



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 7951/1
File Number: DER2018/000097
Duration of Permit: From 19 June 2019 to 19 June 2029

PERMIT HOLDER

Generation Ag Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot M1330 on Plan 3041, Bindi Bindi
Lot 829 on Deposited Plan 58550, Bindi Bindi
Lot 827 on Deposited Plan 58550, Bindi Bindi
Lot 823 on Deposited Plan 58546, Bindi Bindi
Lot 500 on Deposited Plan 54477, Bindi Bindi
Lot 289 on Deposited Plan 245012, Bindi Bindi

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 4.246 hectares of native vegetation within the areas shaded yellow on attached Plan 7951/1(a).

CONDITIONS

1. Avoid, minimise and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

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

2. Vegetation management

The Permit Holder shall not clear native vegetation within 5 metres of the *riparian vegetation* of any *watercourse* or *wetland*.

3. Retention, Revegetation, Rehabilitation and Direct planting

The Permit Holder shall:

- (a) retain existing native vegetation within the areas cross-hatched red on attached Plan 7951/1(b);
- (b) prior to clearing, prepare land devoid of native vegetation within the areas cross-hatched red on attached Plan 7951/1(b) for revegetation by;
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (ii) ripping the ground on the contour to remove soil compaction.
- (c) retain the vegetative material and topsoil removed by clearing authorised under this Permit and lay it within the revegetation areas prepared under condition 3(b) of this permit; and
- (d) undertake additional planting as required to achieve 100 stems per hectares within the areas cross-hatched red on attached Plan 7951/1(b) ensuring;
 - (i) only local provenance seeds and propagating material are used; and
 - (ii) at least 20 stems per hectare are overstorey (tree) species.

4. 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 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); and
- (iv) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit.

(b) In relation to Retention, Revegetation, Rehabilitation and Direct Planting done pursuant to condition 3 of this permit;

- (i) a description of the retention, *revegetation and rehabilitation* activities undertaken under condition 3 of this permit;
- (ii) the size of the area retained, *revegetated and/or rehabilitated* (in hectares) under condition 3 of this permit; and
- (iii) photographic evidence of areas retained, *revegetated and/or rehabilitated* under condition 3 of this permit from the following monitoring points and directions taken in the month of September each calendar year that this permit is active;

- A. 116.311576; -30.665718 – facing east;
- B. 116.311576; -30.665718 – facing west;
- C. 116.3145; -30.665622 – facing west; and
- D. 116.3145; -30.665622 – facing south.

5. Reporting

(a) The Permit Holder shall provide a report to the Department by 30 June each year for the life of this permit, demonstrating adherence to all conditions of this permit, and setting out the records required under condition 4 of this permit in relation to clearing carried out between 1 July and 30 June of the previous year.

(b) Prior to 19 March 2029, the Permit Holder must provide to the Department a written report of records required under condition 4 of this Permit where these records have not already been provided under condition 5(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*;

local provenance means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.

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* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

riparian vegetation has the meaning given to it in Regulation 3 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004;

watercourse has the meaning given to it in section 3 of the *Rights in Water and Irrigation Act 1914*;

wetland/s means an area of seasonally, intermittently or permanently waterlogged or inundated land, whether natural or otherwise, and includes a lake, swamp, marsh, spring, dampland, tidal flat or estuary.



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Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

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

20 May 2019

Plan 7951/1 (a)

116°18.000'E

116°19.200'E

116°20.400'E

116°21.600'E

30°37.200'S

30°38.400'S

30°39.600'S

30°40.800'S

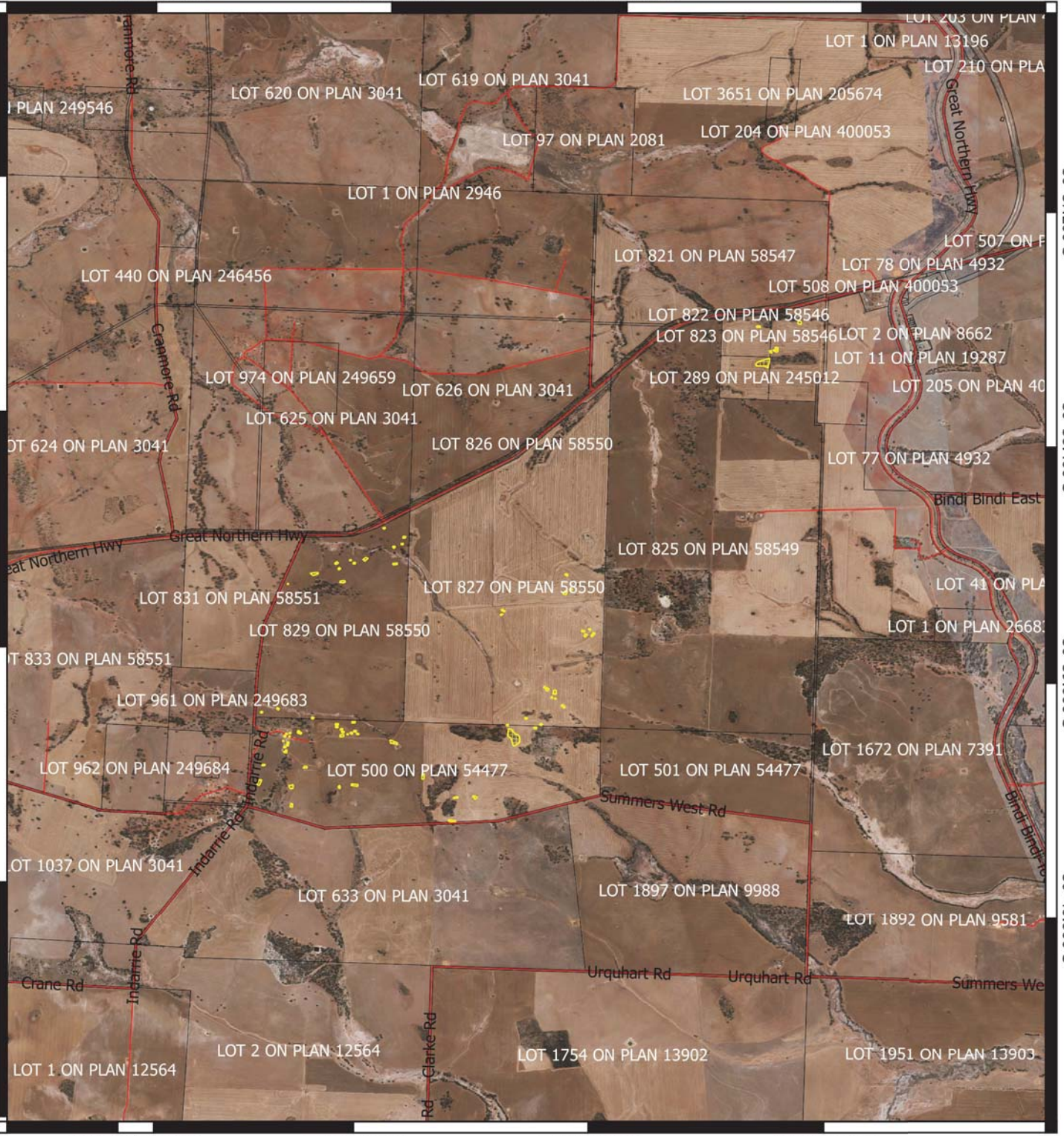
30°42.000'S

30°37.200'S

30°38.400'S

30°39.600'S

30°40.800'S



116°18.000'E

116°19.200'E

116°20.400'E

116°21.600'E

Legend

-  CPS areas approved to clear base layers
-  Cadastre
-  Road Centrelines
-  Local Government Authorities
-  Image



MGA 94
Geocentric Datum of Australia 1994

0 750 1500 2250 3000 m



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Officer delegated under Section 20 of the Environmental Protection Act 1906



GOVERNMENT OF
WESTERN AUSTRALIA

Plan 7951/1 (b)

116°18.000'E

116°19.200'E

30°38.400'S

30°38.400'S

30°39.600'S

30°40.800'S

30°39.600'S

30°40.800'S



116°18.000'E

116°19.200'E



MGA 94
Geocentric Datum of Australia 1994

0 300 600 900 1200 m



R. Mincham







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Officer delegated under Section 20 of the Environmental Protection Act 1906



GOVERNMENT OF
WESTERN AUSTRALIA

Legend

-  CPS subject to conditions
-  base layers
-  Cadastre
-  Road Centrelines
-  Local Government Authorities
-  Image



1. Application details

1.1. Permit application details

Permit application No.: 7951/1
Permit type: Area

1.2. Applicant details

Applicant's name: Generation Ag Pty Ltd
Application received date: 12 January 2018

1.3. Property details

Property: Lot M1330 on Plan 3041, Bindi Bindi
Lot 829 on Deposited Plan 58550, Bindi Bindi
Lot 827 on Deposited Plan 58550, Bindi Bindi
Lot 823 on Deposited Plan 58546, Bindi Bindi
Lot 500 on Deposited Plan 54477, Bindi Bindi
Lot 289 on Deposited Plan 245012, Bindi Bindi
Local Government Authority: Shire of Moora
Localities: BINDI BINDI

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
9.5	0	Mechanical	Improving farm efficiency (cropping)

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 20 May 2019
Reasons for Decision: The clearing permit application was received on 12 January 2018 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that clearing of the application area is at variance to clearing principle (e), may be at variance to clearing principles (a) and (b) and is not or not likely to be at variance to the remaining clearing principles.

In determining to partially grant a clearing permit subject to conditions, the Delegated Officer considered that the environmental impacts of the proposed clearing can be managed through onsite avoidance and mitigation measures and retention and revegetation of strategic areas.

2. Site Information

Clearing Description: The application is to clear 9.5 hectares of native vegetation within several land parcels as listed in Section 1.3 above, for the purpose of improving farm efficiency (cropping) (see Figures 1-4 below).

Assessment of the potential environmental impacts of clearing 9.5 hectares associated with this proposal was considered to have unacceptable risk to the environment. DWER proposed, and the applicant subsequently agreed to a partial grant of the areas applied to be cleared. The decision relates to the approval to clear an area of 4.246 hectares within the 9.5 hectare area applied for.

Vegetation Description The vegetation within the application area is mapped as Beard vegetation association 142, described as a medium woodland of York gum and Salmon gum (Shepherd et al, 2001).

A site inspection conducted by Department of Water and Environmental Regulation (DWER) officers in February 2018 noted two vegetation types: (a) scattered *Eucalyptus* sp. paddock trees with no understorey in a completely degraded (Keighery, 1994) condition due to historical grazing, and (b) open heath in a degraded to good (Keighery, 1994) condition (DWER, 2018).

From photographs (Figures 5-15 below) and information obtained during the DWER and Office of the Commissioner of Soil and Land Conservation (CSLC) (DPIRD, 2018) site inspections, the vegetation within the application area is comprised predominately of either isolated trees, small clumps of trees and/or small sized remnants with groundcover of native shrubs and weeds. The remainder of the land parcels are under cultivation.

Vegetation Condition

The remnant vegetation within the application area is considered to vary between the following condition:

- Good: Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate to it;
- to
- Degraded: Basic vegetation structure severely impacted by disturbance; scope for regeneration but not to a state approaching 'Good' condition without intensive management;
- to
- Completely Degraded: The structure of the vegetation is no longer intact and the area is completely or almost completely without native species (Keighery, 1994).

The majority of individual scattered, isolated paddock trees and clumps of two and three trees are noted as being in a healthy condition whilst some were dead (DWER, 2018).

Vegetation condition was determined from photographs (Figures 6-16 below) and information obtained during the DWER and CSLC site inspections (DWER, 2018; DPIRD, 2018). The application area has been impacted and degraded by historical agricultural practices including livestock grazing.

Soil Type

Mapped as Burabridge Hill 3 System (256Bg_3) where the landform is described as midslopes, undulating rises to low hills with rock outcrop of granite, migmatite and gneiss.

Soils are grey to red shallow and deep loamy duplexes, brown and red sandy earth, shallow and deep gravel, yellow to red shallow sand (DPIRD, 2018; DPIRD, 2017).

Comments

The local area referred to in this assessment is defined as the area within a 20 kilometre radius of the application area. The local area retains approximately 6.5 per cent vegetation cover.



Figure 1: Applied clearing area (blue-hatched areas); clearing was applied for over several land parcels



Figure 2: Applied clearing area (blue-hatched areas); clearing was applied for over several land parcels



Figure 3: Applied clearing area (blue-hatched areas); clearing was applied for over several land parcels

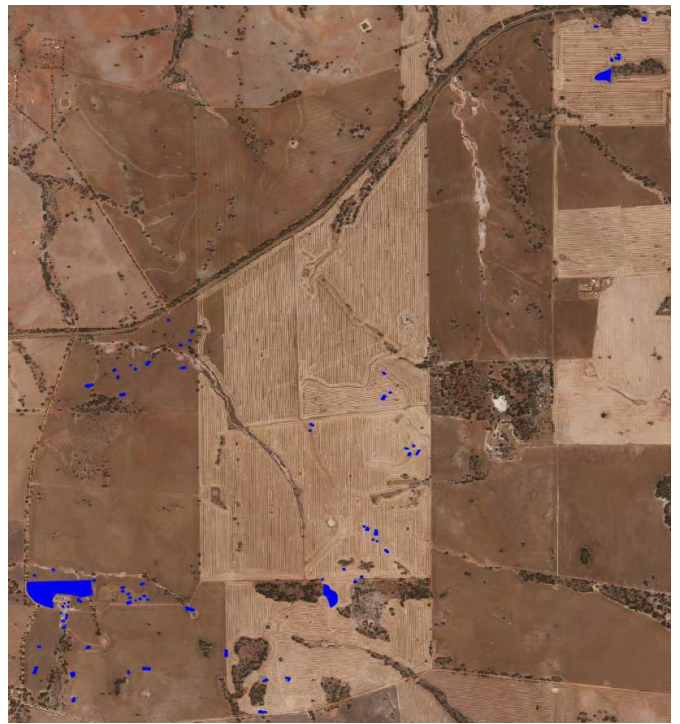


Figure 4: Overview of CPS 7951/1 application areas



Figure 5: Overview of CPS 7951/1 partial grant areas (purple) and retention/revegetation areas (green)

The below photographs (Figures 6-16) were obtained during a DWER site inspection (DWER, 2018).



Figure 6: Typical isolated paddock tree(s)



Figure 7: Typical clump of paddock trees



Figure 8: Typical paddock tree(s)



Figure 9: Typical clump of paddock trees



Figure 10: Typical remnant vegetation type and condition



Figure 11: Typical paddock tree(s)



Figure 12: Typical remnant vegetation type and condition



Figure 13: Typical remnant vegetation type and condition



Figure 14: Typical remnant vegetation type and condition



Figure 15: Small hollow (not suitable for black cockatoos)



Figure 16: Typical remnant vegetation type and condition; parkland cleared

3. Assessment of application against clearing principles

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

Proposed clearing may be at variance to this Principle

The applied clearing area of 9.5 hectares includes scattered trees and small remnants distributed over an approximately 580 hectare footprint (a range of approximately three to six kilometres). The applied clearing area is located within the six land parcels listed under Section 1.3 above and is within the Shire of Moora's agricultural zone.

As outlined in Section 2 above, the application area's pre-European vegetation type is mapped as medium woodland of York gum and Salmon gum (Shepherd et al, 2001), and the soils are mapped as grey to red shallow and deep loamy duplexes, brown and red sandy earth, shallow and deep gravel, yellow to red shallow sand (DPIRD, 2017; DPIRD, 2018).

From photographs and information obtained during the DWER (DWER, 2018) and CSLC (DPIRD, 2018) site inspections, it was noted the application area is extensively cleared having been impacted and degraded by historical agricultural practices including livestock grazing. The vegetation under application comprises predominately either isolated trees, small clumps of trees or small sized remnants comprising either a groundcover of weeds and shrubs or trees, or no groundcover. The application area no longer accurately represents the mapped vegetation type, whilst the local area retains just 6.5 per cent native vegetation cover. The vegetation condition, predominately the remnants under application, varies from good, to degraded to completely degraded (Keighery, 1994) condition. The remainder of the land parcels are under cultivation.

According to available databases, two Priority 1 (P1), one Priority Two (P2), nine Priority 3 (P3) and one Priority 4 (P4) listed flora species have been recorded within the local area. Noting the soil type preferences of some of these species and the mapped soil and landform present within the application area, some species may occur within the application area (refer Table 1).

The P1 species *Androcalva fragifolia* is known from seven WA Herbarium records. The closest record to the application area is approximately five kilometres to the east within a railway reserve, whilst the other six populations occur 73 kilometres to the south. The P2 species *Acacia arcuatilis* is known from 30 WA Herbarium records. The closest record to the application area is approximately eight kilometres to the southeast within a road reserve, whilst the other 24 populations occur between 250 to 460 kilometres to the southeast (WAH, 1998-).

Suitable habitat for these species may be present within the isolated remnant vegetation application area. The application area is not likely to contain sufficient habitat to support viable populations of these species. Any populations that may occur within the application area would not be new range extents, alter the conservation status of these species or be otherwise significant to the continued existence of these species. As there is a small risk Priority 1 and 2 flora occur within the application area, the delegated officer determined to partially grant clearing of the application area to avoid the highest risk habitats for these species.

P3 and P4 flora species occur over a wide geographical area and are known from several populations, some within conservation reserves, and so their conservation status is not considered to be under any immediate threat (Jones, 2015). Noting this, and the number of records and current extent of these species, the clearing of the applied area is not likely to impact on the conservation status of these species should any individuals occur within the clearing footprint.

Table 1: Priority listed flora mapped within the local area (WAH, 1998-)

Taxon	Conservation code	Soil preference/growth habit type	Likelihood of historical/current presence (Yes, No or Possible)
<i>Androcalva fragifolia</i>	1	Brown clay/loam with lateritic gravel	P
<i>Verticordia dasystylis</i> subsp. <i>Oestopoia</i>	1	Gritty soils over granite; outcrops / spreading shrub	N
<i>Acacia arcuatifolia</i>	2	Sand or sandy loam, sometimes with lateritic gravel. Undulating plains, rises / rounded, spreading shrub	P
<i>Acacia anarthros</i>	3	Lateritic gravelly soils. Slopes / erect or prostrate shrub	P
<i>Adenanthos cygnorum</i> subsp. <i>chamaephyton</i>	3	Grey sand, lateritic gravel / prostrate, mat-forming shrub	P
<i>Daviesia debilior</i> subsp. <i>sinuans</i>	3	Gravelly lateritic clay / straggly shrub	P
<i>Eucalyptus macrocarpa</i> x <i>pyriformis</i>	3	Sand, lateritic sandy soils. Hills, rocky ironstone ridges, sandplains / erect, open mallee	P
<i>Gastrolobium rotundifolium</i>	3	Heavy clay or loam soils, granite, sandstone, quartzite / erect, bushy shrub on low rises, breakaways	N
<i>Grevillea asparagoides</i>	3	Gravelly loam, white or yellow sand / dense, prickly shrub	P
<i>Melaleuca sclerophylla</i>	3	Gravelly sand, clayey sand. Granite outcrops, rises / erect-spreading to prostrate	N
<i>Stylidium periscelanthum</i>	3	Loamy clay, moist soils pockets / bulb forming perennial on wet flats, low granitic hills	N
<i>Verticordia huegelii</i> var. <i>tridens</i>	3	Sandy or gravelly loam \ shrub on winter-wet areas, low hills	N
<i>Calothamnus accedens</i>	4	Sandy soils over laterite / erect and slender shrub	P

According to available databases, the ecological community 'Eucalypt woodlands of the Western Australian Wheatbelt' (Wheatbelt Woodlands) has been mapped from a number of occurrences within the local area and within the application area. This ecological community is listed as a priority ecological community (PEC) by the Department of Biodiversity, Conservation and Attractions (DBCAs), and as a threatened ecological community (TEC) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This eucalypt-dominated community is defined by its structure as a woodland. Noting the historical and current agricultural landuse, and the good, to degraded to completely degraded (Keighery, 1994) condition of the vegetation within the application area, the application area is not likely to comprise this PEC/TEC.

As discussed under Principle (e), the mapped Beard vegetation association within the bioregion retains less than the 30 per cent recommended threshold. The local area retains approximately 6.5 per cent native vegetation cover. On this basis, the application area is located in an area that has been extensively cleared. Whilst the vegetation under application may not comprise a high level of biological diversity at the local level, it is considered significant vegetation regionally because these remnants can provide valuable fauna refuge within an extensively cleared landscape.

The clearing of the applied area may 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 indigenous to Western Australia.

Proposed clearing may be at variance to this Principle

According to available databases, four threatened fauna species have been recorded within the local area (DBCA, 2007-). These are:

- *Calyptorhynchus latirostris* (Carnaby's cockatoo);
- *Egernia stokesii* subsp. *badia* (Western Spiny-tailed Skink, Gidgee Skink);
- *Idiosoma nigrum* (Shield-backed Trapdoor Spider); and
- *Leipoa ocellata* (Malleefowl)

Carnaby's cockatoo breed in large hollow-bearing trees, generally within woodlands or forests or in isolated trees (CoA, 2012). 'Breeding habitat' for black cockatoos is defined as trees of species known to support breeding within the range of the species which either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species, suitable DBH is 500 millimetres (CoA, 2012). DWER's site inspection noted, given the apparent younger age structure of the eucalypt trees present, they were considered unsuitable as potential habitat (hollow-bearing) trees for Carnaby's Cockatoo (DWER, 2018).

There are 311 records of the Western Spiny-tailed Skink distributed over the Murchison, Wheatbelt and Shark Bay regions (DoE, 2018a; DBCA, 2007-). Most of the Wheatbelt form of the skink's primary habitat is associated with York gum woodland, with some records in Gimlet (*E. salubris*) and Salmon Gum woodland. Populations persist in woodland patches as small as one hectare and completely surrounded by cropping. Previous fauna surveys noted sites with the greatest number of individuals contain numerous fallen logs and were subjected to low-intensity grazing by domestic stock (DoE, 2018a). The landform of the application area is described as mid-slopes, undulating rises to low hills with rock outcrop - granite, migmatite and gneiss (DPIRD, 2017). DWER's site inspection noted the application area contains some areas of rocky outcropping and the vegetation condition varied between good, to degraded to completely degraded (Keighery, 1994) condition (DWER, 2018). Given the skinks preferred habitat requirements and the application areas historical and current agricultural landuse, poor vegetation condition and lack of observed fallen logs, it is considered unlikely that the application area contains suitable or significant habitat for the skink (DWER, 2018).

The Shield-backed Trapdoor Spider is endemic to semi-arid south-west Western Australia (DoE, 2018b; DBCA, 2007-). It occurs in a number of severely fragmented populations in the central and northern Wheatbelt. Further north, the species occurs in more arid areas in the Midwest (e.g. large isolated ranges at Jack Hills), Weld Range and Blue Hills and coastal areas of the Midwest (e.g. Zuytdorp Station north of the Murchison River and Nanga Station south of Shark Bay). The arid Midwest populations are naturally fragmented or isolated because they persist only on ranges, but the Wheatbelt and coastal Midwest populations are all severely fragmented as a result of land clearing. Leaf litter and twigs are extremely important to the species as it provides material for the burrows, reduced soil moisture loss and increased prey availability. The species avoids areas of dense leaf litter as juveniles are unable to dig their initial hole in such areas. Areas of lower grazing pressure may support greater population abundance. In the Wheatbelt, habitat critical to the species is identified as open York gum, Salmon gum and Wheatbelt Wandoo (*Eucalyptus capillosa*) woodland, where Jam (*Acacia acuminata*) forms a sparse understorey in heavy clay soils (DoE, 2018b). The site inspection did not record any areas that could support this species given the lack of sufficient leaf litter, suitable habitat for this spider and previous grazing pressure.

The malleefowl is found in semi-arid to arid shrublands and low woodlands, especially those dominated by mallee and/or acacias (Benshemesh, J., 2007). A sandy substrate and abundance of leaf litter are required for breeding. Densities of the birds are generally greatest in areas of higher rainfall and on more fertile soils where habitats tend to be thicker and there is an abundance of food (Benshemesh, J., 2007). The species has been shown to be highly sensitive to grazing by sheep, and is probably similarly sensitive to grazing by other introduced herbivores (Benshemesh, J., 2007). Given the malleefowl's preferred habitat requirements and the application areas historical and current agricultural landuse and condition, it is considered unlikely that the application area contains suitable or significant habitat for the malleefowl nesting requirements.

As noted in Principle (e) below, the application area is located in an area that has been extensively cleared, and the vegetation under application is considered significant as a remnant of native vegetation within an extensively cleared landscape. It is considered the remnant patches and clumps of trees remaining within the application area contribute to ecological linkages and landscape connectivity, provide a 'stepping stone' function and contributes to fauna dispersal between larger isolated bushland fragments in an extensively cleared landscape.

Noting the above, the clearing of the applied area may be at variance to this Principle.

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

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

As discussed within Section 2, the application area has been impacted by historical and current agricultural practices, including livestock grazing. According to available databases, four rare flora species have been mapped within the local area (refer Table 2 below). The closest occurrence of these species are between four to ten kilometres east from the application area. The mapped soil type of the application area, and the soil type preferences of these species are similar. The remnants of the application area that are in a good (Keighery, 1994) condition and retain the structure which supports the growth habits of these priority species, may have had potential to comprise suitable habitat for these species.

Suitable habitats within the application area are unlikely to support viable populations of these species given the history of extensive and repeated clearing by grazing on the property. In considering the risk to these species the Delegated Officer determined to partially grant the areas applied to clear and removed the most suitable flora habitats from the decision area.

Noting the above, the clearing of the applied areas is not likely to be at variance to this Principle.

Table 2: Rare flora mapped within 20 kilometres of the application area

Taxon	Soil type preference / habitat / growth form	Likelihood of presence (Yes, No or Possible)	Total known populations and range
<i>Acacia vassalii</i>	Brown sand with gravel over laterite or in yellow sand; in low scrub and heath; low spreading shrub to 60cm high to 1m wide; responds to fire events.	P; closest records are from within road reserve 5kms east	21 within a radius of between 5 and 75kms of the application area; one in conservation estate.
<i>Chorizema humile</i>	Red loam, brown sandy clay with granite or clay soils; on plains in scrub or open tree mallee; small, ground hugging plant 60cm in diameter.	P; closest records are from within road reserve 10kms east	18 within a radius of between 10 and 253kms of the application area; one in conservation estate.
<i>Gastrolobium hamulosum</i>	Yellowish clay loam, sand and gravel on clay flats or in white and grey sand or sandy clay; low heath with tamma, melaleucas, eucalypts and tall sedges; small erect straggly shrub to 45cm tall.	P; closest records are from within road reserve 5kms southeast	7 within a radius of between 5 and 58kms of the application area; three in conservation estate.
<i>Grevillea bracteosa</i> subsp. <i>bracteosa</i>	Yellow-brown, sand, clay loam, lateritic gravel; woodland, heathland; Spindly shrub to 2m high.	P; closest records are from within road reserve 4kms east	28 within a radius of between 5 and 145kms of the application area; one in conservation estate.

(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

As discussed under Principle (a), the ecological community 'Eucalypt woodlands of the Western Australian Wheatbelt' (Wheatbelt Woodlands) has been mapped from a number of occurrences within the local area and within the application area. This community is listed as PEC by DBCA and as a TEC under the EPBC Act.

The document 'Environment Protection and Biodiversity Conservation Act 1999 Approved Conservation Advice (including listing advice) for the Eucalypt Woodlands of the Western Australian Wheatbelt' (Approved Conservation Advice), states that the community is dominated by a complex mosaic of *Eucalyptus* species with a tree or mallet form over an understorey that is highly variable in structure and composition (TSSC, 2015).

Noting the historical and current clearing for agricultural use, and the predominately degraded to completely degraded (Keighery, 1994) condition of the remaining vegetation within the application area, it is considered that the vegetation within the application area does not meet the criteria outlined in the advice.

The vegetation within the application area is not likely to comprise the whole or a part of, or is necessary for the maintenance of this TEC.

Given the above the clearing of the applied areas 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 at variance to this Principle

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 (CoA, 2001).

The application area is located within the Avon Wheatbelt Interim Biogeographic Regionalisation of Australia bioregion, which retains approximately 18.5 per cent of its pre-European vegetation extent, and the mapped Beard vegetation complex "142" retains approximately 12.4 per cent of its pre-European extent (GWA, 2018). The local area retains approximately 6.5 per cent native vegetation cover.

On this basis, the application area is located in an area that has been extensively cleared, and the vegetation under application is considered significant as a remnant of native vegetation within an extensively cleared landscape.

Given the above, the clearing of the applied areas is at variance to this Principle.

	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:					
Avon Wheatbelt	9,517,109	1,761,226	18.5	174,960	1.8
Beard's Vegetation association in Bioregion:					
142	637,707	79,309	12.4	2,381	<1

(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 not likely to be at variance this Principle

According to aerial imagery and as noted during a DWER site inspection (DWER, 2018), several minor watercourses traverse the land parcels in a predominately northeast to the southwest direction.

Several watercourses have been impacted by previous agricultural activities where some have little riparian vegetation remaining. The applicant stated that they do not intend to clear along watercourses, and would not clear within a certain distance of a watercourse (DWER,2018).

Noting this, clearing of the applied areas is not likely to impact on vegetation growing in association with a watercourse and is not likely to be at variance to this Principle.

(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

The application area is located on the midslope and upper position of the landscape with undulating rises to low hills with rock outcrop of granite, migmatite and gneiss. The soils are mapped as Burabidge Hill 3 System (256Bg_3) and vary between grey to red shallow and deep loamy duplexes, brown and red sandy earth, shallow and deep gravel and yellow to red shallow sand (DPIRD, 2018; DPIRD, 2017).

The CSLC advises that the area has a high capability of dryland cropping, the soils do not exhibit any significant degradation characteristics or issues and as such the risk of land degradation in the form of salinity, soil water or wind erosion or waterlogging is low (DPIRD, 2018).

Given the above, clearing of the applied area 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 is not at variance to this Principle

There are three conservation areas (nature reserves) within 20 kilometres of the application area, the closest is 16 kilometres northwest whilst the other two are 20 kilometres to the south.

No direct or indirect impacts to the environmental values of these conservation areas is expected given the geographical distance to them and that there is no ecological linkage joining them and the application area. Furthermore, no impacts are likely given the applied clearing area includes scattered trees and small remnants distributed over an approximately 580 hectare footprint.

Given the above, clearing of the applied area is not 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 is not likely to be at variance to this Principle

As noted in section 2 above, the application area is located on the midslope and upper position of the landscape with undulating rises to low hills with rock outcrop of granite, migmatite and gneiss. The mapped soils vary between grey to red shallow and deep loamy duplexes, brown and red sandy earth, shallow and deep gravel and yellow to red shallow sand (DPIRD, 2018; DPIRD, 2017).

As discussed in Principle (f), several minor watercourses within the application area have been impacted by previous agricultural activities with little riparian vegetation remaining. However, other sections do retain vegetation in the form of a dominate, upper-storey tree line. The applicant stated that they do not intend to clear along watercourses, and would not clear within a certain distance of a watercourse (DWER,2018).

As discussed under Principle (g), the CSLC advises that the area has a high capability of dryland cropping and as such the risk of land degradation in the form of salinity, soil water or wind erosion or waterlogging is low (DPIRD, 2018). It is considered clearing of the applied area is not likely to cause deterioration in the quality of surface or underground water.

Given the above, clearing of the applied area is not likely to be at variance to this Principle.

(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 a variance to this Principle

As noted in Section 2 above, the application area is located on the midslope and upper position of the landscape with undulating rises to low hills with rock outcrop of granite, migmatite and gneiss. The mapped soils vary between grey to red shallow and deep loamy duplexes, brown and red sandy earth, shallow and deep gravel and yellow to red shallow sand (DPIRD, 2017; DPIRD, 2018).

As discussed under Principle (g), the CSLC advises that the area has a high capability of dryland cropping and as such the risk of land degradation in the form of waterlogging is low (DPIRD, 2018). It is considered that clearing of the applied area is not likely to cause, or exacerbate, the incidence or intensity of flooding.

Given the above, clearing of the applied area is not likely to be at variance to this Principle.

Planning instruments and other relevant matters.

Application area is zoned as General agriculture under the Shire of Moora's Town Planning Scheme.

No Aboriginal sites of significance have been mapped within the application area.

The clearing permit application was advertised on DWER's website on 16 March 2018 with a 21 day submission period. No public submissions have been received in relation to this application.

Avoid, minimise and onsite mitigation

The applicant has committed to avoiding and minimising the clearing of native vegetation where possible. DWER officers discussed with the applicant the retention, rehabilitation and revegetation of some key areas on his property during a site inspection.

On 27 March 2019, DWER wrote to the applicant proposing a partial grant scenario which reduced the clearing under this application to 4.246 hectares and included retention and rehabilitation of 7.2 hectares of native vegetation. On 23 April 2019, the applicant agreed to the proposed partial grant.

4. References

- Benshemesh, J. (2007). National Recovery Plan for Malleefowl. Department for Environment and Heritage, South Australia Commonwealth of Australia (CoA) (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra. Commonwealth of Australia (CoA) (2012). EPBC Act referral guidelines for three threatened black cockatoo species. Department of Sustainability, Environment, Water, Populations and Communities, Canberra.
- Department of Biodiversity, Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity, Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>.
- Department of the Environment (DoE) (2018a). *Egernia stokesii badia* in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: <http://www.environment.gov.au/sprat>. Accessed Thu, 27 Sep 2018
- Department of the Environment (2018b). *Idiosoma nigrum* in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: <http://www.environment.gov.au/sprat>. Accessed Thu, 27 Sep 2018
- Government of Western Australia. (GWA)(2018). *2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017*. WA Department of Biodiversity, Conservation and Attractions.
- Department of Primary Industries and Regional Development (DPIRD) (2017) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <https://maps.agric.wa.gov.au/nrm-info/> (accessed September 2018).
- Department of Primary Industries and Regional Development (DPIRD) (2018) Officer of the Commissioner of Soil and Land Conservation Land Degradation Report for Clearing Permit application CPS 7951/1 (DWER Ref. A1658408)
- Jones, A. (2015) Threatened and Priority Flora List, 11 November 2015. Department of Parks and Wildlife: Kensington, WA.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- 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.
- Threatened Species Scientific Committee (TSSC) (2015). Approved Conservation Advice (including listing advice) for the Eucalypt Woodlands of the Western Australian Wheatbelt. Department of the Environment, Canberra. Available from: <http://www.environment.gov.au/biodiversity/threatened/communities/pubs/128-conservation-advice.pdf>.
- Western Australian Herbarium (WAH, 1998-) FloraBase-the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <https://florabase.dpaw.wa.gov.au/>

GIS Databases:

- Aboriginal Sites of Significance
- Department of Biodiversity, Conservation and Attractions Estate
- Groundwater salinity

- Hydrography, linear
- SAC bio datasets (accessed October 2018)
- Soils, Statewide
- Virtual Mosaic Landgate / Aerial imagery (accessed October 2018)