within or adjacent to the application area.

Species / Ecological Community	Distance of closest record to application area (kilometres)	Suitable soil type? (flora, ecological community)	Suitable vegetation type? (flora, ecological community)	Suitable habitat features (fauna)	Are surveys adequate to identify? (Y, N, N/A)
Communities					
Eucalypt woodlands of the Western Australian Wheatbelt (P3 - DBCA; Critically Endangered [EPBC Act])	Community mapped over application area	Yes	Potenitally		N/A
York Gum Woodlands of the wheatbelt (P3)	8.55	Yes	No		N/A
Flora					
Grevillea candolleana (P2)	1.85	Yes	No		N/A
Eremaea blackwelliana (P4)	7	No	No		N/A
Grevillea flexuosa (VU)	0.9	Yes	No		N/A
Stylidium vinosum (P1)	7.7	No	No		N/A
Calytrix oncophylla (P2)	9.14	No	No		N/A
Asterolasia grandiflora (P4)	5.7	No	No		N/A
Chordifex chaunocoleus (P4)	6.2	No	no		N/A
Tetratheca retrorsa (P3)	6.5	No	No		N/A
Leucopogon sp. Bindoon (F. Hort 2766) (P2)	2.7	No	No		N/A
Grevillea curviloba (CR; EN [EPBC])	6.9	No	No		N/A
Verticordia serrata var. *linearis* (P3)	8.8	No	No		N/A
Acacia trinalis (P1)	6.9	No	No		N/A
Boronia scabra subsp. *condensata* (P2)	6.4	No	No		N/A
Fauna					
Calyptorhynchus banksii naso (VU)	3.75			Yes	N/A
Calyptorhynchus baudinii (EN)	4.80			Yes	N/A
Calyptorhynchus latirostris (EN)	2.76			Yes	N/A

Species / Ecological Community	Distance of closest record to application area (kilometres)	Suitable soil type? (flora, ecological community)	Suitable vegetation type? (flora, ecological community)	Suitable habitat features (fauna)	Are surveys adequate to identify? (Y, N, N/A)
Calyptorhynchus sp. 'white-tailed black cockatoo' (EN)	6.26			Yes	N/A
Dasyurus geoffroii (VU)	8.17			Yes	N/A
Falco peregrinus (OS)	5.66			No	N/A
Idiosoma mcclementsorum (P2)	5.64			No	N/A
Idiosoma schoknechtorum (P3)	5.64			No	N/A
Leipoa ocellata (VU)	5.46			No	N/A
Macrotis lagotis (VU)	5.13			No	N/A
Notamacropus irma (P4)	5.64			No	N/A
Notomys longicaudatus (EX)	7.68			No	N/A
Phascogale tapoatafa wambenger (CD)	2.24			Yes	N
Westralunio carteri (VU)	0.66			No	N/A

3. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	% remaining	Current extent in all DBCA managed land (ha)	% current extent in all DBCA managed land (proportion of pre-European extent)	% remaining (local area)
IBRA bioregion						
Avon Wheatbelt	9,517,109.95	1,761,187.42	18.51	230,163.78	2.42	33
Vegetation complex						
Bindoon	36,053.79	10,521.91	29.18	857.84	2.35	33

Appendix B – Assessment against the Clearing Principles

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: None of the threatened and priority flora and ecological communities recorded in the local area are likely to occur within the application area. The application area does not contain significant habitat for fauna.	Not likely to be at variance	Yes
Principle (b): *"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."* Assessment: The application area comprises suitable habitat for five threatened fauna species. Noting the shape and extent of the proposed clearing, its location adjacent/in close proximity to patches of remnant vegetation, and the sparse weed-dominated understorey, the vegetation proposed to be cleared is unlikely to comprise a significant habitat for these or other native fauna.	Not likely to be at variance	Yes
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: Noting the type and condition of the vegetation, the application area is unlikely to be necessary for the continued existence of threatened flora.	Not likely to be at variance	Yes
Principle (d): *"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."* Assessment: Noting the composition and condition of the vegetation within the application area, the application area is unlikely to be representative of, or be necessary for the maintenance of, a TEC.	Not likely to be at variance	No
Environmental values: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of native vegetation in the local area (33 per cent of pre-European extent) is consistent with the national objectives and targets for biodiversity conservation in Australia. Furthermore, the vegetation in the proposed clearing areas is degraded and not considered to be a significant remnant nor considered to be part of a significant ecological linkage in the local area. The application area is not considered to be a significant remnant.	Not likely to be at variance	No
Principle (h): *"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."* Assessment: Given the distance to the nearest conservation area (1.8 kilometres), the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not likely to be at variance	No

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Environmental values: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given the proposed clearing area is 250 metres from an environment associated with a watercourse, and is adjacent to previously cleared areas, the clearing is not in an environment associated with a watercourse or wetland.	Not likely to be at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are moderately susceptible to water erosion. Noting the extent of the proposed clearing and the condition of the vegetation, and that no waterways occur within the application area, the proposed clearing is not likely to cause appreciable land degradation.	Not likely to be at variance	No
Principle (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."* Assessment: Given that no watercourses / wetlands / Public Drinking Water Sources Areas are recorded within the proposed clearing area, the clearing is not likely to impact surface or groundwater quality.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given that no watercourses / wetlands are recorded within the proposed clearing area, the clearing is unlikely to contribute to water-logging.	Not likely to be at variance	No

Appendix C – 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.

Measuring Vegetation Condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
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.

Appendix D – Biological survey information excerpts / photographs of the vegetation

Photographs provided by the Shire of Toodyay in support of the application (Shire of Toodyay, 2020a)

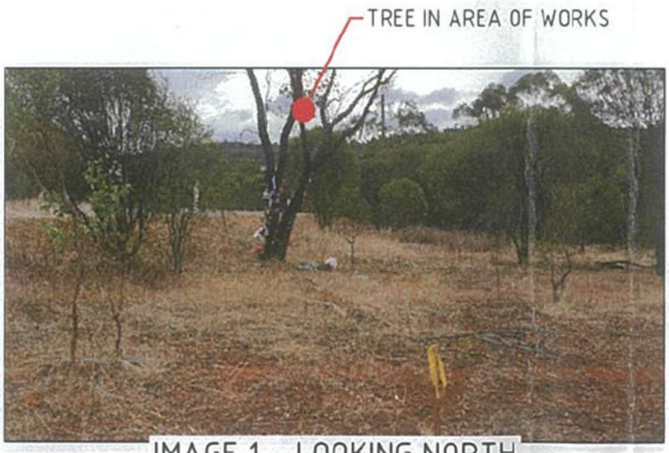

IMAGE 1 - LOOKING NORTH

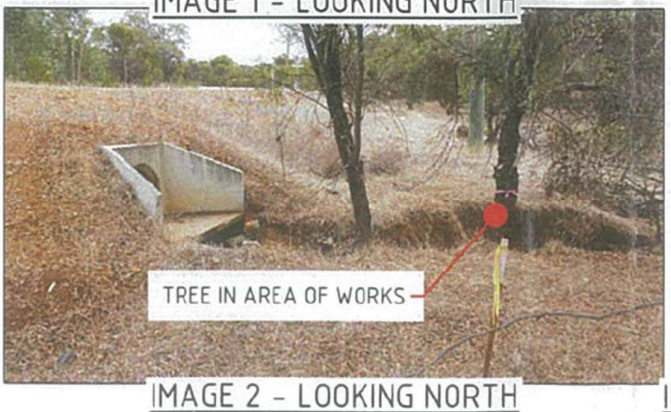

IMAGE 2 - LOOKING NORTH

IMAGE 3 - LOOKING NORTH

Appendix E – References and databases

1. GIS datasets

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

- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Regional Parks (DBCA-026)
- Soil and Landscape Mapping – Best Available

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
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

2. References

Burbidge AA, McKenzie NL. (1989) Patterns in the modern decline of western Australia's vertebrate fauna: causes and conservation implications. Biological Conservation. 1989;50:143–198. doi: 10.1016/0006-3207(89)90009-8.

Bureau of Meteorology (BOM) (2020) Climate classification maps. Available from: http://www.bom.gov.au/jsp/ncc/climate_averages/climate-classifications/index.jsp?maptype=kpn#maps

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

Department of Biodiversity, Conservation and Attractions (DBCA) (2019). Regional advice from the Wheatbelt Region for Clearing Permit application CPS 8588/1, received 11 September 2019. Department of Biodiversity, Conservation and Attractions, Government of Western Australia. (DWER Ref: A1824862).

Department of Environment and Conservation (DEC) (2012). Chuditch *(Dasyurus geoffroii)* Recovery Plan. Wildlife Management Program No. 54. Department of Environment and Conservation, Perth, Western Australia

Department of Parks and Wildlife (2016) Annual Report. Prepared by the Public Information and Corporate Affairs Branch of the Department of Parks and Wildlife. September 2016.

Department of Primary Industries and Regional Development (DPIRD) (2017). NRInfo Digital Mapping. Accessed at https://maps.agric.wa.gov.au/nrm-info/ Accessed September 2018. Department of Primary Industries and Regional Development. Government of Western Australia.

Department of the Environment (DoE) (2015). *Approved Conservation Advice (including listing advice) for the Eucalypt Woodlands of the Western Australian Wheatbelt*. Canberra: Department of the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/communities/pubs/128-conservation-advice.pdf. In effect under the EPBC Act from 04-Dec-2015.

Department of Environment and Energy (DoEE) (2020a) Species Profile and Threats Database: *Calyptorhynchus baudinii* — Baudin's Cockatoo, Baudin's Black-Cockatoo, Long-billed Black-Cockatoo. Department of Environment and Energy. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl.

Department of Environment and Energy (DoEE) (2020b) Species Profile and Threats Database: *Calyptorhynchus banksii naso* — Forest Red-tailed Black-Cockatoo, Karrak. Department of Environment and Energy. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl.

DPIRD (2017) NRInfo Digital Mapping. Accessed at https://maps.agric.wa.gov.au/nrm-info/ Accessed October 2019. Department of Primary Industries and Regional Development, Government of Western Australia.

EPA (2019). EPA Technical Report: Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region. Environmental Protection Authority, Western Australia. Available from https://www.epa.wa.gov.au/policiesguidance/carnaby%E2%80%99scockatoo-environmental-impact-assessment-perth-and-peel-region

Government of Western Australia (2019) 2018 South West Vegetation Complex Statistics. Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth, https://catalogue.data.wa.gov.au/dataset/dbca

Groom (2011) Plants Used by Carnaby's Black Cockatoo. List prepared by Christine Groom. Western Australian Department of Parks and Wildlife (now the Department of Biodiversity, Conservation and Attractions). Perth. 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.

Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

RCC (2004). Roadside conservation values in the Shire of Mukinbudin. Roadside Conservation Committee, Como WA. Available from https://www.dpaw.wa.gov.au/images/documents/conservation-management/off-roadconservation/rcc/reports/shire_of_mukinbudin_technical_report_2004.pdf

Shire of Toodyay (2020). Telephone discussion with Greg Warburton from the Shire of Toodyay (applicant). Confirmation that additional approvals under the *Planning and Development Act 2005*, or any other Act, are not required, and that clearing is consistent with the Shire's Local Planning Scheme (DWER Ref: A1908514).

Shire of Toodyay (2020a) Application form and supporting documentation – CPS 8917/1. (DWER Ref: A1896405).

Western Australian Herbarium (WAH) (1998-). FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. https://florabase.dpaw.wa.gov.au/ Accessed October 2019