



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 8524/1

File Number: DWERVT2913

Duration of Permit: From 27 September 2019 to 27 September 2024

PERMIT HOLDER

Shire of Serpentine - Jarrahdale

LAND ON WHICH CLEARING IS TO BE DONE

Abernethy Road reserve (PINs 11756240, 11614507), Oakford

Jarrahdale Road reserve (PINs 11412598, 11547873, 1177651), Jarrahdale

Kingsbury Drive road reserve (PINs 11412613, 1210318, 11539548, 11539547), Jarrahdale

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 9.94 hectares of native vegetation within the combined area hatched yellow on attached Plan 8524/1a and Plan 8524/1b.

CONDITIONS

1. Avoid, minimise and reduce the extent and impacts 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:

- (i) avoid the clearing of native vegetation;
- (ii) minimise the amount of native vegetation to be cleared; and
- (iii) reduce the impact of clearing on any environmental value.

2. Dieback and weed 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 *weeds* and *dieback*:

- (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (ii) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (iii) 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 in relation to the clearing of native vegetation authorised under this Permit:

- (i) 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;
- (ii) the date that the area was cleared;
- (iii) the size of the area cleared (in hectares);
- (iv) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit; and
- (v) 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

- (a) The Permit Holder must provide to the *CEO* on or before 1 July of each year, a written report:
 - (i) of records required under condition 3 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.

- (a) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the *CEO* on or before 14 June of each year.

- (c) Prior to 27 June 2024, the Permit Holder must provide to the *CEO* a written report of records required under condition 3 of this Permit where these records have not already been provided under condition 4(a) of this Permit.

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;

soil disease status means soil types either infested, not infested, uninterpretable or not interpreted with a pathogen.

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*

28 August 2019

Plan 8524/1a



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



0  100m

1:2,088

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994



Date 28 August 2019

Mathew Gannaway

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



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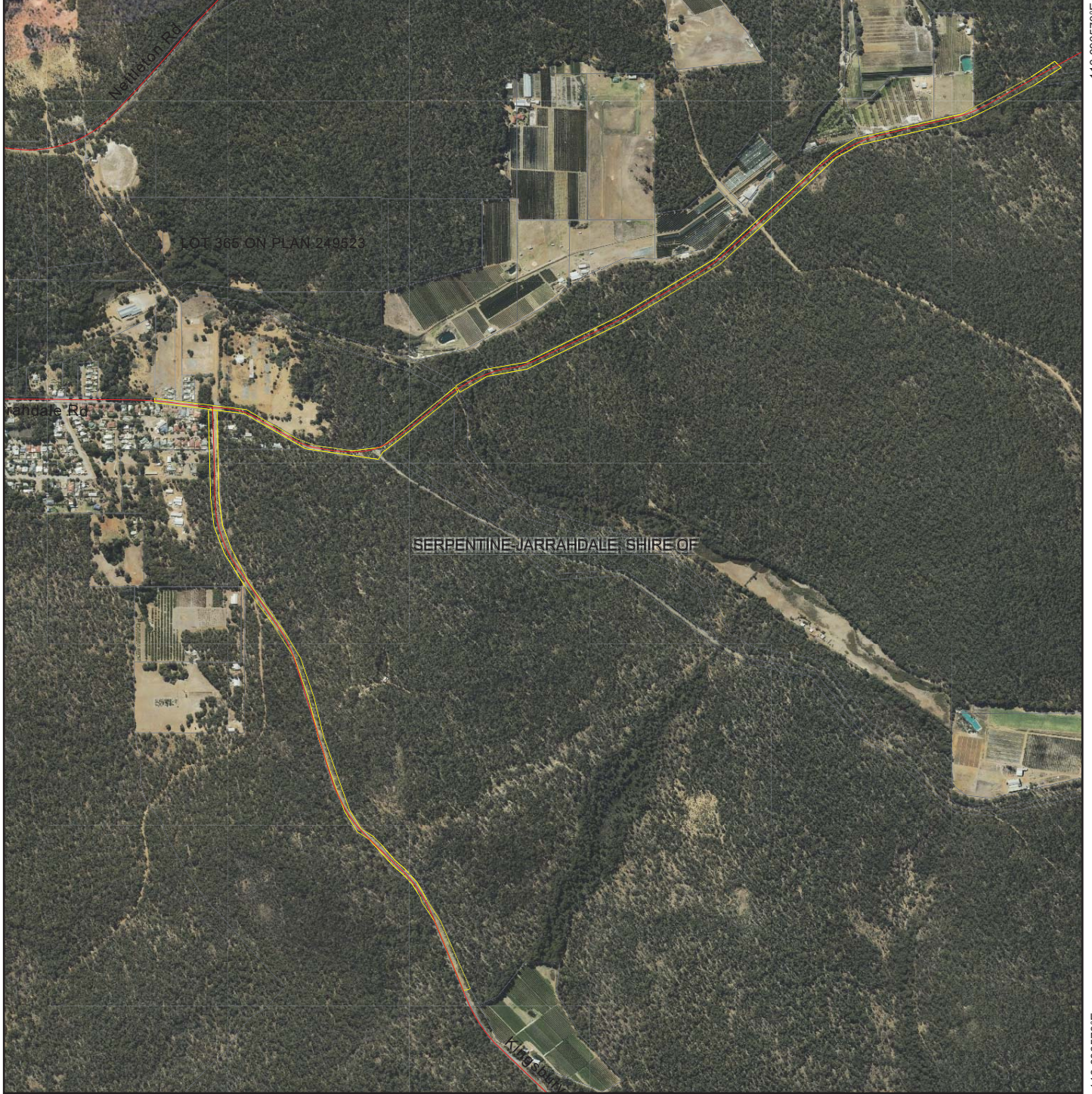
Plan 8524/1b

32.333524°S

32.333524°S

116.063113°E

116.063113°E



116.063113°E

116.063113°E

32.349343°S

32.349343°S

Legend

- Imagery
- Clearing Instruments Activities
- Local Government Authority



1:16,685

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Date 28 August 2019
Mathew Gannaway

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1. Application details

1.1. Permit application details

Permit application No.: 8524/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Serpentine-Jarrahdale
Application received date: 7 June 2019

1.3. Property details

Property: Abernethy Road reserve (PIN 11756240, 11614507), Oakford
Jarrahdale Road reserve (PIN 11754241, 11412598, 11547873, 1177651), Jarrahdale
Kingsbury Drive road reserve (PIN 11412613, 1210318, 11539548, 11539547), Jarrahdale
Local Government Authority: Shire of Serpentine Jarrahdale
Localities: Jarrahdale and Oakford

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
9.94	0	Mechanical Removal	Road construction or upgrades

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 28 August 2019

Reasons for Decision: The clearing permit application was received on 7 June 2019 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986* (EP Act). It has been concluded that the proposed clearing is at variance to principles (f), may be at variance to principle (i) and (h), and is not likely to be at variance to the remaining principles.

The Delegated Officer determined that the proposed clearing may increase the spread of weeds and dieback into adjacent vegetation. To minimise the impact, a condition has been placed on the permit requiring the implementation of weed and dieback management measures.

The Delegated Officer also took into consideration that upgrades to the road will provide a public benefit.

Given the above, the Delegated Officer decided to grant a clearing permit subject to avoid and minimise and dieback and weed management conditions.

2. Site Information

Clearing Description

The application is to clear 9.94 hectares of native vegetation over three project areas within the Shire of Serpentine-Jarrahdale for the purpose of road construction and upgrades (Table 1). Hereon, referred to as the project areas.

Table 1: Shire of Serpentine-Jarrahdale project areas

Project area name	Abernethy Road	Jarrahdale Road	Kingsbury Drive
Interim Biogeographic Regionalisation for Australia (IBRA) region	Swan Coastal Plain	Jarrah Forest	Jarrah Forest
Project area (ha)	0.14	5.87	3.92
Proposed works	Up to 2-3 metres from existing road surface to improve line of sight for intersection.	Up to 3.5 metres on bends and corners from existing road surface.	Up to 3.5 metres on bends and corners from existing road surface.

Vegetation Description

Mapped Heddle vegetation complexes (Heddle et al. 1980):

Beermullah Complex: Mixture of low open forest of *Casuarina obesa* (Swamp Sheoak) and open woodland of *Corymbia calophylla* (Marri) - *Eucalyptus wandoo* (Wandoo) - *Eucalyptus marginata* (Jarrah). Minor components include closed scrub of *Melaleuca* species and occurrence of *Callitris pyramidalis* (Swamp Cypress). This complex is located within the Abernethy Road project area.

Mapped Matiske vegetation complexes (Matiske and Havel, 1998):

- Dwellingup 2, D2: Open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla* on lateritic uplands in subhumid and semiarid zones.
- Murray 1, My1: Open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Eucalyptus patens* on valley slopes to woodland of *Eucalyptus rudis*-*Melaleuca raphiophylla* on the valley floors in humid and subhumid zones.
- Yarragil 2, Yg2: Open forest of *Eucalyptus marginata* subsp. *thalassica*-*Corymbia calophylla* on slopes, woodland of *Eucalyptus patens*-*Eucalyptus rudis* with *Hakea prostrata* and *Melaleuca viminea* on valley floors in subhumid and semiarid zone.

These complexes are spread throughout the Jarrahdale Road and Kingsbury Drive project areas.

The three project areas have been identified by the Shire of Serpentine-Jarrahdale as containing the following vegetation (Shire of Serpentine-Jarrahdale, 2019):

- Abernethy Rd: *Casuarina obesa* over grass weeds in a degraded (Keighery, 1994) condition.
- Jarrahdale_Rd: Jarrah and Marri forest regrowth over *Acacia* spp. in degraded to good (Keighery, 1994) condition. The most eastern end is subject to the most disturbance and weed invasion. The vegetation within the understorey consists predominately of *Acacia* sp..
- Kingsbury Dr: Jarrah and Marri forest regrowth in degraded to very good (Keighery, 1994) condition. The eastern side of the project area has previously been cleared to maintain existing powerlines.

Vegetation Condition

The application was determined to range in condition from Very Good to Degraded, described as:

- Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994); to
- Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Soil type

Three soil types have been mapped within the application area, being (Department of Primary Industries and Regional Development (DPIRD), 2019):

- Dwellingup 2 Phase: Very gently to gently undulating terrain (<10%) with well drained, shallow to moderately deep gravelly brownish sands, pale brown sands and earthy sands overlying lateritic duricrust. Located within Kingsbury Drive and Jarrahdale Road project areas.
- Pinjarra P7 Phase: Seasonally inundated swamps and depressions with very poorly drained variable acidic mottled yellow and grey sandy duplex and effective duplex soils. Located within Abernethy Road project area.
- Yarragil 1 Phase: Very gentle to moderately inclined concave sideslopes. Moderately well drained yellow duplex soils and yellow and brown massive earths. Woodland of *E. wandoo*, *E. marginata*, *E. accedens*. *Casuarina obesa* on salt affected areas. Located within Kingsbury Drive and Jarrahdale Road project areas.

Local Area description

The local area considered in the assessment of this application is defined as a 10 kilometre radius measured from the perimeter of the combined project areas.

Comment

Vegetation condition and description obtained through a series of site visits conducted by Shire of Serpentine-Jarrahdale during April 2019 (Shire of Serpentine-Jarrahdale, 2019).



Figure 1: Abernethy road project area

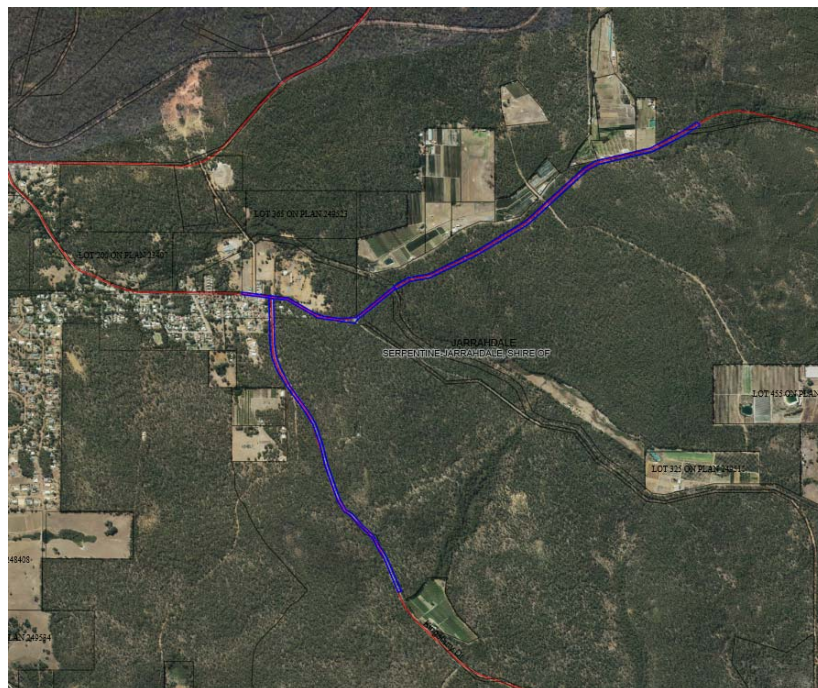


Figure 2: Kingsbury Drive and Jarrahdale road project areas.

3. Minimisation and mitigation measures

The applicant provided the following avoidance and mitigation measures as supporting information with the application (Shire of Serpentine-Jarrahdale, 2019);

- For Jarrahdale road and Kingsbury Drive project areas, vegetation will be cleared 1 to 1.5 meters only from the existing cleared table drain. Only understory species and a few young trees are proposed to be cleared for the works. All measures will be taken to avoid clearing of native vegetation. Removal of trees on both sides will be required.
- For Abernethy Road project area, the clearing is for establishing a slow point which will require 2 to 3 meters of clearing at the widest point after which the amount of clearing will reduce down to less than 1 meter wide. All measures will be taken to avoid clearing of native vegetation.

4. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biodiversity.

Proposed clearing is not likely to be at variance to this Principle

The project areas consist of *Casuarina obesa* over grass weeds and Marri and Jarrah regrowth in a degraded to very good (Keighery, 1994) condition (Shire of Serpentine-Jarrahdale, 2019).

As discussed in principle (b), it is not considered for the proposed clearing to impact on significant habitat for threatened fauna species.

Nineteen priority flora species occur within a 10 kilometre radius of the project areas. However, most are associated with granite outcrops or occur within habitats such as wetlands that do not occur within the application areas. No granite outcrops or wetlands occur within these project areas. No priority flora records have been mapped within the project areas. Based on condition and habitat type of the vegetation found within the project areas, it is not considered for the project areas to contain suitable habitat for priority flora.

No priority ecological communities (PEC) occur within the project areas or have been mapped within the local area of the proposed clearing.

As discussed in principle (c), six Threatened flora species occur within the local area. The project areas do not provide suitable habitat for threatened flora species.

As discussed in principle (d), it is not considered for the project areas to consist of habitat suitable for state listed threatened ecological communities (TEC). One commonwealth listed TECs (*Corymbia calophylla* - *Xanthorrhoea preissii* woodlands and shrublands, Swan Coastal Plain) which is also state listed TEC occurs within the local area. This TEC has been discussed within principle (d). It is not considered for the proposed clearing to impact state or Commonwealth listed TECs.

Given the above, it is not considered for the proposed clearing to contain vegetation that comprises a high level of biodiversity and therefore the proposed clearing is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this Principle

Seven terrestrial fauna species, listed as Threatened under the *Biodiversity Conservation Act 2016* (BC Act) within the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* and 12 other species of conservation importance have been recorded within the local area (DBCA, 2007-). Of these species, it is considered habitat for Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's cockatoo (*Calyptorhynchus latirostris*) and forest red-tailed black cockatoo species (*Calyptorhynchus banksia naso*) (herein referred to as black cockatoos) to occur within the project areas.

Black cockatoos have been recorded within the local area of the project areas. The project areas are on the edge of the Jarrah Forrest and Swan Coastal Plain IBRA regions which is known roosting, foraging and breeding habitat for all three species.

Black cockatoos nests in hollows in live or dead trees of wandoo, York gum, salmon gum, powderbark wandoo (*Eucalyptus accedens*), marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*), flooded gum (*Eucalyptus rudis*), tuart (*Eucalyptus gomphocephala*) and karri (*Eucalyptus diversicolor*) (Commonwealth of Australia, 2012). The project areas within Jarrahdale Road and Kingsbury Drive do not contain trees with hollows as the vegetation consists of marri and jarrah re-growth. The project area within Abernethy Road reserve consists of *Casuarina obesa* over weeds and therefore is not considered to contain suitable breeding or roosting habitat for black cockatoos.

Common foraging species for black cockatoos includes seeds, flowers and nectar of Proteaceous plant species, *Eucalyptus* spp. and *Callistemon* spp. (Commonwealth of Australia, 2012). All of the project areas except Abernethy Rd contain suitable foraging habitat (*Eucalyptus* species) for black cockatoo species. However the vegetation within the Jarrahdale Road and Kingsbury Drive project areas are not considered to represent significant foraging habitat as these project areas occur adjacent to more than 1000 hectares of the Jarrahdale state forest that contains similar habitat in better condition. Furthermore, as the vegetation within Jarrahdale Rd and Kingsbury Dr project areas is considered juvenile regrowth, foraging quality for black cockatoos is expected to be low.

. Due to the project areas being adjacent to existing roads, Abernethy Road project area being in a degraded condition with no native understorey and Kingsbury Drive and Jarrahdale Road project areas being adjacent to Jarrahdale state forest which contains similar habitat in better condition, it is not considered for the project areas to contain significant habitat for the other conservation significant species recorded within the local area.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.

Proposed clearing is not likely to be at variance to this Principle

There are six Threatened flora species recorded within the local area, being *Anthocercis gracilis*, *Diuris purdei*, *Lepidosperma rostratum*, *Synaphea* sp. Pinjarra Plain (A.S. George 17182), *Synaphea* sp. Serpentine (G.R. Brand 103) and *Thelymitra stellata*.

Lepidosperma rostratum is mapped 2.3 kilometres south west of the Kingsbury Drive project area. This species grows within *Eucalyptus rudis* and *Melaleuca raphiophylla* woodland on the edges of a river in moist dark brown loam (Brown et al., 1998).

Anthocercis gracilis is mapped 9.4 kilometres south if the Kingsbury Drive project area. This species is found on steep granite slopes in shallow humus rich, loamy soils (Brown et al., 1998).

Diuris purdei is mapped 2.1 km southwest of Abernethy road project area. This species occurs in sand to sandy clay soils within winter wet areas (Brown et al., 1998).

Synaphea sp. Pinjarra Plain is mapped 5.7 kilometres southeast of the Abernethy road project area. This species occurs on grey sandy loam or clay within seasonally wet areas (Western Australian Herbarium, 1998-).

Synaphea sp. Serpentine is mapped 5.6 kilometres southeast of the Abernethy road project area. This species occurs adjacent or within seasonally wet areas on loamy or clay soils (Western Australia Herbarium, 1998-).

Thelymitra stellata is mapped 8.8 kilometres northeast of the Abernethy road project area. This species occurs within gravelly loam among low scrub in *Eucalyptus marginata* and *Eucalyptus wandoo* woodland and in low heath on lateritic hill tops (Brown et al., 1998).

The vegetation within Kingsbury Drive and Jarrahdale road reserves consists of Jarrah and Marri regrowth with the majority in a degraded (Keighery, 1994) condition. The applicant has advised that clearing in most areas will occur within 1.5 metres of the cleared table drain on both sides. No riparian vegetation occurs within the application areas and no granite outcrops are present. It is not considered for the project areas to contain habitat suitable for the threatened flora species listed above. Given the small area of proposed clearing and that the vegetation is mainly regrowth, it is not likely that the proposed clearing will impact on habitat for these species.

The vegetation within Abernethy Road reserve is in a degraded (Keighery, 1994) condition and consists of *Casuarina obesa* over grassy weeds. Given the condition of the vegetation within this project area, the proposed clearing within Abernethy Road reserve is not considered likely to impact habitat for threatened flora species.

The proposed clearing is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this Principle

No state listed TECs have been mapped within the project areas. The closest mapped TEC to the Jarrahdale and Kingsbury project areas is the *Corymbia calophylla* - *Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain TEC, located 7.3 kilometres to the west. The closest mapped TEC to Abernethy project area is the *Corymbia calophylla* - *Xanthorrhoea preissii* woodlands and shrublands, Swan Coastal Plain TEC, located 3 kilometre to the east.

As detailed within Section 2 of this report, the vegetation within the project areas is not considered to be representative of the above-mentioned TECs. Both the Jarrahdale and Kingsbury road project areas occur within the Jarrah Forest IBRA region and therefore are not considered likely to contain vegetation that represents TECs that only occur within the Swan Coastal Plain IBRA region.

Abernethy road project area is dominated by *Casuarina obesa* and does not contain any *Corymbia calophylla*. Therefore it is not considered that the vegetation within this project area to be representative of the above-mentioned TECs.

Given the above, the proposed clearing is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this Principle

The National Objectives and Targets for Biodiversity Conservation 2001-2005 include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750 (i.e. pre-European settlement) (Commonwealth of Australia, 2001). This is the threshold level, below which species loss appears to accelerate exponentially.

In assessing the risk of further loss and subsequent cumulative effects, consideration has been given to the extent of native vegetation remaining. The local area retains 48 per cent pre-European native vegetation cover within the local area. However, one of the project areas (Abernethy Road), occur within the extensively cleared eastern portion of the Swan Coastal Plain.

Abernethy Road is also mapped as a vegetation complexes that has less than 10 per cent or their pre-European extent remaining within the Swan Coastal Plain Bioregion (Beermullah Complex 6.5 per cent remaining). However, the vegetation within this project area occurs in a degraded (Keighery, 1994) condition and is not considered to be representative of this community.

It is not considered for the project areas to contain significant fauna habitat or habitat for threatened or priority flora species or communities.

Given the above, the proposed clearing is not considered to impact a significant remnant in a highly cleared landscape and is not likely to be at variance to this Principle.

Table 2: Vegetation Extents

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed lands (ha)	Extent remaining in all DBCA managed lands (proportion of Pre-European extent) (%)
IBRA Bioregion*					
Swan Coastal Plain	1,501,222	578,997	38.6	222,767	14.8
Jarrahdale Forest	4,506,660	2,406,939	53.4	1,673,353	37.1

Shire of Serpentine-Jarrahdale	90,050	46,822	52.0	39,901	85.0
Vegetation complexes Swan Coastal Plain**					
Beermullah Complex	6,707	434.03	6.5	138.57	2.1
Vegetation complexes South Western Forest**					
Dwellingup, D2	86,128	71,072	82.5	58,977	68.5
Murray 1, My1	68,695	52,387	76.3	44,540	64.8
Yarragil 2, Yg2	80,203	64,982	81	59,120.9	73.7

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Proposed clearing is at variance to this Principle

The Jarrahdale Road project area intersects two minor streams, non-perennial Gooralong Brook and an unnamed minor watercourse.

Given the above, the proposed clearing is at variance to this Principle. However given the small amount of clearing within these watercourses, impacts are likely to be minimal and short term and the proposed clearing is not considered significant.

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation

Proposed clearing is not likely to be at variance to this Principle

As discussed within Section 2 of this report, three soil types have been mapped within the project areas being; Dwellingup 2 Phase, Pinjarra P7 Phase and Yarragil 1 Phase (DPIRD) (2019).

Less than 3 per cent of the mapped soil types have a very high to extreme hazard of water erosion and salinity. Therefore the proposed clearing is not considered to cause appreciable land degradation through increased salinity or through water erosion.

Between 30 to 70 per cent of the mapped soils types have a high to extreme risk of wind erosion. The proposed clearing may cause land degradation through wind erosion. However noting the long and linear shape of the proposed clearing, that the clearing is to take place over three separate areas and the presence of bare soils will be minimal due to the construction of the road, the risk of appreciable land degradation through wind erosion is considered to be low.

Given the above, the proposed clearing is not likely to be at variance to this 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.

Proposed clearing may be at variance to this Principle.

The application area within Jarrahdale Road and Kingsbury Drive road reserves occur adjacent to the Jarrahdale state forest.

The proposed clearing within these project areas may increase the spread of weeds and dieback within the adjacent conservation area. Implementation of weed management and dieback management measures would reduce this risk. The proposed clearing may be at variance to this 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.

Proposed clearing may be at variance to this Principle

Groundwater salinity within the application area is mapped <500 total dissolved solids, milligrams per litre. This level of groundwater salinity is classified as 'fresh'. Given this level, the proposed clearing is not likely to increase groundwater salinity.

As discussed in Principle (f), the Jarrahdale Road project area intersects two minor rivers, non-perennial Gooralong Brook and an unnamed watercourse.

Given that the project areas may contain areas of surface water, the proposed clearing may increase sedimentation in the watercourse, thus potentially degrading the quality of surface water. The proposed clearing may be at variance to this Principle.

Although the proposed clearing may cause sedimentation of surface water, the impact is unlikely to be significant as the impact is likely to be short term during the clearing process. Surface water will be managed through the drainage design of the project areas.

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Proposed clearing is not likely to be at variance to this Principle

Less than three per cent of the mapped soil unit has a moderate to high flood risk. Based on this relatively low risk of flooding the proposed clearing is not likely to cause or exacerbate, the incidence or intensity of flooding.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Planning instruments and other relevant matters.

No Aboriginal sites of significance have been mapped within the project areas.

The clearing permit application was advertised on the Department of Water and Environmental Regulation (DWER) website on 16 July 2019 with a 21 day submission period. One public submission has been received. The submission stated concerns relating to the extent of the proposed clearing and that further evidence from the applicant is required to justify that avoid and minimise measures have been considered. Concerns were also raised regarding impact to Threatened and priority flora and fauna habitat (Submission, 2019). Upfront flora and fauna surveys were recommended. As discussed under principles (a), (b) and (c), the proposed clearing is not likely to impact significant habitat for threatened and priority flora and fauna. Please see the corresponding principles for more details..

The submission also raised concerns that the applicant should submit the proposed clearing and the proposed clearing under the nearby clearing application (CPS 8526/1) as one strategic application so impacts could be assessed as a whole. DWER has conducted a strategic preliminary assessment of the application area and the application areas for clearing permit application CPS 8526/1 prior to the applicant submitting the two separate applications. During this assessment it was determined that the applicant should submit the proposed clearing as two applications as the project areas for Cardup Siding and Wrights road (CPS 8526/1) are likely to impact priority and threatened flora habitat and a threatened ecological community and require further information prior to a decision being made. This preliminary assessment determined that no further information was required for a decision to be made for the proposed clearing under clearing application CPS 8524/1.

5. References

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- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
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- Department of Biodiversity, Conservation and Attractions (DCBA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed June 2018
- Department of Primary Industries and Regional Development (DPIRD) (2019). NRInfo Digital Mapping. Department of Primary Industries and Regional Development.
- Government of Western Australia (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Government of Western Australia (2018) 2017 South West Vegetation Complex Statistics. Current as of October 2017. WA Department of Biodiversity, Conservation and Attractions, Perth, <https://catalogue.data.wa.gov.au/dataset/dbca>
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GIS databases:

- CPS Areas applied to clear
- NatureMap (conservation significant fauna)
- DAFWA Subsystems V5
- Soils of WA
- Vegetation Complexes – Swan Coastal Plain
- Managed Tenure
- Environmentally Sensitive Areas
- TPFL Data July 2019
- WAHerb Data July 2019
- Aboriginal Sites Register
- IBRA Vegetation WA
- WA TECPEC
- Land Degradation Hazards