



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6717/1
Permit Holder:	Shire of Goomalling
Duration of Permit:	10 January 2016 to 10 January 2021

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.

2. Land on which clearing is to be done

Bejoording Road reserve, Numile (PIN 11535363 and PIN 11393928).

3. Area of Clearing

The Permit Holder must not clear more than 0.552 hectares of native vegetation within the area cross hatched yellow on attached Plan 6717/1.

4. 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.

5. Type of clearing authorised

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

PART II – MANAGEMENT CONDITIONS

6. 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*:

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

7. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit between 1 July to 28 February, the Permit Holder shall engage a *fauna specialist* to conduct a *fauna survey* of the Permit Area to identify Salmon gum (*Eucalyptus salmonophloia*) wandoo (*Eucalyptus wandoo*) black cockatoo habitat tree/s being utilised by Carnaby's cockatoo (*Calyptorhynchus latirostris*);
- (b) where fauna are identified under condition 7(a) of this Permit, the Permit Holder shall ensure that:
 - (i) no clearing within 10 metres of *black cockatoo habitat tree/s* of the identified fauna occurs, unless first approved by the CEO; and
 - (ii) no taking of identified fauna occurs, unless first approved by the CEO.

DEFINITIONS

black cockatoo habitat tree/s: means trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater;

fauna specialist: means a person who holds a tertiary qualification specializing in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Wildlife Conservation Act 1950*;

fauna survey: means a field-based investigation, including a review of established literature, of the biodiversity of fauna and/or fauna habitat of the Permit Area. Where conservation significant fauna are identified in the Permit Area, the survey should also include sufficient surrounding areas to place the Permit Area into local context;

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; and

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 Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



J Clarkson
A/SENIOR MANAGER
CLEARING REGULATION

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

10 December 2015

Plan 6717/1



Legend

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



1:10,957

(Approximate when reproduced at A4)
GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

J Clarkson Date 10/12/15

J Clarkson

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



1. Application details

1.1. Permit application details

Permit application No.: 6717/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Goomalling

1.3. Property details

Property: ROAD RESERVE - 11535363, NUNILE
ROAD RESERVE - 11393928, NUNILE

Colloquial name:

Local Government Authority: TOODYAY, SHIRE OF

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 10 December 2015

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
Beard vegetation association (Shepherd et al, 2001)	The application is for the clearing of 0.552 hectares of native vegetation within Bejoording Road reserve (PIN 11535363 and PIN 11393928) Nunile, Shire of Goomalling for the purpose of road widening.	Good; Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994). To Degraded; Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).	The condition and structure of the vegetation under application was determined from a site inspection undertaken by the Department of Environment Regulation on the 29 October 2015.

3. Assessment of application against clearing principles

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

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

The application is to clear 0.552 hectares of native vegetation within the Bejoording Road reserve, Nunile, for the purpose of road widening. The vegetation under application consists of wandoo and York gum woodland and the vegetation under application is predominately in a degraded (Keighery, 1994) condition (DER, 2015) with a small section at the northern end of the application area being in a good (Keighery, 1994) condition (DER, 2015).

There have been no priority or threatened ecological communities mapped within 10 kilometres of the area under application.

Eight priority flora species have been mapped within 10 kilometres of the area under application. Of the eight priority flora species suitable habitat for two species may be present in the small area (0.125 hectares) of good condition vegetation located adjacent to Wongamine Nature Reserve.

Stylidium sp. dewars pool (P1) is known from a variety of vegetation communities but is often found associated with sand or sandy loam soils (Parks and Wildlife, 2015a). Calytrix oncophylla (P2) has been located approximately 1.2 kilometres from the application area and its preferred habitat is Wandoo woodlands (Parks and Wildlife, 2015b).

Based on the local Parks and Wildlife database and an onsite assessment of the proposed clearing area and adjacent areas, no priority flora was observed or is likely to be present within the application area (Parks and Wildlife, 2015b). The proposed clearing is unlikely to have a significant impact on conservation status of these species given the area of suitable habitat in better condition adjoining the application area in Wongamine Nature Reserve.

Three fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded in the local area (10 kilometre radius) being; Carnaby's cockatoo (*Calyptorhynchus latirostris*), chuditch (*Dasyurus geoffroii*) and shield-backed trapdoor spider (*Idiosoma nigrum*) (Parks and Wildlife, 2007-). Carnaby's cockatoo is listed as endangered under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The application area falls within Carnaby's cockatoo breeding range, and contains eucalyptus species of a size and age as to contain potential breeding hollows (DER, 2015). Given the soil type present and the lack of native understorey and jam tress (DER, 2015) it is unlikely the application areas supports suitable habitat for the shield-backed trapdoor spider and chuditch.

Given the above the clearing as proposed is not likely to comprise a high level of biological diversity and is therefore not likely to be at variance to this principle.

Methodology References:
DER (2015)
Keighery (1994)
Parks and Wildlife (2007-)
Parks and Wildlife (2015a)
Parks and Wildlife (2015b)

GIS Datasets:
- Sac Bio Datasets - accessed October 2015

(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 **Proposed clearing may be at variance to this Principle**

Carnaby's cockatoo (*Calyptorhynchus latirostris*), chuditch (*Dasyurus geoffroii*) and shield-backed trapdoor spider (*Idiosoma nigrum*) have been recorded within the local area (10 kilometre radius) (Parks and Wildlife, 2007-). A site inspection of the application area undertaken by Department of Environment Regulation identified the vegetation as wandoo and York gum woodland (DER, 2015).

The local area (10 kilometre radius) retains approximately 10 percent native vegetation. Given this, the application falls within a highly cleared landscape where any remaining vegetation may be significant for conservation significant fauna recorded within the area.

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) referral guidelines (SEWPaC 2012) defines breeding habitat for black cockatoos as trees of species known to support breeding within the range of the species which either have a suitable nest hollow or are of suitable diameter at breast height (DBH) to develop a nest hollow. For most trees, suitable DBH is 500 millimetres. For wandoo, suitable DBH is 300 millimetres. Approximately 19 trees within the application area were noted to be an appropriate size for breeding purposes for black cockatoos (DER, 2015). The site inspection determined that four of these trees had already developed hollows suitable for black cockatoo breeding (DER, 2015).

Carnaby's cockatoo was once abundant in Western Australia. Since the late 1940s the species has suffered a 30 per cent contraction in range, a 50 percent decline in population, and between 1968 and 1990 disappeared from more than a third of its breeding range (Saunders and Ingram, 1998, Garnett et al., 2011).

The Carnaby's cockatoo management plan states "In 1998, Saunders and Ingram considered that there were sufficient hollow-bearing eucalypts for Carnaby's cockatoos in the Wheatbelt, however the senescence and loss of ageing hollows, and competition for hollows is likely to be an issue for the conservation of the species. One of the indirect effects of broad-scale clearing for agriculture in the south-west of Western Australia is that there is a lack of recruitment of nesting trees. As a consequence there may be a shortage of suitable nesting hollows in some areas in the future, regardless of whether there is sufficient suitable foraging habitat present within close proximity to those breeding sites" (Parks and Wildlife, 2013).

Shield-backed trapdoor spider (*Idiosoma nigrum*) is listed as vulnerable under the EPBC Act and rare or likely to become extinct under the WC Act. The shield-backed trapdoor spider Conservation Plan 2008 - 2013 (Avon Catchment Council, 2007) defines critical habitat for this species as open York gum (*Eucalyptus loxophleba*), Salmon gum (*E. salmonophloia*) and wheatbelt wandoo (*E. capillosa*) woodland, where jam (*Acacia acuminata*) trees forms a sparse understorey in heavy clay soils. A site inspection of the area determined the presence of Salmon gum and wandoo vegetation present within the application area (DER, 2015). However no jam tress were present and the soil type consists of gneissic rock outcrops and chief soils are hard neutral red (Northcote

et al, 1960-68), and not heavy clay soils. The proposed clearing is unlikely to impact on the shield-backed trapdoor spider.

The majority of the vegetation under application is in a degraded (Keighery, 1994) condition (DER, 2015) and lacked native understorey (DER, 2015) and is unlikely to contain habitat suitable for chuditch.

As the application area contains suitable habitat for Carnaby's cockatoo, the application may be significant habitat for this species if they are utilising the hollows for breeding. Identifying habitat trees for black cockatoo breeding prior to clearing will assist in mitigating the potential impact to this species.

Given the above the proposed clearing may be at variance to this principle.

Methodology References:
Avon Catchment Council (2007)
DER (2015)
Garnett et al. (2011)
Keighery (1994)
Parks and Wildlife (2007-)
Parks and Wildlife (2013)
Saunders and Ingram (1998)
SEWPaC (2012)

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

Comments **Proposed clearing is not likely to be at variance to this Principle**
There are no records of rare flora recorded within 10 kilometres of the area under application.

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

Methodology GIS Datasets:
- Sac Bio Datasets - accessed October 2015

(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 **Proposed clearing is not likely to be at variance to this Principle**
There are no records of threatened ecological communities recorded within 10 kilometres of the area under application.

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

Methodology GIS Datasets:
- Sac Bio Datasets - accessed October 2015

(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 **Proposed clearing may be at variance to this Principle**
Aerial photography indicates the local area (10 kilometre radius) is approximately 10 per cent vegetated. The Interim Biogeographic Regionalisation for Australia's Bioregion (Avon Wheatbelt) and the local government authority area (Shire of Toodyay) retains approximately 18 per cent and 50 per cent of their respective pre-European vegetation extents (Government of Western Australia, 2014).

The application area is mapped as Beard vegetation associations 352 and 946 which retain approximately 17 per cent and 19 per cent of their pre-European vegetation extent within the Avon Wheatbelt IBRA Bioregion respectively. Given that most of the application area is in a degraded (Keighery, 1994) condition (DER, 2015) it is unlikely the mapped vegetation associations are represented within the application area.

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 application falls within a highly cleared landscape with approximately 10 per cent of vegetation remaining within 10 kilometres of the applied area. The application area contains hollows which may provide breeding habitat for Carnaby's cockatoos. Therefore the application area may represent a significant remnant of vegetation in an extensively cleared landscape.

The proposed clearing may be at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion*				
Avon Wheatbelt	9,517,110	1,765,881	18	10
Shire*				
Shire of Toodyay	169,176	85,381	50	46
Beard Vegetation Association in Bioregion*				
946	43,309	8,426	19	9
352	630,582	109,441	17	9

Methodology References:
Commonwealth of Australia (2001)
Government of Western Australia (2014)

GIS Datasets:
- Pre-European 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 **Proposed clearing may be at variance to this Principle**
A minor, non-perennial watercourse intersects the application area. Several other minor, non-perennial watercourses have been mapped within close proximity to the application area. These watercourses are likely to be seasonally inundated with water during the winter months. The proposed clearing may impact upon vegetation within the mapped watercourse, however any impacts to the watercourse are likely to be minor and managed during road construction.

Given the above, the proposed may be at variance to this principle.

Methodology GIS Datasets:
- Hydrography linear

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

Comments **Proposed clearing is not likely to be at variance to this Principle**
The mapped soil type in the application area consists of gneissic rock outcrops and chief soils are hard neutral red (Northcote et al., 1960-68)

Increased water erosion due to the proposed clearing is likely to be minimal given that the one watercourse intersected is minor and non-perennial, annual local rainfall is low (500 millimetres), the landscape is gently undulating and the vegetation proposed to be cleared is in a degraded (Keighery, 1994) condition (DER, 2015).

The proposed clearing is unlikely to cause wind erosion given the linear nature of the application area.

Groundwater is highly saline, mapped at 14000-35000 total dissolved solids (milligrams per litres). Considering the relatively small amount of clearing over a linear distance of 1.2 kilometres it is not likely to contribute to the rise of groundwater causing land degradation due to increased salinity at the surface.

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

Methodology References:
DER (2015)
Keighery (1994)
Northcote, et al. (1960-68)

GIS Datasets:
- Groundwater Salinity Statewide

- Hydrography linear
- Rainfall, Mean Annual
- Topographic contours

(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 **Proposed clearing may be at variance to this Principle**
 Approximately 200 metres of the northern end of the application area adjoins Wongamine Nature Reserve. A site inspection of the application area adjacent to the reserve determined that the area consists of understory vegetation in a good (Keighery, 1994) condition (DER, 2015).

The proposed clearing may impact the adjoining Nature Reserve through the spread of weeds as an indirect consequence of the clearing. Weed management practices will help mitigate this risk.

Given the above, the proposed clearing may be at variance to this principle.

Methodology References:
 DER (2015)
 Keighery (1994)

GIS Datasets:
 - Parks and Wildlife Tenure

(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 **Proposed clearing is not likely to be at variance to this Principle**
 Ground water salinity within the application area has been mapped as highly saline at 14000-35000 total dissolved solids (milligrams per litres). The proposed clearing is not expected to significantly change salinity levels given its relatively small scale and the condition of the vegetation.

The proposed clearing may cause an increase in turbidity of the watercourse that it intersects and subsequently other watercourse within the area. However, this is likely to be short term and minimal given the relatively small extent of vegetation to be cleared within the vicinity of the watercourse.

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

Methodology GIS Datasets:
 - Groundwater Salinity Statewide
 - Hydrography linear
 - Topographic contours

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

Comments **Proposed clearing is not likely to be at variance to this Principle**
 The proposed clearing is not expected to cause flooding given the gentle undulation of the application area and the surrounding area as well as the relatively small scale and linear nature of the application area.

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

Methodology GIS Datasets:
 - Groundwater Salinity Statewide
 - Hydrography linear
 - Topographic contours

Planning instruments and other relevant matters.

Comments The application area is located within the Avon River Surface Water Area, proclaimed under the Rights in Water and Irrigation Act 1914, where there may be a requirement to obtain a permit to interfere with the bed and banks of a watercourse. The proponent is advised to liaise with the Department of Water to determine if approvals are required.

No registered Aboriginal Sites of Significance occur within the application area.

No public submissions have been received.

Methodology GIS Databases:
 - Aboriginal Sites Register
 - RIWI Surface Water Areas

4. References

- Avon Catchment Council (2007) Shield - backed Trapdoor Spider (*Idiosoma nigrum*) Conservation Plan. Avon Catchment Council, Western Australia.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) (2012) EPBC Act Referral guidelines for three threatened black cockatoo species: Carnaby's cockatoo (endangered) *Calyptorhynchus latirostris*, Baudin's cockatoo (vulnerable) *Calyptorhynchus baudinii*, Forest red-tailed black cockatoo (vulnerable) *Calyptorhynchus banksii naso*.
- DER (2015) Site Inspection Report for Clearing Permit Application CPS 6717. Undertaken on the 29 October 2015 (DER Ref:A1003171).
- Garnett, S., Szabo, J. and Dutson, G. (2011) The Action Plan for Australian Birds 2010. CSIRO Publishing, Melbourne, Victoria.
- Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, 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.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Parks and Wildlife (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed October 2015
- Parks and Wildlife (2013) Carnaby's cockatoo (*Calyptorhynchus latirostris*) Recovery Plan. Department of Parks and Wildlife, Perth, Western Australia.
- Parks and Wildlife (2015a) Regional advice received Perth Hills in relation to Clearing Permit Application CPS 6717/1 (DER Ref:A1015649).
- Parks and Wildlife (2015b) Regional advice received Wheatbelt region in relation to Clearing Permit Application CPS 6717/1 (DER Ref:A1001145).
- Saunders, D.A. and Ingram, J.A. (1998) Twenty-eight years of monitoring a breeding population of Carnaby's cockatoo. *Pacific Conservation Biology*. 4: 261-270.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.