GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 7987/1
File Number: DER2018/000278-1
Duration of Permit: From 7 July 2018 to 7 July 2020

PERMIT HOLDER

Isaac Peter Baum
Brodie Lee Melchiorre

LAND ON WHICH CLEARING IS TO BE DONE

Lot 11 on Deposited Plan 70016, Cowalellup.

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 5.47 hectares within the area cross-hatched yellow on attached Plan 7987/1.

CONDITIONS

1. **Avoid, minimise and reduce the impacts and extent of clearing**
   In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:
   (a) avoid the clearing of native vegetation;
   (b) minimise the amount of native vegetation to be cleared; and
   (c) reduce the impact of clearing on any environmental value.

2. **Dieback and weed control**
   When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:
   (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
   (b) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
   (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

3. **Records must be kept**
   The Permit Holder must maintain the following records for activities done pursuant to this Permit, in relation to the clearing of native vegetation authorised under this Permit:
   (a) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
   (b) the date that the area was cleared;
   (c) the size of the area cleared (in hectares);

(d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit; and
(e) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 2 of this Permit.

4. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 2 of this Permit, when requested by the *CEO*.

DEFINITIONS

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

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

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

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

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

weed/s means any plant –

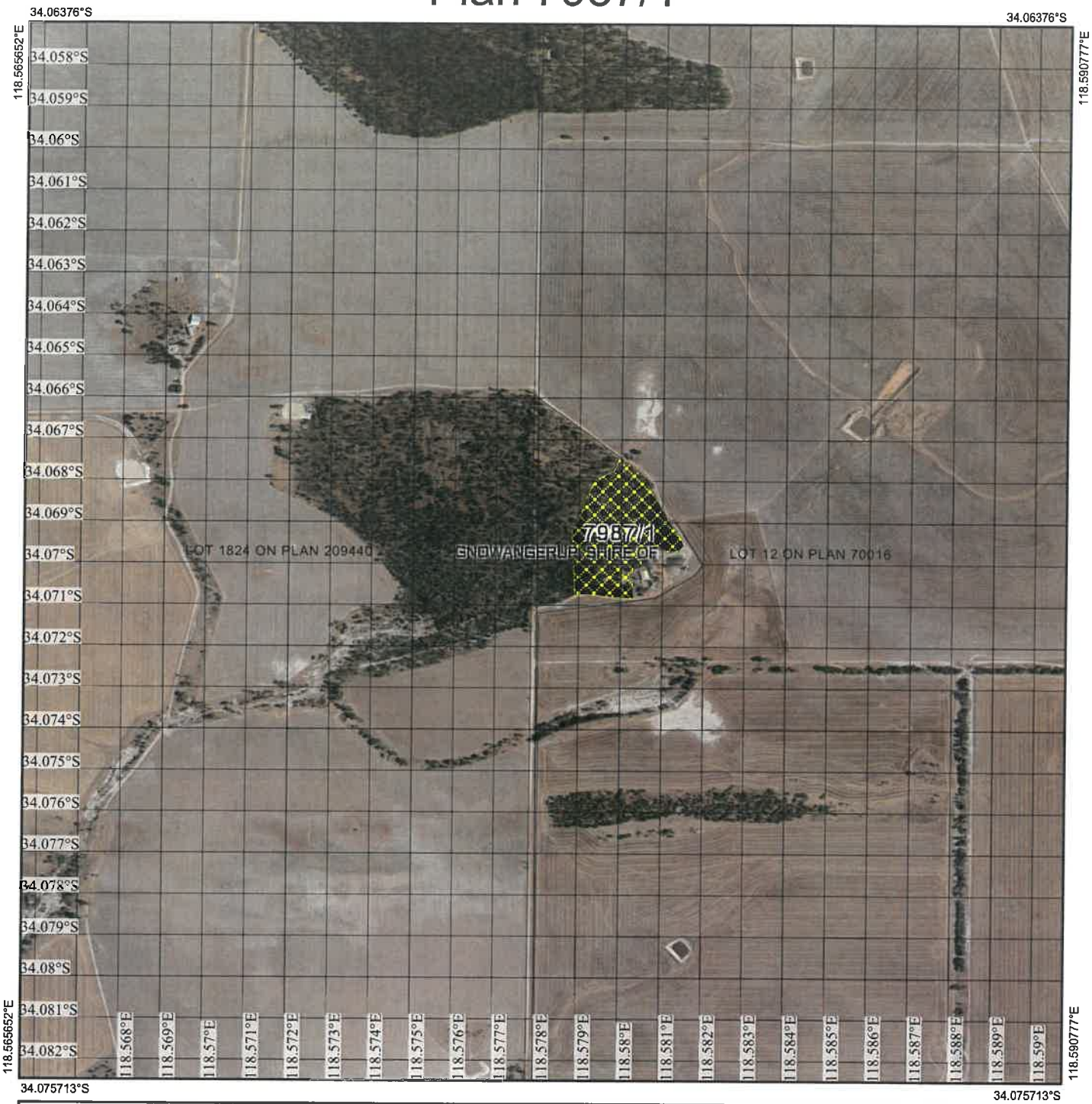
(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
(b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or
(c) not indigenous to the area concerned.

Emma Bramwell
A/MANAGER
CLEARING REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

5 June 2018

Plan 7987/1



Legend

- Imagery
- Clearing Instruments Activities
- Local Government Authority

N

0 500m

1:12,287

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

E BRAMWELL Date 05/06/18

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

GOVERNMENT OF WESTERN AUSTRALIA

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: CPS 7987/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Mr Isaac Peter Baum and Ms Brodie Lee Melchiorre
Application received date: 13 February 2018

1.3. Property details

Property: LOT 11 ON PLAN 70016, COWALELLUP
Local Government Authority: GNOWANGERUP, SHIRE OF
Localities: COWALELLUP

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
5.47 (as revised)		Mechanical Removal	Grazing & pasture

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 5 June 2018
Reasons for Decision: The clearing permit application was received on 13 February 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* (EP Act). It has been concluded that the proposed clearing may be at variance to clearing principles (a) and (e), and is not likely to be at variance to the remaining clearing principles.

The Delegated Officer noted that the application area is part of a larger remnant of native vegetation and may be significant as a remnant in an extensively cleared area, and that the proposed clearing may impact on adjacent remnant vegetation through the introduction or spread of weeds and dieback. In determining to grant a clearing permit subject to conditions, the Delegated Officer determined that the proposed clearing is unlikely to lead to any unacceptable risk to the environment.

2. Site Information

Clearing Description: The revised application is for the proposed clearing of 5.47 hectares of native vegetation within Lot 11 on Plan 70016, Cowalellup, for the purpose of creating a stock yard (refer Figure 1).

Vegetation Description: The vegetation within the application area is mapped as Beard vegetation association 1075: Shrublands; mallee scrub, tall sand mallee (*Eucalyptus eremophila*) and black marlock (*Eucalyptus redunca*) (Shepherd et al., 2001).

Vegetation description was determined from photographs provided by the applicant (refer Figures 2 to 7), and from the findings of a site inspection conducted by the Department of Primary Industry and Regional Development (DPIRD) on 1 March 2018. The application area comprises a yate (*Eucalyptus occidentalis*) woodland with jam (*Acacia acuminata*) and/or sheoak (*Allocasuarina* sp) and mallee (*Eucalyptus* sp.) structure (DPIRD, 2018). The vegetation within the north-eastern portion of the application area is mapped as mallee heath typically blue mallee (*Eucalyptus tetragona), Banksia* (nee *Dryandra*) spp. and sheoak (DPIRD, 2018). The ground layer comprises introduced grass/weed species interspersed with scattered native shrubs (DPIRD, 2018).

It is understood from the applicant that the vegetation was burnt on two occasions in close succession, the most recent being during 2014.

Vegetation Condition: The vegetation within the application area is considered to be in the following condition:

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

Vegetation condition was determined from photographs provided by the applicant (refer Figures 2 to 7), and from the findings of the DPIRD site inspection (refer DPIRD Report Figures 2 and 3). The application area is recovering from fire and is of variable condition, and was likely to have been in a 'Good' (Keighery, 1994) to 'Degraded' (Keighery, 1994) condition prior to the fire (DPIRD, 2018). The ground cover comprises agricultural grasses/weeds and scattered native shrubs (DPIRD, 2018).

The applicant advised that the application area has been historically impacted by agricultural activities, pig activity and a 2014 (and earlier) fire event resulting in the mallee not regenerating in some areas (Supporting documentation, 2018).

Soil / Landform type: The DPIRD site inspection found that the application area generally occupies the mid slope positions in the landscape, and that the soils present are Toompup 3 Subsystem (Map Unit 241Tm_3): Slopes of gently undulating rises with alkaline grey sandy and loamy duplex soils (often shallow) and deep sandy duplex soils (DPIRD, 2018).

Comments: The local area considered in the assessment of the application is described as a 10 kilometre radius measured from the application area. The local area retains approximately 13.7 per cent native vegetation cover.

Figure 1: Revised application area (blue-hatched area)

Photographs provided by applicant and DPIRD

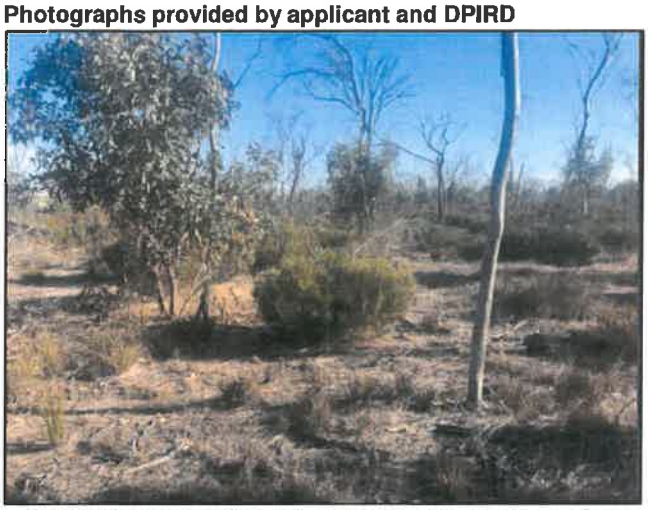


Figure 2: Typical vegetation type and condition in the southern portion of the application area (source: applicant)

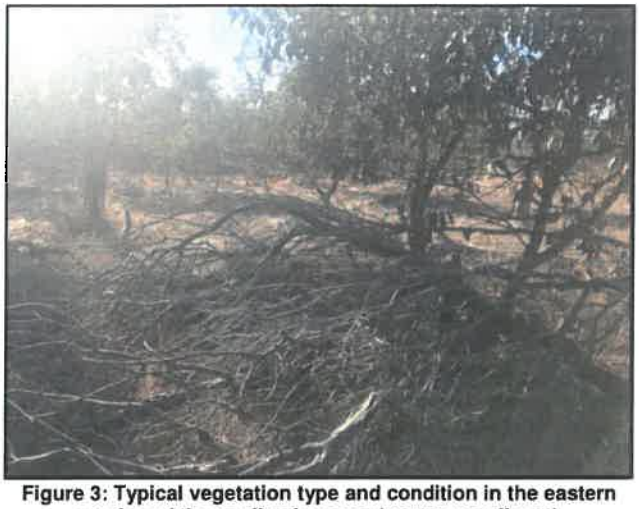


Figure 3: Typical vegetation type and condition in the eastern portion of the application area (source: applicant)

Figure 4: Typical vegetation type and condition in the southwestern portion of the application area (source: applicant)

Figure 5: Typical vegetation type and condition in the western portion of the application area (source: applicant)

Figure 6: Typical vegetation type and condition in the northwestern portion of the application area (source: applicant)

Figure 7: Typical vegetation type and condition in the northern portion of the application area (source: applicant)

Figure 8: Vegetation type and condition in the northwestern portion of the application area (source: DPIRD Attachment 3)

3. Minimisation and mitigation measures

The application was originally for the proposed clearing of 8.67 hectares of native vegetation for the creation of a stock-yard and fire hazard reduction for a dwelling. To avoid and reduce the potential environmental impacts associated with the proposed clearing, the applicant revised the application to the clearing footprint resulting in a 110 meter buffer to the adjoining remnant, a 10 metre buffer to the mapped watercourse, and a reduced clearing size of 5.47 hectares.

4. 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

Lot 11 is 17.769 hectares in area, and contains approximately 13.8 hectares of native vegetation. The application area constitutes approximately 63 per cent of the native vegetation on Lot 11.

As outlined in Section 2, the vegetation within the application area is mapped as a yate woodland with jam and/or sheoak and mallee structure, over a ground layer comprised of introduced grass/weed species interspersed with scattered native shrubs, and was likely to have been in a 'Good' (Keighery, 1994) to 'Degraded' (Keighery, 1994) condition prior to the fire (DPIRD, 2018). The applicant advised that the application area has been historically impacted by agricultural activities, pig activity and a 2014 fire event resulting in the mallee not regenerating in some areas (Supporting documentation, 2018). Photographs provided in the DPIRD site inspection report and provided by the applicant indicate that the fire has killed many upper-storey plants, that the majority of surviving individuals are coppicing, and that the understorey is dominated by introduced grasses/weeds (DPIRD, 2018; Supporting documentation, 2018).

As outlined in section 2, the soils within the application area are mapped as grey sandy and loamy duplex soils (often shallow) and deep sandy duplex soils predominately in the southern area and grey deep and, less commonly, shallow sandy duplex soils, duplex sandy gravels and yellow/brown sandy duplex soils in the northern area.

According to available databases, one Priority 1 (P1), eight Priority 3 (P3) and five Priority 4 (P4) listed flora species have been recorded within the local area. The majority of these species are small to low shrubs and/or herbs between 20 and 70 centimetres high (WAH, 1998-). Noting the habitat preferences of some of these species (including granitic soils or winter-wet areas that are not present within the application area), and the mapped soil and vegetation types present within the application area, the majority of these species are unlikely to occur within the application area. However the application area may contain suitable habitat for the following species which have been recorded nearby:

- *Thysanotus gageoides* (P3) is known from 26 recorded populations in the Albany, Boyup Brook, Broomehill-Tambellup, Cranbrook, Gnowangerup, Jerramungup and Plantagenet local government areas, and grows in sand, clay, granite, sandstone and lateritic soils (WAH, 1998-). This species has been mapped approximately 320 metres from the application area within the adjacent remnant. However, the accuracy of this location is questionable given the location was manually calculated/determined based on field notes from a 1964 Herbarium collection.
- *Acacia trulliformis* (P4) is known from 26 recorded populations in the Cranbrook, Gnowangerup, Jerramungup and Plantagenet local government areas, and grows in sandy loam soils (WAH, 1998-). This species has been recorded approximately 1.3 kilometres from the application area.
- *Banksia densa* var. *parva* (P4) is known from 24 records in the Albany, Cranbrook, Dumbleyung, Gnowangerup, Kent and Plantagenet local government areas, and grows in gravelly clay loam, sandy loam and white sandy soils (WAH, 1998-). This species has been recorded approximately 2.1 kilometres from the application area.
- *Brachyloma mogin* (P3) is known from 39 records in the Beverley, Broomehill-Tambellup, Corrigin, Cranbrook, Esperance, Gnowangerup, Jerramungup, Kent, Kojonup, Kulin and Pingelly local government areas, and grows in grey clayey sand and dry grey sandy loam soils (WAH, 1998-). This species has been recorded approximately 4.4 kilometres from the application area.
- *Orthrosanthus muelleri* (P4) is known from 28 records in the Broomehill-Tambellup, Cranbrook, Gnowangerup and Plantagenet local government areas, and grows in sandy and loam soils (WAH, 1998-). This species has been recorded approximately 4.4 kilometres from the application area.

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 range extents of the above species, the proposed clearing is not likely to impact on the conservation status of these species should any individuals occur within the application area.

According to available databases, the ecological community 'Eucalypt woodlands of the Western Australian Wheatbelt' (Wheatbelt Woodlands) has been recorded from a number of occurrences within the local area, the nearest of which is approximately three kilometres southwest of the application area. This ecological community is listed as a priority ecological community (PEC) by the Department of Biodiversity, Conservation and Attractions (DBCA), and as a threatened ecological community (TEC) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. Noting the type and condition of the vegetation within the application area, in particular noting that the application area does not include salmon gum (*Eucalyptus salmonophloia*), York gum (*E. loxophleba*), red morrel (*E. longicornis*) and gimlet (*E. salubris*), the vegetation within the application area is not likely to comprise this PEC. TECs are discussed under Principle (d).

The application area is part of a remnant of approximately 40 hectares in size (refer Figure 1), and the proposed clearing would reduce the size of this remnant by approximately 13 per cent to approximately 34 hectares.

As discussed under Principle (h), the application area is approximately 110 metres from a conservation area, separated by a buffer containing remnant vegetation. The proposed clearing may impact on this buffer through the introduction or spread of weeds. Implementing weed management measures will assist in reducing this risk.

Noting the presence of priority flora within the local area, that the application area comprises approximately 13 per cent of a remnant of approximately 40 hectares in size, and the extent of native vegetation remaining within the local area, and taking into account the regenerative capacity of the vegetation following fire, it is considered that the application area may comprise a high level of biodiversity in the context of an extensively cleared local area. The proposed clearing 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 is not likely to be at variance to this Principle

As outlined under Section 2, the applicant advised that the application area has been historically impacted by agricultural activities, pig activity and a 2014 (and earlier) fire event. The ground layer comprises introduced grass/weed species interspersed with scattered native shrubs (DPIRD, 2018; Supporting documentation, 2018).

As discussed under Principle (a), the application area comprises approximately 13 per cent of a remnant of approximately 40 hectares in size.

According to available databases, the threatened fauna malleefowl (*Leipoa ocellata*) and the Priority 4 fauna western brush wallaby (*Notamacropus irma*) species have been recorded within the local area (DBCA, 2007-).

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 plant (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). The effect of fire on malleefowl is severe, and breeding in burnt areas is usually reduced for at least 30 years (Benshemesh, J., 2007).

The western brush wallaby optimum habitat is open forest or woodland, particularly favouring open, seasonally-wet flats with low grasses and open scrubby thickets (Parks and Wildlife, 2016). It is also found in some areas of mallee and heath-land, and is uncommon in karri forest (Parks and Wildlife, 2016).

Noting the above, the proposed clearing is not likely to impact on significant habitat for fauna species indigenous to Western Australia. The proposed clearing is not likely to be at variance to this Principle.

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

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

According to available databases, six rare flora species have been mapped within the local area. Four of these species are prostrate shrubs between 20 and 50 centimetres high, one of these species is an orchid, and the sixth species is a spindly erect shrub (WAH, 1998-). The closest occurrence of rare flora is approximately four kilometres from the application area. Noting the habitat preferences of these species (including granitic soils or winter-wet areas that are not present within the application area), and the mapped soil and vegetation types present within the application area, the application area may contain suitable habitat for some of these species.

As outlined under Section 2, the vegetation within the application area is mapped as a yate woodland with jam and/or sheoak and mallee structure, over a ground layer comprised of introduced grass/weed species interspersed with scattered native shrubs, and was likely to have been in a 'Good' (Keighery, 1994) to 'Degraded' (Keighery, 1994) condition prior to the fire (DPIRD, 2018). The applicant advised that the application area has been historically impacted by agricultural activities, pig activity and a 2014 fire event resulting in the mallee not regenerating in some areas (Supporting documentation, 2018). The soils within the application area are mapped as alkaline grey sandy and loamy duplex soils (often shallow) and deep sandy duplex soils (DPIRD, 2018).

Whilst the preferred vegetation habitat type of the six threatened flora species may be similar to the type within the application area, their preferred soils (predominately lateritic and quartzite based sandy loams or clays) differ from the soils present within the application area and hence may not support these species. In addition, the four prostrate shrubs and the orchid may not be able to compete with the existing weed cover should they have originally occured within the application area.

Noting the structure and condition of the vegetation within the application area, it is considered that the application area is not likely to include, or be necessary for the continued existence of, rare flora. The proposed clearing is not likely to be at variance to this Principle.

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

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

According to available databases, the nearest occurrence of a TEC is the Wheatbelt Woodlands TEC located three kilometres southwest of the application area.

The document '*Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) Approved Conservation Advice (including listing advice) for the Eucalypt Woodlands of the Western Australian Wheatbelt*' (Approved Conservation Advice) states that the Wheatbelt Woodland TEC 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 (Threatened Species Scientific Community, 2015).

Noting the type and condition of the vegetation within the application area, in particular noting that the application area does not include salmon gum (*Eucalyptus salmonophloia*), York gum (*E. loxophleba*), red morrel (*E. longicornis*) and gimlet (*E. salubris*), it is considered that the vegetation within the application area does not meet the criteria outlined in the Approved Conservation Advice for this TEC, and is therefore not considered to be a representative of this TEC.

Noting this, and the mapped vegetation type within the application area, the vegetation within the application area is not likely to comprise the whole or a part of, or is necessary for the maintenance of a threatened ecological community. The proposed clearing is not likely to be at variance to this Principle.

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Proposed clearing may be 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 (Commonwealth of Australia, 2001).

As indicated in Table 1, the mapped Beard vegetation association within the bioregion retains less than the 30 per cent recommended threshold. The local area retains approximately 13.7 per cent native vegetation cover. On this basis the application area is considered to be located in an area that has been extensively cleared.

As discussed under Principle (a), the application area comprises approximately 13 per cent of a remnant of approximately 40 hectares in size. Other remnants in the local area are approximately 800 metres to the north (approximately 65 hectares in size), approximately 2.5 kilometres to the southeast (approximately 300 hectares), and approximately seven kilometres to the east (approximately 183 hectares), of the application area. On this basis, it is considered that the application area may be a significant remnant within an extensively cleared landscape.

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

Table 1: Vegetation extents (Government of Western Australia, 2018)

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Current Extent in DBCA Managed Lands (ha)	(%)
IBRA bioregion					
Mallee	7,395,894	4,180,566	56.5	1,288,894	30.8
Beard Vegetation Association in Bioregion*					
1075	517,041	73,493	14.2	28,301	38.51

(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 to this Principle

According to available databases, a minor, non-perennial watercourse is mapped approximately 10 metres from the revised application area. The mapped watercourse traverses the property from the northeast to the southwest. Noting the vegetation type within the applciation area, the proposed clearing is not likely to impact on vegetation growing in association with this watercourse.

The DPIRD site inspection noted a lack of land slope within the application area (DPIRD, 2018). A site inspection conducted by the Officer of Soil and Land Conservation did not note or refer to any watercourse issues (DPIRD, 2018).

Noting the above, the application area is not likely to include vegetation growing in association with a watercourse or wetland. The proposed clearing 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

As outlined in section 2, the application area generally occupies the mid slope position and is mapped as slopes of gently undulating rises with alkaline grey sandy and loamy duplex soils (often shallow) and deep sandy duplex soils (DPIRD, 2018).

The Commissioner of Soil and Land Conservation (Commissioner) advised that the risk of land degradation in the form of water erosion, wind erosion, eutrophication (phosphorus risk), salinity, waterlogging and flooding as a result of the proposed clearing is low (DPIRD, 2018). The Commissioner also advised that the proposed clearing is not expected to have a significant impact on the existing ground water table (DPRID, 2018). The land degradation risks are outlined in Table 2.

Given the above, the proposed clearing is not likely to cause appreciable land degradation. The proposed clearing is not likely to be at variance to this Principle.

Table 2: Land degradation risk (DPIRD, 2018)

Land degradation type	Map Unit 257Gd_4
Salinity	• 3 per cent of map unit is presently saline. • 0 per cent of map unit has a high risk. • 0 per cent of map unit has a moderate risk. • 97 per cent of map unit is nil or partial risk or not rated.
Eutrophication (phosphorus loss)	• 3 per cent of map unit has an extreme risk. • 0 per cent of map unit has a very high risk. • 5 per cent of map unit has a high risk. • 26 per cent of map unit is a low to moderate risk or is not rated.
Wind erosion	• 0 per cent of map unit has an extreme risk. • 0 per cent of map unit has a very high risk. • 30 per cent of map unit has a high risk. • 70 per cent of map unit is a low to moderate risk or is not rated.
Water erosion	• 0 per cent of map unit has an extreme risk. • 3 per cent of map unit has a very high risk. • 0 per cent of map unit has a high risk. • 97 per cent of map unit has a very low to moderate risk.
Waterlogging	• 3 per cent of map unit has a very high risk. • 0 per cent of map unit has a high risk. • 97 per cent of map unit is nil to moderate risk or not rated.

(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 likely to be at variance to this Principle

According to available databases, an un-named 'A' Class Nature Reserve occurs approximately 8.9 kilometres northeast of the application area. Noting the distance to this Nature Reserve, and the extent of cleared land in the local area, the proposed clearing is not likely to have an impact on the environmental values of this conservation area.

The application area is part of a remnant of approximately 40 hectares. The (larger) portion of the remnant on an adjacent land parcel is subject to an instrument under the *Soil and Land Conservation Act 1945*. This conservation area is separated from the proposed clearing by a 110 metre vegetated buffer.

Given the above, the proposed clearing is not likely to impact on the environmental values of this conservation area. The proposed clearing is not likely to be at variance to this Principle.

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

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

As outlined in section 2, the application area generally occupies the mid slope position and is mapped as slopes of gently undulating rises with alkaline grey sandy and loamy duplex soils (often shallow) and deep sandy duplex soils (DPIRD, 2018). As discussed under Principle (f), a minor, non-perennial watercourse is mapped approximately 10 metres from the application area.

As discussed under Principle (g), the Commissioner advised that the risk of salinity and eutrophication as a result of the proposed clearing is low, and that the proposed clearing is not expected to have a significant effect on the existing ground water table (DPIRD, 2018).

Given the above, and noting the soil type within the application area and the presence of adjacent remnant vegetation, the proposed clearing is not likely to cause deterioration in the quality of surface or underground water. The proposed clearing 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 at variance to this Principle

As outlined in section 2, the application area generally occupies the mid slope position and is mapped as slopes of gently undulating rises with alkaline grey sandy and loamy duplex soils (often shallow) and deep sandy duplex soils (DPIRD, 2018). As discussed under Principle (f), a minor, non-perennial watercourse is mapped approximately 10 metres from the application area.

As discussed under Principle (g), the Commissioner advised that the risk of flooding as a result of the proposed clearing is low (DPIRD, 2018).

Given the above, and noting the mapped water course and soil type within the application area and the presence of adjacent remnant vegetation, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding. The proposed clearing is not likely to be at variance to this Principle.

Planning instruments and other relevant matters.

The original application was for the proposed clearing of 8.67 hectares of native vegetation for the creation of a stock-yard and fire hazard reduction for a dwelling. Assessment of the original application found that the proposed clearing could potentially impact on the environmental values of an adjacent remnant subject to an instrument under the *Soil and Land Conservation Act 1945*, vegetation growing in association with a watercourse, and a mapped vegetation association that has been extensively cleared. The applicant was also advised of an exemption from requiring a clearing permit under regulation 5, Item 15 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* for clearing within 20 metres of a building for fire protection.

The applicant subsequently revised the application area to exclude a 110 metre buffer to the adjacent remnant, and to avoid the watercourse through a 10 metre setback.

The original application was advertised on the Department of Water and Environmental Regulation (DWER) website on 23 February 2018 with a 21 day submission period. The revised application was advertised on DWER's website on 26 May 2018 with a seven day submission period. No public submissions have been received in relation to this application.

The application area is zoned General Agriculture - Rural under the Shire of Gnowangerup's Land Planning Scheme.

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

5. Applicant's Submissions

On 18 May 2018, the applicant was advised of the potential impacts of the proposed clearing associated with the original application, including to vegetation associated with a watercourse, an adjacent remnant subject to an instrument under the *Soil and Land Conservation Act 1945*, and to a vegetation association that has been extensively cleared (DWER ref. A1679546).

On 23 May 2018, the applicant requested that the application area be revised to exclude a 110 metre buffer to the adjacent remnant, and to avoid the watercourse through a 10 metre setback, thereby reducing the extent of the proposed clearing from 8.75 hectares to 5.47 hectares (DWER ref. A1679898).

The applicant's endeavours to avoid and minimise impacts has been taken into account in this assessment, as well as the current condition and regenerative capacity of the vegetation within the application area following two fires in close succession (the most recent of these being in 2014).

6. References

Benshemesh, J. (2007). National Recovery Plan for Malleefowl. Department for Environment and Heritage, South Australia

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 Parks and Wildlife (Parks and Wildlife) (2016) Fauna Profiles: https://www.dpaw.wa.gov.au/images/documents/plants-animals/animals/animal_profiles/Western Brush Wallaby.pdf

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 April 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 7987/1 (DWER ref. A1635915).

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Government of Western Australia (2018) 2017 State-wide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions.

Jones, A. (2015) Threatened and Priority Flora List, 11 November 2015. Department of Parks and Wildlife: Kensington, WA.

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.

Supporting documentation (2018). Application for clearing permit CPS 7987/1, advice received from applicant 1 March 2018 and 3 May 2018 (DWER Ref: A1670084 and A1626928)

Threatened Species Scientific Committee (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 April 2018)
- Soils, Statewide
- Virtual Mosaic Landgate / Aerial imagery (accessed April 2018)