



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5028/1
Permit Holder:	Shire of Kellerberrin
Duration of Permit:	7 September 2012 – 7 September 2022

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of road widening and construction.

2. Land on which clearing is to be done

Kellerberrin-Yoting Road Reserve, MOUNT CAROLINE (6410) (PIN 1355940, 1355942, 1355943, 1302243 and 1302265)

Kellerberrin-Yoting Road Reserve, MOUNT STIRLING (6383) (PIN 1355938)

Kellerberrin-Yoting Road Reserve, SOUTH TAMMIN (6409) (PIN 1302293 and 1302244)

Kellerberrin-Shackleton Road Reserve, KELLERBERRIN (6410) (PIN 11725239 and 11725240)

Kellerberrin-Shackleton Road Reserve, DAADENNING CREEK (6410) (PIN 11650077, 11650080, 11650076, 11648555, 11648554, 11648556, 1648557 and 11648558)

Kwolyin West Road Reserve, KELLERBERRIN (6410) (PIN 1302303 and 1302304)

3. Area of Clearing

The Permit Holder shall not clear more than 2.5 hectares of native vegetation within the combined areas hatched yellow on attached Plan 5028/1a and 5028/1b and Plan 5028/1c and Plan 5028/1d and Plan 5028/1e.

4. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 7 September 2017.

5. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

6. 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.

7. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

8. Avoid, minimise etc 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.

9. 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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *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.

10. Fauna management

(a) Prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by a *fauna specialist* who shall identify *habitat tree(s)* that contain hollows suitable to be utilised as *habitat tree(s)* by fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice*.

(b) Where *habitat tree(s)* are identified in relation to condition 10(a) of this Permit, the Permit Holder shall ensure that:

- (i) no clearing of the identified *habitat tree(s)* occurs, unless approved by the CEO.

11. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

(a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.

(b) at an *optimal time* following clearing authorised under this Permit *revegetate* and *rehabilitate* within the areas hatched red on attached Plan 5028/1c by:

- (i) ripping the ground on the contour to remove soil compaction; and
- (ii) laying the vegetative material and topsoil retained under condition 11(a) on the cleared area(s).

(c) within 18 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 11(b) of this Permit:

- (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
- (ii) where, in the opinion of an *environmental specialist*, the species composition structure and density determined under condition 11(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.

- (d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 11(c)(ii) of this permit, the Permit Holder shall repeat condition 11(c)(i) and 11(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (e) Where a determination by an *environmental specialist* that the species composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 11(c)(i) and 11(c)(ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 11(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 11(c)(ii).

PART III - RECORD KEEPING AND REPORTING

12. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) 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;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).
- (b) In relation to fauna management pursuant to condition 10 of this Permit:
 - (i) the location of each *habitat tree* identified 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) a copy of the fauna specialist's report.
- (c) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 11 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, 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) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
 - (v) a copy of the environmental specialist's report.

13. 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 12 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 7 June 2022, the Permit Holder must provide to the CEO a written report of records required under condition 12 of this Permit where these records have not already been provided under condition 13(a) of this Permit.

DEFINITIONS

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

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

fauna specialist means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

habitat tree(s) means trees that have a diameter, measured at 1.5m above the ground, of 50cm or greater, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts;

local provenance means native vegetation seeds and propagating material from natural sources within 50kms kilometres of the area cleared.

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;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

regenerate/ed/ion 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 mulch;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

Wildlife Conservation (Specially Protected Fauna) Notice means those fauna taxa gazetted as rare fauna pursuant to section 14(4)(a) of the *Wildlife Conservation Act 1950* (as amended).

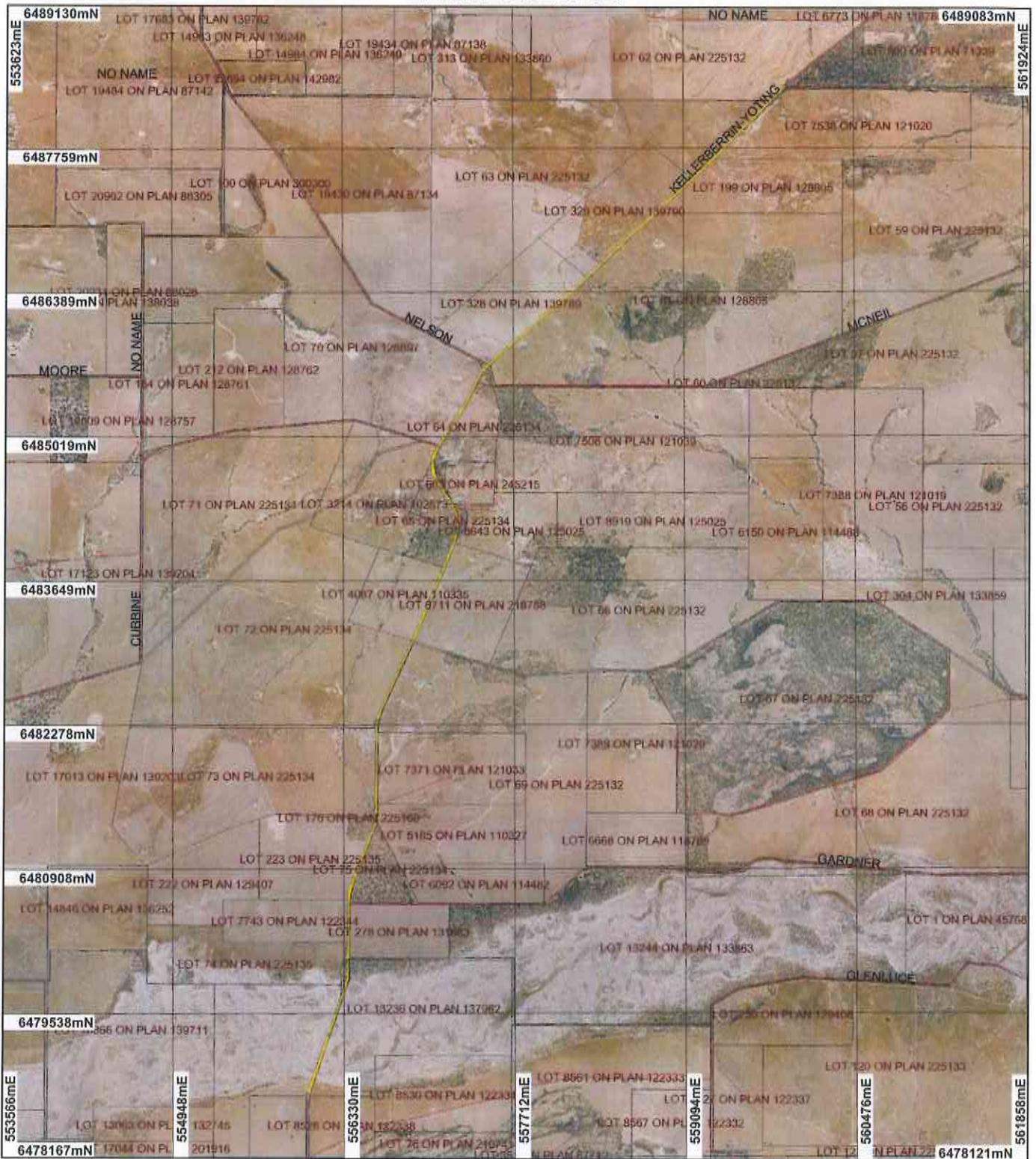


M Warnock
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

16 August 2012

Plan 5028/1a



LEGEND

<ul style="list-style-type: none"> Road Centrelines Cadastre for labelling Freehold Crown Reserve State Forest / Timber Reserve (cont) 	<ul style="list-style-type: none"> Marine Park Crown Lease Lease / Reserve Lease on State Forest / Timber Reserve Public Roads Unallocated Crown Land (cont) 	<ul style="list-style-type: none"> Water Clearing Instruments Areas Approved to Clear <p>Kellerberin 50cm Orthomosaic - Landgate 2004</p>
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(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

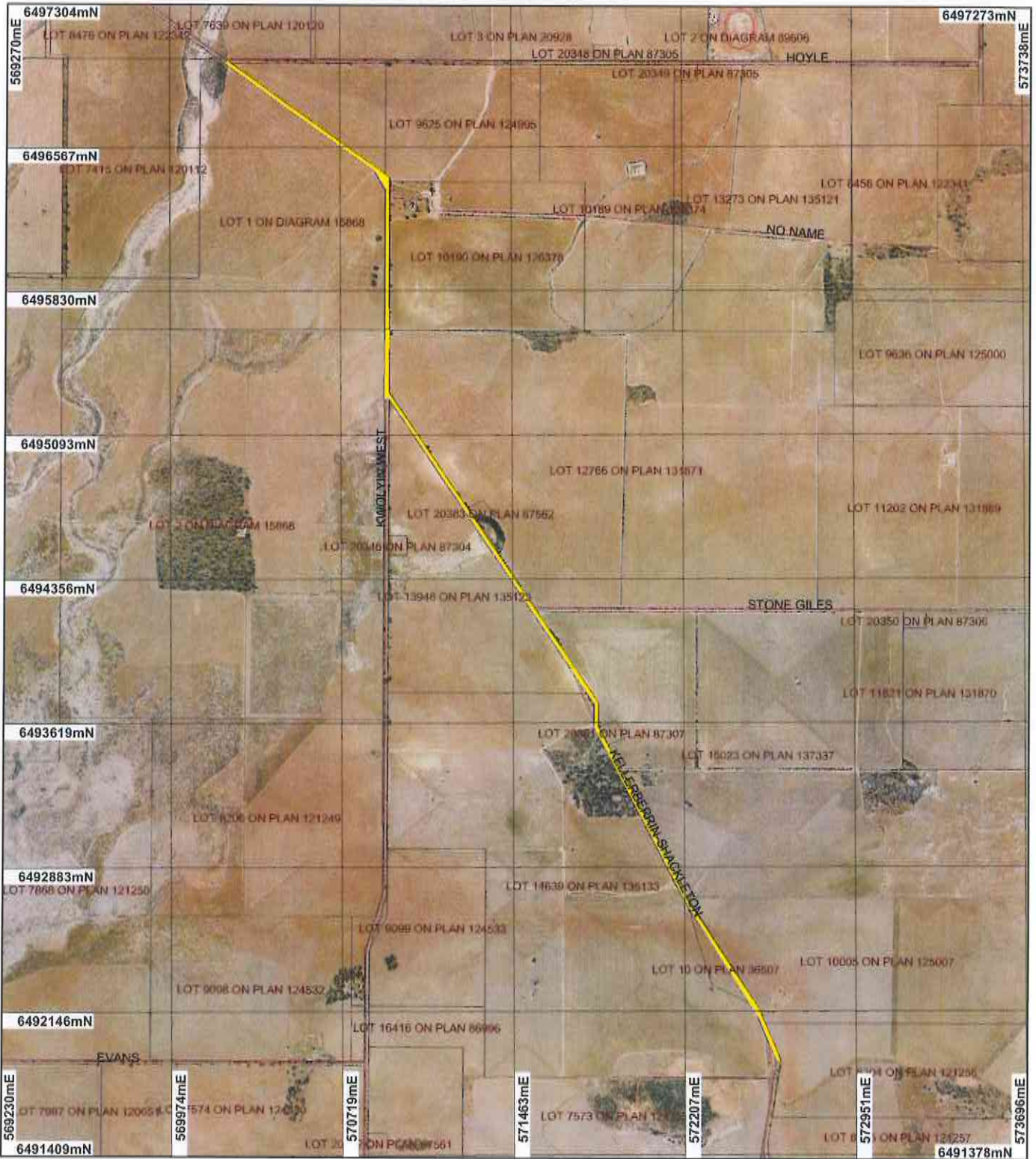
Overland Date 10/8/12

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

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Plan 5028/1b

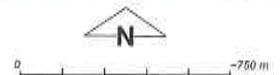


LEGEND

- Road Centrelines
- Cadastre for labelling
- Freehold
- Crown Reserve
- State Forest / Timber Reserve
- Marine Park (cont)

- Crown Lease
- Lease / Reserve
- Lease on State Forest / Timber Reserve
- Public Roads
- Unallocated Crown Land
- Water

- Clearing Instruments
- Areas Subject to Conditions
- Areas Approved to Clear
- Kellerberrin 50cm Orthomosaic - Landgate 2004**



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 (Approximate when reproduced at A4)
 Geocentric Datum Australia 1994
 Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

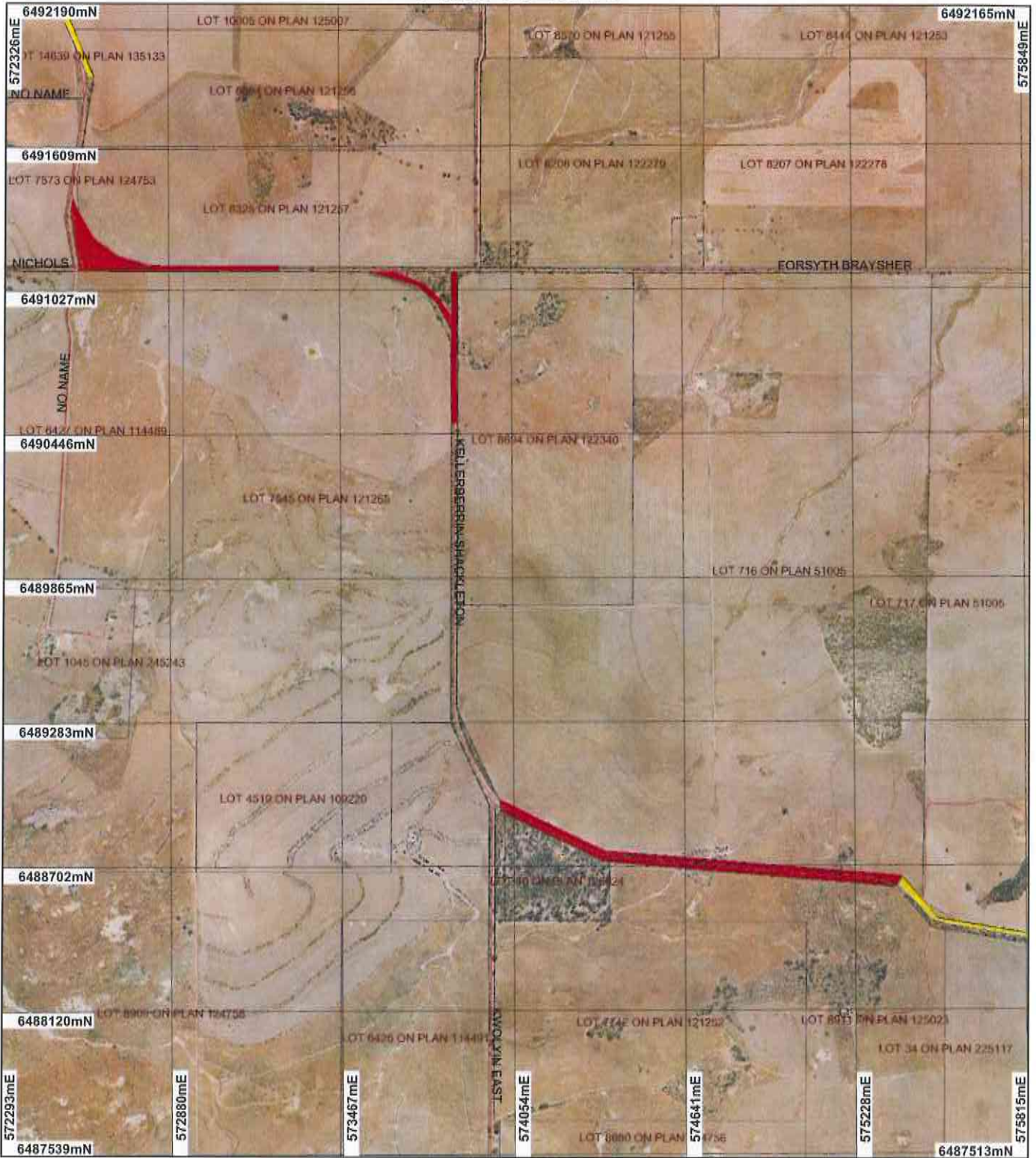
Completed Date **16/3/12**

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Plan 5028/1c

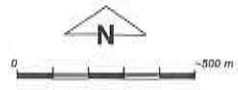


LEGEND

- ✗ Road Centrelines
- ▭ Cadastre for labelling
- ▭ Freehold
- ▭ Crown Reserve
- ▭ State Forest / Timber Reserve
- ▭ Marine Park (cont)

- ▭ Crown Lease
- ▭ Lease / Reserve
- ▭ Lease on State Forest / Timber Reserve
- ▭ Public Roads
- ▭ Unallocated Crown Land
- ▭ Water

- Clearing Instruments**
- ▭ Areas Subject to Conditions
- ▭ Areas Approved to Clear
- Kellerberrin 50cm Orthomosaic - Landgate 2004**



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(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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M Warnock Date *16/8/12*

M Warnock

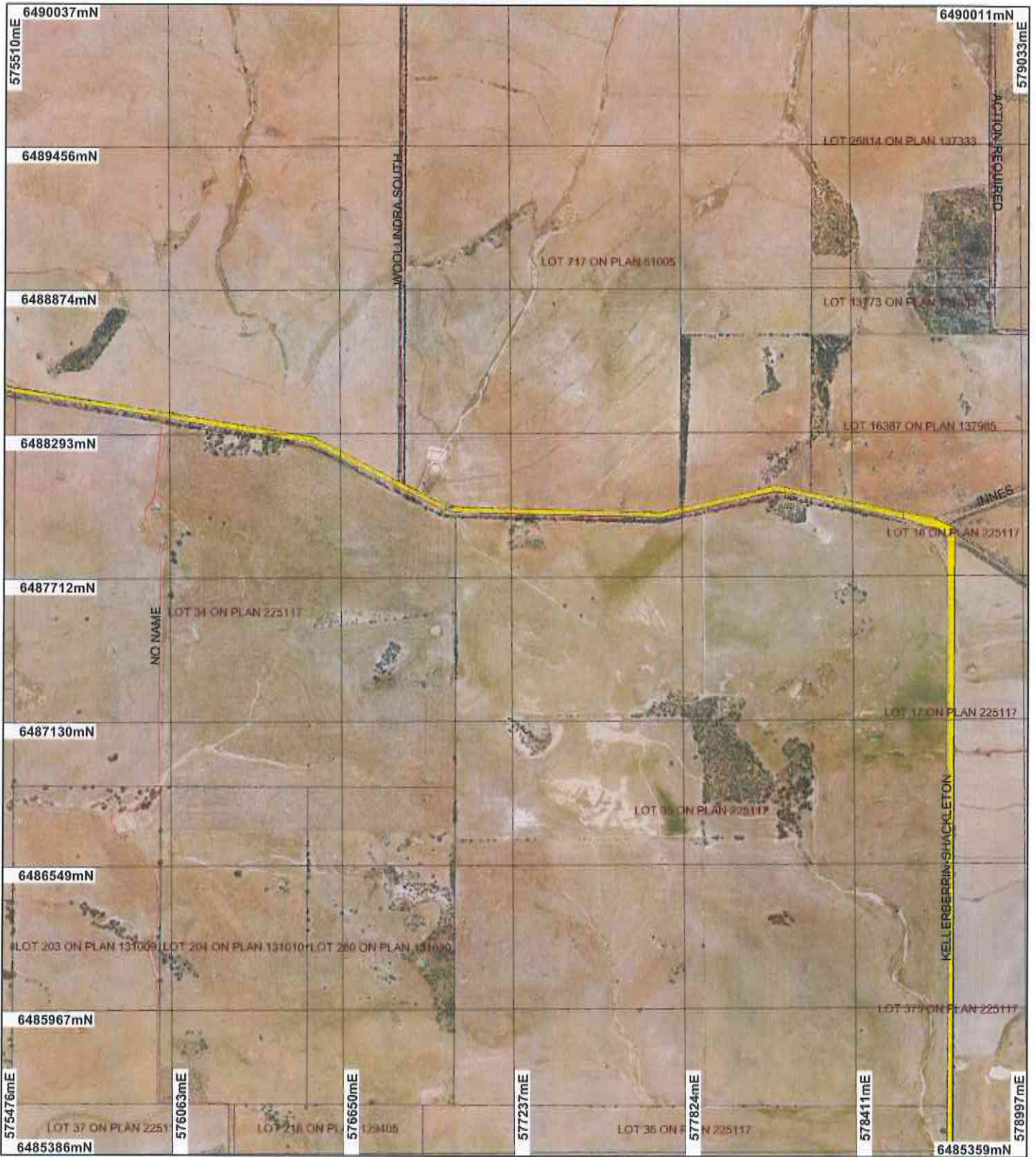
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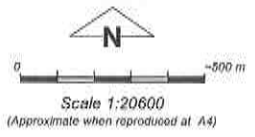
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Plan 5028/1d



LEGEND

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> Road Centrelines Cadastre for labelling Freehold Crown Reserve State Forest / Timber Reserve Marine Park (cont) | <ul style="list-style-type: none"> Crown Lease Lease / Reserve Lease on State Forest / Timber Reserve Public Roads Unallocated Crown Land Water | <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Subject to Conditions Areas Approved to Clear <p>Kellerberrin 50cm Orthomosaic - Landgate 2004</p> |
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Geocentric Datum Australia 1994
Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

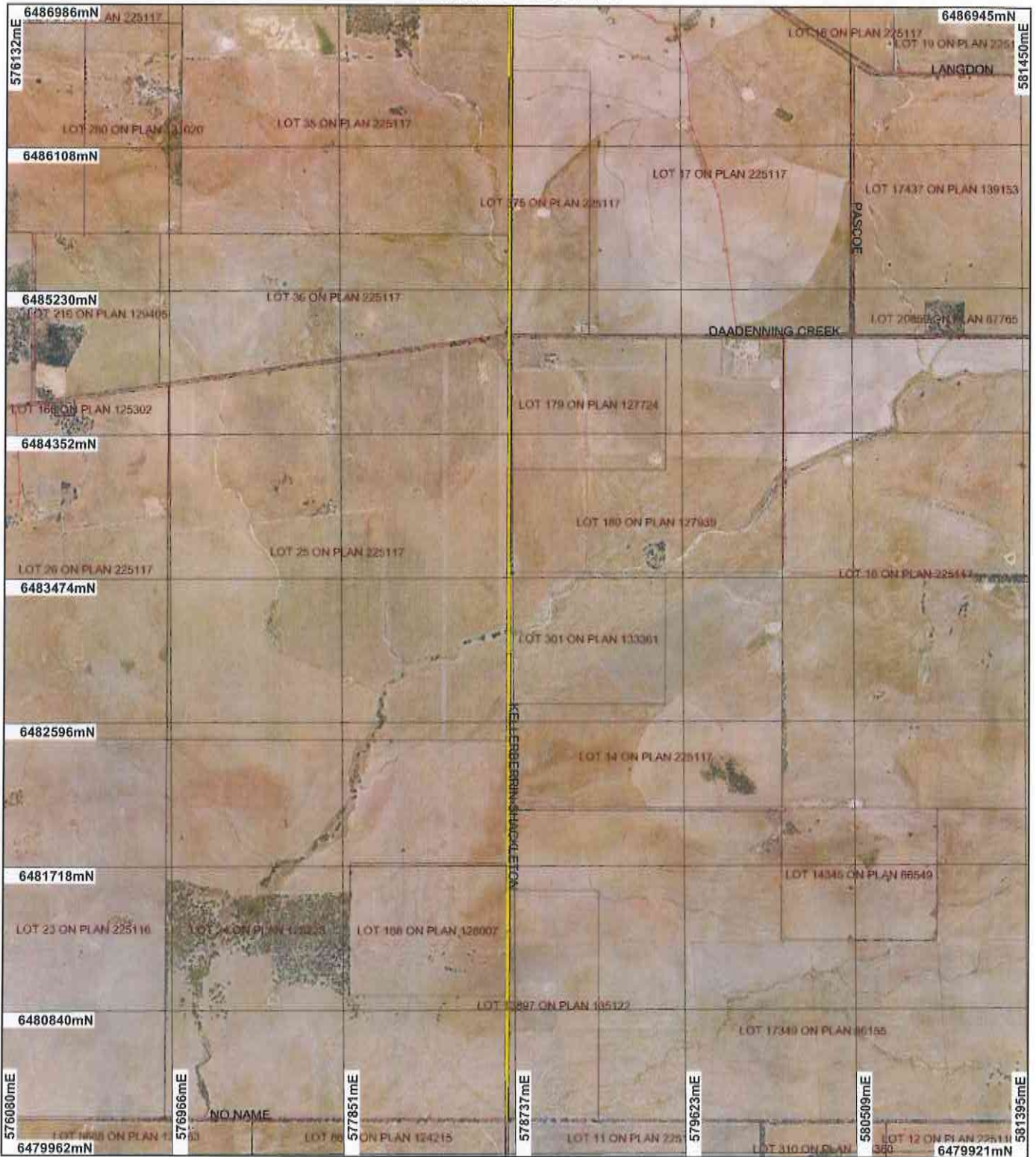
M Warnock Date *10/8/12*

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Plan 5028/1e

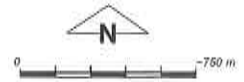


LEGEND

- Road Centrelines
- Cadastre for labelling
- Freehold
- Crown Reserve
- State Forest / Timber Reserve
- Marine Park (cont)

- Crown Lease
- Lease / Reserve
- Lease on State Forest / Timber Reserve
- Public Roads
- Unallocated Crown Land
- Water

- Clearing Instruments**
- Areas Subject to Conditions
- Areas Approved to Clear
- Kellerberrin 50cm Orthomosaic - Landgate 2004**



Scale 1:31105
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

M Warnock Date 10/8/12
M Warnock

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

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1. Application details

1.1. Permit application details

Permit application No.: 5028/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Kellerberrin

1.3. Property details

Property: ROAD RESERVE (KELLERBERRIN 6410)
ROAD RESERVE (DAADENNING CREEK 6410)
ROAD RESERVE (MOUNT CAROLINE 6410)
ROAD RESERVE (SOUTH TAMMIN 6409)
ROAD RESERVE (MOUNT CAROLINE 6410)
ROAD RESERVE (MOUNT STIRLING 6383)

Colloquial name:
Local Government Area: Shire of Kellerberrin

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.5		Mechanical Removal	Road construction or maintenance
		Mechanical Removal	Road construction or maintenance

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 16 August 2012

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Mapped Beard vegetation association 1023 is described as 'Medium woodland; York gum, wandoo & salmon gum (E. salmonophloia)'.	The proposed clearing of 2.5 hectares is for the purpose of road widening along the Kellerberrin - Shackleton Road reserve and Kellerberrin - Yoting Road Reserve.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition of the vegetation was assessed using aerial imagery (Kellerberrin 50cm Orth mosaic 2004) and during a site inspection undertaken in August 2012 by Department of Environment and Conservation officers (DEC 2012).
Mapped Beard vegetation association 1049 is described as 'Medium woodland; wandoo, York gum, salmon gum, morrel & gimle'.			
Mapped Beard vegetation association 951 is described as 'Succulent steppe with sparse woodland & thicket; york gum & Kondinin blackbutt over teatree thicket & samphire'			
Mapped Beard vegetation association 1053 is described as 'Shrublands; Melaleuca uncinata thicket with scattered York gum'.			
Mapped Beard vegetation association 956 is described as 'Shrublands; Allocasuarina campestris thicket with scattered wandoo'.			
(Shepherd et al. 2001).			

Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)

3. Assessment of application against clearing principles

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

Comments

Proposal is at variance to this Principle

The proposed clearing of 2.5 hectares is for the purpose of road widening along a 23.3 km stretch of Kellerberrin - Shackleton Road reserve and 10.7 km stretch along Kellerberrin - Yoting Road reserve.

Four of the five mapped Beard vegetation associations within the areas under application, have less than 30 per cent of their pre-European extent remaining within the Avon Wheatbelt Bioregion, and are therefore considered to be below threshold levels for maintaining biodiversity. Beard association 1049 has approximately 7 per cent remaining within Avon wheatbelt bioregion (Government of Western Australia 2011). Beard associations 951, 1023, 1049 and 1053 have been identified as priority 1 for ecosystem protection within the Avon Wheatbelt bioregion (DEC 2012). In addition, the Beard associations 1023 and 1049 are significantly under-represented within the DEC managed conservation estate (DEC 2012).

As the surrounding landscape is extensively cleared (approximately 10 per cent vegetation remaining within the local area) and the vegetation under application connects larger remnants of bushland, the application area may have values as a biological corridor, particularly for native fauna.

The Roadside Conservation Committee (2012) has advised that the application area along Kellerberrin - Shackleton road has been given a medium to low conservation value with high conservation value vegetation at the intersection with Langdon and Smiths Road. Medium to high conservation value has also been given to the southern side of the road between Kwolyin road and Langdon road. The layer of trees and flowering shrubs potentially play a corridor role in the landscape connecting small remnants (Roadside Conservation Committee, 2012). The applicant has advised that clearing will take place on the northern road side only within this area (DEC 2012a).

The majority of Kellerberrin - Yoting Road Reserve under application contains low biodiversity and is in a degraded (Keighery 1994) condition (DEC 2012a).

Given that the area proposed to be cleared is located in a Shire with less than 10 per cent native vegetation remaining and that the areas under application contain significant fauna habitat, the areas proposed to be cleared are representative of areas of high biodiversity when viewed in a local context. Avoid and minimise measures as well as only clearing on one side of the road in the most degraded areas will go towards mitigating the impact on biodiversity.

Therefore the clearing as proposed is at variance to this principle.

Methodology

References

- DEC (2012)
- DEC (2012a)
- Government of Western Australia (2011)
- Roadside Conservation Committee (2012)
- GIS Database
- Sac Bio datasets (8 May 2012)
- Pre-European vegetation
- Soils, statewide
- NLWRA, current extent of vegetation

(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 indigenous to Western Australia.

Comments

Proposal may be at variance to this Principle

Numerous conservation significant fauna species have been recorded within the local area (10 km radius) of the proposed clearing, including the *Petrogale lateralis* subsp. *lateralis* (Black-flanked Rock-wallaby) which is listed as threatened under the Wildlife Conservation Act 1950 and threatened (vulnerable) under the Environment Protection and Biodiversity Conservation Act 1999.

The surrounding landscape is extensively cleared (approximately 10 per cent remaining vegetation within the local area) and the vegetation under application connects larger remnants of bushland acting as a biological corridor, particularly for native fauna in a highly cleared landscape.

A section of proposed clearing along the Kellerberrin-Shackleton Road reserve is located approximately 800 metres from the Mt Caroline Nature Reserve. The reserve supports a population of the Black-flanked Rock-wallaby. It is considered that the Black-flanked Rock-wallaby population within the nature reserve may use the Kellerberrin-Shackleton Road reserve application area as a corridor between vegetation remnants in the area. The applicant has advised that they will only clear on the northern side of this road to maintain linkages (DEC 2012a).

The areas under application contains Wandoo, York Gum or Salmon Gum trees that contain hollows suitable for a range of parrot and cockatoo species occurring in the local area (DEC 2012a).

Given the highly cleared local area and that the sections of the application area may be used as a movement corridor for the threatened Black-flanked Rock-wallaby, the proposed clearing may be at variance to this Principle.

Methodology References
-DEC (2012a)
GIS Database
-SAC Biodataset (8 May 2012)
- NLWRA, current extent of vegetation

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

Comments **Proposal is not likely to be at variance to this Principle**

Two declared rare flora species have been recorded in the local area (10km radius) occurring in similar soil and vegetation type as the Kellerberrin - Yoting Road application area. These species are *Ptilotus fasciculatus* and *Roycea pycnophylloides*. In addition, the rare flora *Acacia subflexuosa* subsp. *capillata* has been recorded in close proximity to the Kellerberrin - Shackleton Road application area in similar soil and vegetation types.

A site visit of the areas under application did not identify any rare flora species within the areas proposed to be cleared (DEC 2012a). It is considered unlikely for the proposed clearing to impact on these rare flora species.

It is not considered likely for the proposed clearing to be at variance to this Principle.

Methodology References
-DEC (2012a)
-Keighery (1994)
GIS Datasets
-Sac Bio datasets (8 May 2012)
-Soils, statewide
-Pre-European vegetation

(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.

Comments **Proposal is not likely to be at variance to this Principle**

There are no records of threatened ecological communities (TEC) within the local area (40 km radius).

Therefore the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Datasets
-Sac Bio datasets (8 May 2012)

(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.

Comments **Proposal is at variance to this Principle**

The area under application falls within the Avon Wheatbelt IBRA bioregion which has approximately 18 per cent of its pre-European extent of vegetation coverage remaining. The Shire of Kellerberrin has approximately 9 per cent native vegetation remaining.

Four of the five mapped Beard vegetation associations within the area under application 1023, 1049, 956 and 1053 have 10.9 per cent, 6.8 per cent, 12.2 per cent and 22.9 per cent remnant vegetation remaining respectively and are therefore considered to be below threshold levels for maintaining biodiversity. Beard associations 951, 1023, 1049 and 1053 have been identified as priority 1 for ecosystem protection within the Avon Wheatbelt bioregion (DEC 2012). In addition the Beard associations 1023 and 1049 are significantly under-represented within the DEC managed conservation estate (DEC 2012).

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).

The vegetation varies from a degraded (Keighery 1994) condition to very good (Keighery 1994) condition and conservation significant flora and fauna may occur within the vegetation under application.

Given that the application area contains highly cleared vegetation communities and occurs within a highly cleared

area, the proposed clearing is of significant native vegetation in an extensively cleared landscape. Therefore the proposed clearing is at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Avon Wheatbelt	9,541,109	1,732,026	18.2	9.87
Shire*				
Shire of Kellerberrin	191,564	17,882	9.33	14.0
Beard Vegetation Association in Bioregion*				
951	27,508	11,147	40.5	17.4
1049	833,385	56,954	6.83	5.73
1023	1,601,602	174,626	10.9	10.53
956	25,556	3,382	13.2	34
1053	13,823	3,168	22.9	27.28

*Government of Western Australia (2011)

Methodology References:
 -Commonwealth of Australia (2001)
 -Keighery (1994)
 -DEC (2012)
 -Government of Western Australia (2011)
 GIS Databases:
 - Kellerberrin 50cm Orthomosaic - Landgate 2004
 - Pre-European Vegetation
 - NLWRA, current extent of vegetation

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

Comments **Proposal may be at variance to this Principle**
 There are multiple non-perennial watercourses that intersect the application area. The southern portion of the application area along Kellerberrin - Yoting Road reserve crosses through a salt river and associated floodplain. Therefore it is considered for these sections of vegetation to be cleared to be growing in association with a watercourse and wetlands.

 Existing infrastructure including culverts and bridges occur within the applied clearing area and the amount of vegetation that is to be disturbed along the watercourses is minimal. Therefore the proposed clearing may be at variance to this principle.

 Measures to avoid and minimise the clearing along the watercourses, as well as the upgrade of infrastructure such as culverts and bridges, will assist in preventing any long term impacts to the waterways from the road widening.

Methodology GIS Databases:
 - Hydrography, linear
 - Hydrography, linear (Hierarchy)

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

Comments **Proposal is not likely to be at variance to this Principle**
 Given the nature of the application, localised land degradation is likely to occur during the works, however this is likely to be only short term. These issues should be minimal as the existing roads already have roadside infrastructure in place to prevent land degradation associated with roads.

 Given the linear nature of the application area, it is unlikely that the proposed clearing of native vegetation would cause appreciable land degradation. Therefore the proposed clearing is not likely to be at variance to this principle.

Methodology GIS database:
 - Soils, Statewide
 - Hydrogeology, Statewide

(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.

Comments Proposal may be at variance to this Principle

One unnamed Conservation area, Reserve 11024 is located adjacent to the application area along Kellerberrin - Yoting Road and holds high conservation value. Mt Caroline Nature Reserve is 800m east of Kellerberrin - Shackleton Road and Kellerberrin - Yoting Road application area is 650 m west of one registered Land for Wildlife site.

The application areas provides value as an ecological corridor for fauna movement between these reserves and other areas of remnant vegetation and therefore the clearing may reduce the dispersal of fauna to these conservation areas.

The clearing may impact on environmental values and could increase the spread of weed species into Reserve 11024.

Therefore, the proposal may be at variance to this principle. Weed management practices will assist in reducing the potential for introduction or spread of invasive weed species

Methodology References
-DEC (2012)
GIS Databases
-DEC Managed Lands
-Land For Wildlife sites
- NLWRA, current extent of vegetation

(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.

Comments Proposal is not likely to be at variance to this Principle

Groundwater salinity is mapped as ranging from 14000 to greater than 35000 mg/L total dissolved solids. Significant clearing of native vegetation has already occurred within the local area for agricultural purposes and the area is susceptible to secondary salinity (DEC 2012). The clearing of 2.5ha across a number of road reserves is not likely to further increase groundwater salinity.

The proposed road widening and maintenance may result in the clearing of some riparian vegetation and as such may result in temporary localised sedimentation within the watercourses during the clearing process however, this is unlikely to cause long term deterioration to the quality of surface water in the local area.

Therefore, this proposal is not likely to be at variance to this principle.

Methodology References
-DEC (2012)
GIS Databases:
- Groundwater Salinity, Statewide
- Hydrography, linear (hierarchy)
- RiWI Act, Surface Water Areas, Irrigation Districts
- Topographic Contours, Statewide

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

Comments Proposal is not likely to be at variance to this Principle

As the proposal is for the clearing of 2.5ha along a number of road reserves, the clearing will be linear and relatively small, it is unlikely to cause or exacerbate the incidence or intensity of flooding.

The proposal is not likely to be at variance to this principle.

Methodology GIS Databases
- Soils, Statewide
- Hydrography, linear

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

The proposed clearing of 2.5 hectares is for the purpose of road widening along the Kellerberrin - Shackleton Road reserve and Kellerberrin - Yoting Road reserve.

A letter was sent on 5 July 2012 to applicant outlining environmental issues with the proposed clearing. A letter in response was received on the 10 August 2012 outlining that the clearing area has been reduced to 2.5 ha to

minimise environmental impacts and that the Shire of Kellerberrin proposes to only clear on the northern side of Kellerberrin - Shackleton road to avoid good condition vegetation and to provide an offset in the form of revegetating closed portions of Kellerberrin - Shackleton Road.

The application areas fall within the Surface Water -Avon River System- Surface Water area covered by the Rights in Water and Irrigation Act 1914. A permit to interfere with the bed and banks of a watercourse may be required from the Department of Water.

Roadside Conservation Committee (2012) recommends that the Shire:

- Minimises clearing in the high conservation section of the road reserves, using engineering solutions like curing to minimise the road footprint,
- Adopt a road design that occupies the minimum of space,
- Prune branches rather than removing the whole tree,
- Clear vegetation to the narrower side of the road reserve, or to the side which has the lowest quality vegetation,
- Avoid disturbance to the soil to reduce germination of weeds and
- Control weeds in the high conservation sections of the road after the completion of road works.

Methodology Area defined in EPA position Statement No 2, however the clearing is not for the purpose of agriculture
References
-Roadside Conservation Committee (2012)

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2012) Regional advice for Clearing Permit Application CPS 5028, Shire of Kellerberrin. Department of Environment and Conservation, Western Australia (DEC ref A518142)
- DEC (2012a) Site Visit Report for Permit Application CPS 5028, Shire of Kellerberrin. Department of Environment and Conservation, Western Australia (DEC ref A532553).
- Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Roadside Conservation Committee (2012) Advice for Clearing Application CPS 5028/1, Shire of Kellerberrin. Department of Environment and Conservation, Western Australia (DEC ref A518140)
- Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

5. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)