



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 8337/1
File Number: DWERT2126
Duration of Permit: 11 December 2019 to 11 December 2021

PERMIT HOLDER

Hien Thuy Chaney

LAND ON WHICH CLEARING IS TO BE DONE

Lot 75 on Plan 17014, Nambeelup

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.865 hectares of native vegetation within the area hatched yellow on attached Plan 8337/1.

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 known *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 area to be cleared.

3. Records to 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 the extent of clearing in accordance with condition 1 of this Permit; and
- (e) actions taken to minimise 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 3 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 Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION








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

11 November 2019

Plan 8337/1



Legend

-  Roads
-  Imagery
-  Cadastre
-  Clearing Instruments Activities
-  Cadastre (Search)
-  Local Government Authority
-  POI




1:2,083

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

 Date 11 November 2019
 Mathew Gannaway

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



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1. Application details

1.1. Permit application details

Permit application No.: 8337/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Ms Hien Thuy Chaney
Application received date: 21 January 2019

1.3. Property details

Property: Lot 75 on Plan 17017
Local Government Authority: Murray, Shire of
Localities: Nambeelup

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
0.865 hectares (originally a 1.298 hectare application area was sought)		Mechanical Removal	Hazard reduction or fire control

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 11 November 2019

Reasons for Decision:

This clearing permit application has been assessed against the clearing Principles, planning instruments and other matters in accordance with s51O of the *Environmental Protection Act 1986*. It has been concluded that the initial proposed clearing of 1.298 hectares is at variance with Principles (f) and (e), may be at variance with Principles (a), (b), (c), (g) and (j), and is not likely to be at variance with the remaining Clearing Principles.

The applicant initially applied to clear an area of 1.298 hectares. Through assessment of the initial application area it was identified that the proposed clearing had the potential to impact on suitable habitat for fauna and flora species of conservation significance, a resource enhancement wetland and represented a significant remnant vegetation within an extensively cleared landscape.

The Delegated Officer determined that the proposed clearing had the potential to result in significant environmental impacts. Further information was sought from the applicant to address these concerns.

The applicant requested to amend the application area to incorporate a smaller portion of vegetation comprising 0.865 hectares, which comprises degraded vegetation and excludes the mapped resource enhancement wetland occurrence. A reassessment of the proposed clearing against the clearing Principles for the revised application area determined that the proposed clearing is at variance with Principle (f) and is not likely to be at variance with any of the remaining clearing Principles.

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

2. Site Information

Clearing Description

The application is to clear 1.298 hectares of native vegetation within Lot 75 on Plan 17017, Nambeelup, for the purpose of constructing access tracks and bushfire mitigation (Figure 1 and Figure 2).

The assessment of the clearing principles under Section 3 relates to the area initially applied to clear. During the assessment process the applicant requested to reduce the application area to 0.865 hectares, corresponding to a slightly reduced area to that shown within Figure 2 below.

The assessment supporting the determination of the revised application area is contained in Section 5 of this report.

Vegetation Description

The application area is mapped as Swan Coastal Plain Bassendean Complex-Central and South, which is described as "Vegetation ranges from woodland of *Eucalyptus marginata* (Jarrah) - *Allocasuarina fraseriana* (Sheoak) - *Banksia* species to low woodland of *Melaleuca* species, and sedgeland on the moister sites" (Heddle et al., 1980).

A site inspection undertaken on 1 April 2019 determined that the application area primarily consists of *Eucalyptus marginata*, *Eucalyptus rudis*, *Melaleuca* sp., paperbark trees and sedges. Non-native trees were scattered throughout the application area (Department of Water and Environmental Regulation (DWER), 2019).

Vegetation Condition

Vegetation condition was determined via the site inspection undertaken by DWER officers (DWER, 2019). The application area was determined to be in a Degraded to Very Good condition, described as:

- Degraded: Basic vegetation structure severely impacted by disturbance, scope for regeneration but not to a state approaching good condition without intensive management (Keighery, 1994); to
- Very good: Vegetation structure altered, obvious signs of disturbance (Keighery, 1994).

Soil type

The application area is mapped as Bassendean B3 Phase, which is described as "Closed depressions and poorly defined stream channels with moderately deep, poorly to very poorly drained bleached sands with an iron-organic pan, or clay subsoil. Surfaces are dark grey sand or sandy loam" (Schoknecht et al., 2004).

Comments

The local area considered in the assessment of this application is defined as 10 kilometre radius measured from the centre of the application area.

Evidence of weed invasion, vehicles track and rubbish were evident throughout the application area (DWER, 2019).



Figure 1: Application area hatched in blue.



Figure 2: Application area separated into three areas based on their clearing purpose. Area 1 (pink area) represent a 3m firebreak (as per Shire of Murray bush fire notice). Area 2 (green area) represents the area for constructing a house and driveway. Area 3 (red area) (wetland) represents the area for bush fire mitigation.

3. Assessment of application against clearing principles, planning instruments and other relevant matters

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

Proposed clearing may be at variance with this Principle

According to available databases, five threatened flora and 21 priority flora have been mapped within the local area. *Cyathochaeta teretifolia* (Priority 3), *Jacksonia gracillima* (Priority 3), *Caladenia speciosa* (Priority 4), *Stylidium longitubum* (Priority 4), *Acacia lasiocarpa* var. *bracteolata* long peduncle variant (G.J. Keighery 5026) (Priority 1), and *Diuris drummondii* (Threatened) have been mapped in similar soil and vegetation types than that mapped within the application area. The remaining flora have been mapped within different soil and vegetation types than that mapped within the application area. Threatened flora is discussed in more detail under Principle (c).

Priority 4 flora species are considered to have been adequately surveyed, or for which sufficient knowledge is available, and are considered not currently threatened or in need of species protection, but could be present if circumstances change (Smith & Jones, 2018). Priority 3 flora species are known from several locations, and the species do not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat (Smith & Jones, 2018).

Acacia lasiocarpa var. *bracteolata* long peduncle variant (G.J. Keighery 5026) predominantly occurs in swampy areas and in winter wet lowlands. According to DBCA (2007), there are only 5 records known of this species. Priority 1 flora species are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either very small or on lands not managed for conservation, or otherwise under threat of habitat destruction or degradation (Smith & Jones, 2018). Given the above, and that flora records are mapped within the same soil and vegetation types than that mapped within the application area, this flora species may occur within Area 3 of the application area.

According to available databases, three threatened ecological communities (TEC) and three priority ecological communities (PEC) have been mapped within the local area. The Commonwealth listed TEC "Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region" (Banksia Woodlands TEC) has been mapped within the application area.

The key diagnostic characteristics for the Banksia Woodlands TEC, are as follows (Department of the Environment and Energy, 2016);

- Occurs predominantly within the Swan Coastal Plain IBRA bioregion;
- Occurs on well drained, low nutrient soils on sandplain landforms. In particular, on deep Bassendean and Spearwood sands, or rarely on Quindalup sands;
- A distinctive upper sclerophyllous layer of large shrubs or small trees, more than 2 metres tall;
- An emergent layer of medium, or tall Eucalyptus or Allocasuarina species may be present above the Banksia canopy;
- A lower shrub and/or ground later or sclerophyllous shrubs, cord rushes, sedges and perennial and ephemeral forbs;
- Contain a range of Banksia species but must include at least one of the following; *Banksia attenuata*, *B. menziesii*, *B. prionotes*, and *B. ilicifolia*.

Given that no *Banksia* species were observed during a site inspection, the application area is not representative of this TEC. Therefore, the application area does not comprise the whole or a part of, or is necessary for the maintenance of this TEC.

As discussed under Principle (d), no state listed TECs are likely to occur within the application area.

The State-listed PEC "Coastal shrublands on shallow sands" (Priority 3), and "Northern Spearwood shrublands and woodlands" (Priority 3) is located approximately 7,058 metres north west and 7,227 metres north west of the application area, respectively. The remaining PECs are located approximately greater than 9,400 metres from the application area. Noting the species composition of these PECs and the vegetation mapped within the application area and observed during a site inspection (DWER, 2019), the application area does not comprise of these PECs.

As discussed under Principle (b), according to available databases, 11 threatened fauna species, 29 species listed under international agreement, five Priority 4, three Priority 3 and two species classified as other specially protected fauna have been mapped within the local area. Of the threatened and priority fauna identified, the application area may comprise habitat for forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's cockatoo (*Calyptorhynchus latirostris*), swan coastal plain shield-backed trapdoor spider (*Idiosoma sigillatum*), quenda (*Isoodon fusciventer*), Perth slider (*Lerista lineata*), black-striped snake (*Neelaps calonotos*), and water-rat (*Hydromys chrysogaster*).

Noting the above, the application area may contain suitable habitat for conservation significant flora and fauna. Therefore, the application area may comprise a high level of biodiversity and the proposed clearing may be at variance with this Principle.

A flora and fauna survey would be required to determine if the vegetation comprised of significant habitat for conservation significant flora and fauna.

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.

Proposed clearing may be at variance with this Principle

As discussed under Principle (a), 11 specially protected species, 29 species listed under international agreement, five Priority 4, three Priority 3 and two species classified as other specially protected fauna have been mapped within the local area (Department of Biodiversity, Conservation and Attractions, 2007) (DBCA).

Of the threatened and priority fauna identified, the application area may comprise habitat for forest red-tailed black cockatoo, Baudin's cockatoo, Carnaby's cockatoo, swan coastal plain shield-backed trapdoor spider, black-striped snake, quenda, Perth slider lined skink and water-rat.

Carnaby's cockatoo and Baudin's cockatoo are listed as endangered and forest red-tailed black cockatoo as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and *Biodiversity Conservation Act 2016* (BC Act). These species nest in hollows in live or dead trees of karri, marri, wandoo, tuart, salmon gum, jarrah, flooded gum, York gum, powder bark, bullich and blackbutt (Commonwealth of Australia, 2012). A site inspection confirmed no suitable habitat trees for black cockatoos (DWER, 2019) within the application area.

Black cockatoos have a preference for foraging habitat that includes jarrah and marri woodlands and forest heathland and woodland dominated by proteaceous plant species such as *Banksia* sp., *Hakea* sp., and *Grevillea* sp. (Commonwealth of Australia, 2012). Given the application area predominately comprises of *Melaleuca* sp., sedges and some jarrah and no evidence of foraging was observed (DWER, 2019), the application area is not likely to comprise of significant foraging habitat for black cockatoos.

Quenda is listed as Priority 4 by DBCA. This species prefers swamps with dense understory and banksia and jarrah woodland. According to advice provided by DBCA (2019), the surrounding area is known habitat for this species, therefore quenda is likely to occur within the application area.

Swan Coastal Plain shield-backed trapdoor spider is listed as Priority 3 by DBCA. One individual recorded in 2013 was mapped within the local area (DBCA, 2007). According to DBCA (2019), this species predominately occurs in the Perth Metropolitan Area. Given the above, the application area is unlikely to contain significant habitat for this species.

Perth slider is listed as Priority 3 by DBCA. This species is restricted to the Swan Coastal plain, south of the Swan River, including Garden and Rottnest Islands, extending south to Binningup in a variety of habitats. Given the above, the proposed clearing is not likely to impact on significant habitat for this species.

Black-striped snake is listed as Priority 3 by DBCA. This species tends to occur in Banksia woodlands and sandy areas of the Perth Metropolitan Area. Given that no *Banksia* species were observed during the site inspection, the application area is unlikely to contain significant habitat for this species.

Water-rat is listed as Priority 4 by DBCA. This species tends to occur near permanent fresh or brackish water, including freshwater lakes, streams, swamps, dams and urban rivers. According to DBCA (2019), this species predominately occurs closer to the coast and further north of the application area. During a site inspection, a stagnant water body effected by algal blooms was identified. This waterbody is not included in the application area. Noting this, the application area is unlikely to contain significant habitat for this species.

The South West Regional Ecological Linkage (SWREL) report (Molley et al., 2009) defines an ecological linkage as "A Series of (both contiguous and non-contiguous) patches which, by virtue of their proximity to each other, act as stepping stones of habitat to facilitate the maintenance of ecological processes and the movement of organisms within, and across, a landscape". Axis lines in the SWREL Report are used to identify patches of remnant vegetation with high connectivity of linkage value; the emphasis for biodiversity planning and conservation becomes the protection and management of the patches identified using the linkage lines, rather than the area defined by the line itself.

Remnant vegetation within the SWREL boundary can be assigned a 'proximity analysis' level. A group of vegetation with an edge touching or less than 100 metres from a linkage (axis line) is assigned a proximity analysis level 1a, which is the highest category group. The application area is located approximately 56.5 metres south of the SWREL axis line. Despite this, the vegetation patches within the linkage has been extensively cleared to the west and the east of the application area (Figure 3). Therefore, vegetation within the application is not considered to represent a significant ecological linkage.

Given the above, the application area may comprise suitable habitat for conservation significant fauna. Therefore, the application area may be necessary for the maintenance of significant habitat for fauna. The proposed clearing may be at variance with this Principle.

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

Proposed clearing may be at variance with this Principle

According to available databases, one threatened flora species has been mapped within similar soil and vegetation types to that mapped within the application area, being *Diuris drummondii*.

This species is listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the BC Act. This species is found in low-lying depressions in peaty and sandy clay swamps. According to advice provided by the DBCA (2019), there is a confirmed location of this species 800m from the application area, and therefore habitat for this species may potentially occur at this site, particularly within Area 3 (Figure 2).

Given the above, Area 3 (see figure 2) of the application area may include or be necessary for the continued existence of threatened flora.

The proposed clearing may be at variance with 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 with this Principle

Two state TECs listed under the BC Act are recorded within the local area, being 'Forests and woodlands of deep seasonal wetlands of the Swan Coastal Plain' and 'Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain'. The abovementioned TECs are located 9,404 metres north east and 9,867 metres north west from the application area respectively. Noting the distance to the TECs, species composition of these TECs and the vegetation mapped within the application area and observed during a site inspection (DWER, 2019), the application area does not comprise of these TECs. Therefore, the application area does not comprise the whole or a part of, or is necessary for the maintenance of these TECs.

The proposed clearing is not likely to be at variance with 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 with this Principle

The National Objectives and Targets for Biodiversity Conservation include a target to prevent the clearance of ecological communities within an extent below 30 per cent of that present pre-European settlement (Commonwealth of Australia, 2001).

The local area retains approximately 25.27 per cent (approximately 8155.40 hectares) of native vegetation cover.

The application area falls within the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia (IBRA) bioregion and is mapped as Bassendean Complex-Central and South vegetation complex, retaining 38.57 per cent and 26.90 per cent respectively (Table 1) (Government of Western Australia, 2018a; Government of Western Australia, 2018b).

Given the vegetation complex and local area are below the 30 per cent threshold, the application area is considered to be in an area that has been extensively cleared.

Noting that the application area may comprise of conservation significant fauna and flora, the vegetation is considered to be significant as a remnant.

The proposed clearing is at variance with this Principle.

Table 1: Bioregion, vegetation association, and local government statistics (Government of Western Australia, 2018a; Government of Western Australia, 2018b).

	Pre-European Extent	Current Extent Remaining		Current Extent Remaining in DBCA Managed Lands
	(ha)	(ha)	(%)	(%)
IBRA Bioregion				
Swan Coastal Plain	1,501,221.93	578,997.37	38.57	38.47
Vegetation Type				
Bassendean Complex-Central and South	87,476.25	23,533.09	26.90	4.99

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

Proposed clearing is at variance with this Principle

According to available databases, the application area falls within a resource enhancement dampland within the Bennett Brook consanguineous wetland suite. Resource enhancement wetlands are considered priority wetlands that have been partially modified but still support substantial ecological attributes and functions. Approximately 41.30 per cent of the application area falls within this wetland. During a site inspection, evidence of the wetland being impacted from edge effects alongside the access track and built areas was observed (DWER, 2019).

According to the Water and Rivers Commission Position Statement (2001), the ultimate objective for these wetlands is for management, restoration and protection towards improving their conservation value i.e. they have the potential to be restored to conservation category. Advice provided by DBCA (2019), state that the wetland is identified as having a "high value", attributed by habitat values, vegetation and proximity to threatened ecological communities, threatened fauna and high hydrological connectivity.

Additionally, agricultural drainage in the area connects this wetland system to the extensive palusplain system which drains into the Serpentine River, approximately two kilometres west and the Peel-Harvey Estuarine system. Drainage from the application area flows into the Serpentine River and into the Peel estuary which is part of the Peel-Yalgorup Ramsar site. DBCA advise that the proposed clearing will remove a significant area of wetland vegetation and fauna habitat, is likely to have significant impact on the wetland hydrology, processes and values and increase the risk of elevated sediment and nutrient loads within the estuary and Ramsar site (DBCA, 2019).

Given the above, and the *Melaleuca* sp., sedges and *Eucalyptus rudis* species observed (DWER, 2019), the application area is considered to be growing in, or in association with a wetland or watercourse.

The proposed clearing is at variance with this Principle.

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

Proposed clearing may be at variance with this Principle

As discussed within Section 2 of this report, the application area is mapped as the Bassendean B3 Phase. The land degradation risk categories that apply to this soil phase are demonstrated in Table 2. Based on the mapped land degradation risk outlined in Table 2, the application area has a relatively low likelihood of wind erosion.

Bassendean B3 Phase soil has been mapped as having a moderate water erosion, flood risk and salinity risk (30-50% of map unit has a high to extreme water erosion risk; 30-50% of the map unit has a moderate to high flood risk and 30-50% of map unit has a high to extreme water erosion risk). Soils have been mapped as having a high water logging risk (>70% of map unit has a moderate to very high waterlogging risk).

Clearing wetland vegetation that is in very good (Keighery, 2019) condition (Figure 2: Area 3), may increase the risk of flooding, waterlogging, water erosion and salinity within the area. Given this and that there is little vegetation in similar or better condition surrounding the application area, the proposed clearing may cause appreciable land degradation through water erosion, flooding, waterlogging and salinity.

The proposed clearing may be at variance with this Principle.

Table 2: Land degradation risk categories for the Bassendean B3 Phase (Schokecht et al., 2004).

Risk Category	Bassendean B3 Phase
Wind erosion	3-10% of map unit has a high to extreme wind erosion risk
Water erosion	30-50% of map unit has a high to extreme water erosion risk
Flood risk	30-50% of the map unit has a moderate to high flood risk
Water logging	>70% of map unit has a moderate to very high waterlogging risk
Salinity	30-50% of map unit has a high to extreme water erosion risk

(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 with this Principle

According to available databases, six conservation areas have been mapped within the local area. The closest conservation area is an un-named nature reserve, located approximately 835 metres east of the application area. Given that there are multiple roads and parkland cleared landscapes between the application area and the nature reserve, the application area is not likely to impact on the environmental values of any nearby conservation areas.

The proposed clearing is not likely to be at variance with 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 with this Principle

Groundwater salinity within the application area is mapped as between 1000 to 3000 total dissolved solids, milligrams per litre. This level of groundwater salinity is classified as "brackish" to borderline "saline". Given this level, the proposed clearing is not likely to increase groundwater salinity.

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

As discussed in Principle (g), soils have been described as comprising of poorly to very poorly drained sands or clay subsoil and as having a moderate to high flood risk (30-50% of the map unit has a moderate to high flood risk). Therefore the proposed clearing may cause, or exacerbate, the incidence or intensity of flooding

The proposed clearing may be at variance with this Principle.

Planning instruments and other relevant matters.

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

Evidence of unlawful clearing was observed during the DWER site inspection (DWER, 2019). This was confirmed by the applicant who stated that they needed to clear the trees to allow access for a truck. Since the clearing involved riparian vegetation, the clearing is not exempt. This clearing has been reported to DWER's pollution watch.

The clearing permit application was advertised on the DWER website on 07 March 2019 with a 21 day submission period. One submission was received in relation to this application.

The submitter objects to the clearing for the following reasons (summarised):

- No biological information has been provided by the proponent;
- Vegetation may support habitat trees for threatened fauna;
- Vegetation may support wetland species given that it is adjacent to and contiguous with a wetland area to the west;
- The proposed clearing is in a bioregion that has been extensively cleared; and
- No data provided to ensure that any Priority or Threatened species are not impacted by the proposed clearing.

The Shire of Murray advised that the vegetation proposed to be cleared includes a resource enhancement wetland and is of the Bassendean Complex-Central and South of which there is less than 20 per cent remaining from its pre-European extent. The Shire supports clearing for access and for fire mitigation in line with the hazard reduction and building protection requirements of the firebreak notice and for any approved buildings. Additionally, the Shire states that while this would clear a large portion of area around several of the buildings on the lot, it would not cumulatively add up to 1.2 hectares (or 60 per cent of the lot). The Shire does not support clearing in excess of the requirements of the bushfire notice and is concerned of any clearing in an area marked as resource enhancement (Shire of Murray, 2019).

The applicant has reduced the application area to exclude vegetation in very good (Keighery, 1994) condition and completely exclude the resource enhancement wetland.

4. Applicant's Submissions

In a letter dated 6 August 2019, DWER advised the applicant of the significant environmental impacts identified during the above assessment. This letter advised measures to avoid and minimise the impacts identified would be required along with biological surveys (if impacts were still relevant post avoiding/minimising) to confirm the presence or absence of flora and fauna species of conservation significance.

On 28 August 2019, a meeting was held between the applicant and DWER staff where the potential environmental impacts identified by the above assessment were discussed further. A revised application area was discussed, and the applicant advised that she was amenable to proceeding with a reduced application area.

On 5 September 2019, DWER provided the applicant with a map outlining a potential revised application area of 0.865 hectares, based on the meeting discussions. On 10 September 2019, the applicant requested to proceed with the revised application area.

5. Assessment of Principle variances following a reduction of the application area

The revised application area represents an area of vegetation in a degraded (Keighery, 1994) condition (DWER, 2019). This area has been heavily impacted by historical clearing and invasive species, and largely contains scattered *Eucalyptus marginata* and *Eucalyptus rudis*, invasive trees over bare understorey with areas of *Kunzea glabrescens* and scattered *Melaleuca* species on western border (DWER, 2019). *Pteridium esculentum* (bracken fern) also occurs in some portions (DWER, 2019). The revised application area is shown below in Figure 3.



Figure 3: The revised application area (shown in yellow).

As discussed under Principle (a) of this report, it was considered that the original application area provided suitable habitat for threatened and priority flora species. Noting the degraded (Keighery, 1994) condition of the vegetation within the revised application area, it is unlikely to contain any threatened or priority flora species.

As discussed under Principle (b), the original application area had value as habitat for Quenda. Given the degraded (Keighery, 1994) condition of the vegetation in the revised application area, and that the higher value wetland habitat for quenda occurring

in the western half of the property has now been excluded, the clearing of the revised application area is not likely to result in the loss of significant habitat for this species, or any other fauna species.

As discussed under Principle (e), the original application area represented a significant remnant of vegetation in an extensively cleared landscape as it included a resource enhancement wetland and had potential to provide habitat for flora and fauna species of conservation significance. In addition, the original application area was mapped as the Bassendean Complex-Central and South vegetation complex which retains only approximately 26.9 per cent of its pre-European clearing extent. The revised application area no longer includes any of the mapped occurrence of the resource enhancement wetland and is not expected to provide suitable habitat for flora and fauna species of conservation significance. Given the degraded (Keighery, 1994) condition of the vegetation in the revised application area, this area is not considered to be representative of the Bassendean Complex-Central and South vegetation complex. Therefore, the revised application area is unlikely to represent a significant remnant of native vegetation within an extensively cleared landscape.

As discussed under Principle (f), the original application area encompassed a portion of a resource enhancement wetland (dampland). The revised application area now completely excludes the mapped occurrence of the wetland. While the application area includes some riparian vegetation in the form of scattered *Melaleuca* sp., *Kunzea glabrescens*, bracken fern and *Eucalyptus rudis* (DWER, 2019), the extent of clearing on riparian habitat is minimal, and impacts to the total extent of the resource enhancement wetland (total mapped extent of 31.71 hectares, including 1.1 hectares within the applicants property) are not expected to be significant.

Noting that the revised application area completely excludes the mapped resource enhancement wetland, it is not likely to result in appreciable land degradation or flooding.

Given the above, the proposed clearing is at variance with Principle (f) and is not likely to be at variance with any of the remaining clearing Principles.

6. References

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- Submission (2019) Submission received 28 March 2019, DWER 1776751
- Shire of Murray (2019) Advice and comments received 2 April 2019, Shire of Murray, DWER A1778051.

GIS databases:

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