GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8448/1
Permit Holder:	Shire of Manjimup
Duration of Permit:	11 October 2019 to 11 October 2024

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

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done
Clearing for the purpose of road widening and upgrades.

2. Land on which clearing is to be done
North Walpole Road reserve (PINs: 11561540, 11561541, 11561538, 11561539, and 11561542), North Walpole

3. Area of Clearing
The Permit Holder must not clear more than 1 hectares of native vegetation within the combined area cross-hatched yellow on attached Plan 8448/1a and Plan 8448/1b.

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

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

PART II – MANAGEMENT CONDITIONS

6. 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.

7. 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*:
(i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
(ii) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
(iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

PART III – RECORD KEEPING AND REPORTING

8. Records must be kept

The Permit Holder must maintain the following records for activities done in 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;
  (ii) the date that the area was cleared; and
  (iii) the size of the area cleared (in hectares).

(b) Actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 6 of this Permit.

(c) Actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 7 of this Permit.

9. Reporting

(a) The Permit Holder must provide to the *CEO* on or before 30 June of each year, a written report:
  (i) of records required under condition 8 of this Permit; and
  (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.

(b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the *CEO* on or before 30 June of each year.

(c) Prior to 10 July 2024, the Permit Holder must provide to the *CEO* a written report of records required under condition 8 of this Permit where these records have not already been provided under condition 9(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*;

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.

Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

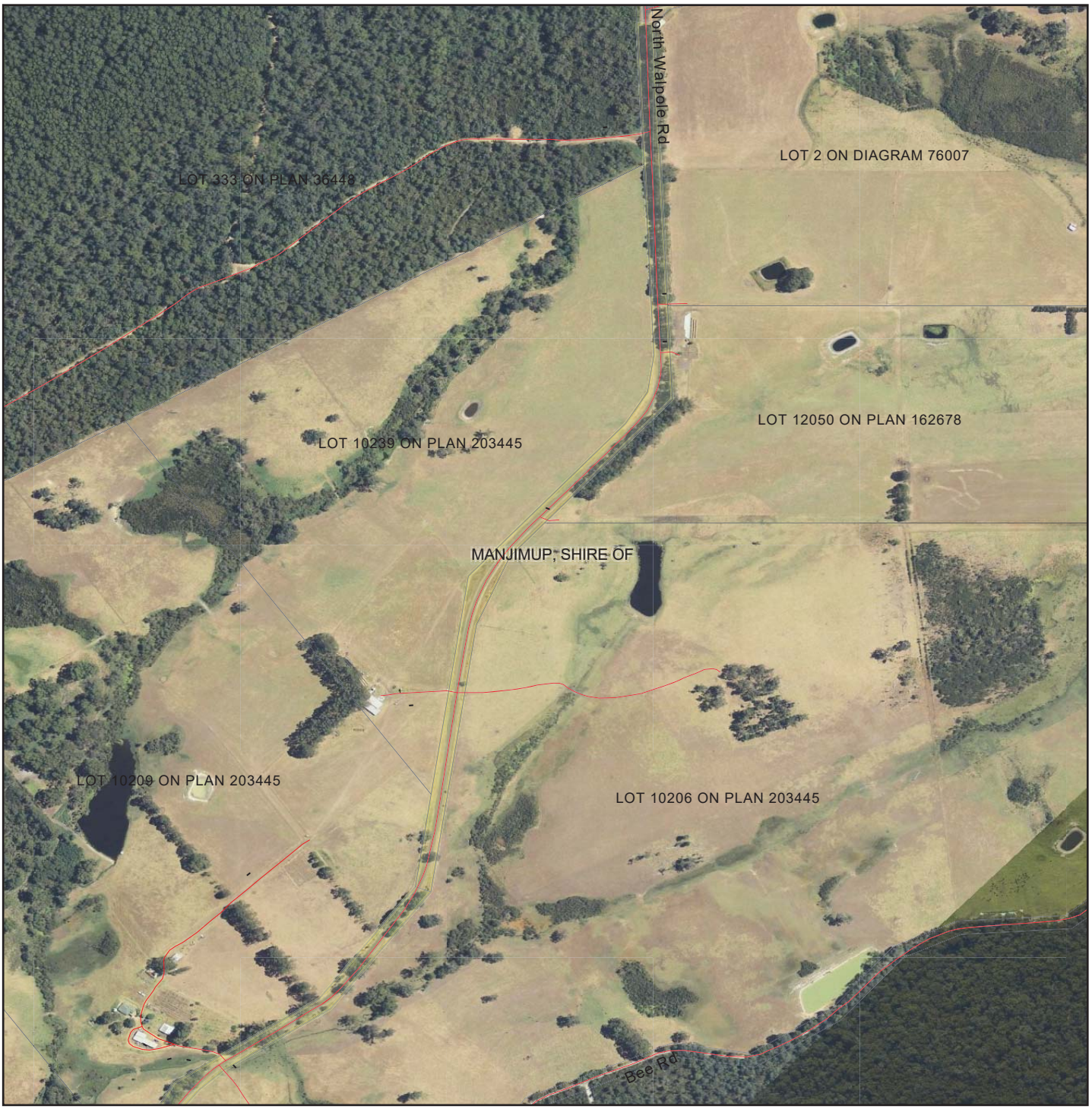
Officer delegated under Section 20
of the Environmental Protection Act 1986

11 September 2019

Plan 8448/1a

34.921337°S 34.921337°S

116.718211°E 116.732958°E



116.718211°E 116.732958°E

34.928309°S 34.928309°S

Legend

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

N

0 200m

1:7,136

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

..... Date .....

Mat Gannaway

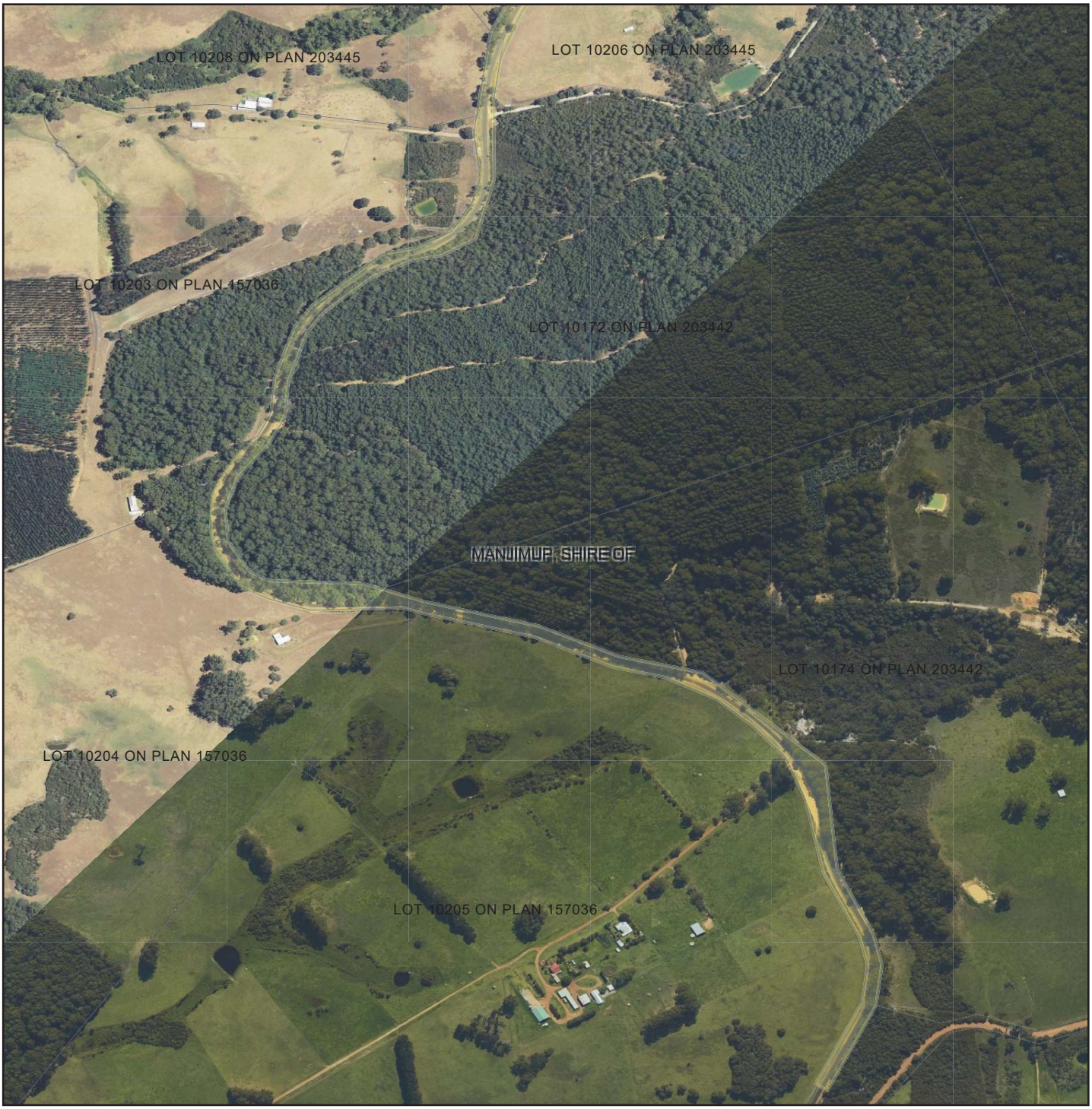
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

GOVERNMENT OF WESTERN AUSTRALIA

Plan 8448/1b

34.937181°S 34.937181°S

116.712355°E 116.729141°E



116.712355°E 116.729141°E

34.945117°S 34.945117°S

Legend

- Imagery
- Clearing Instruments Activities
- Local Government Authority

N

0 200m

1:8,121

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

..... Date .....

Mat Gannaway

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.: 8448/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Manjimup
Application received date: 05 April 2019

1.3. Property details

Property: North Walpole Road Reserve (PINs 11561540, 11561541, 11561539, 11561538, 11561542), North Walpole
Local Government Authority: Manjimup, Shire of
Localities: North Walpole

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
1		Mechanical Removal	Road construction or upgrades

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 12 September 2019

Reasons for Decision:

The clearing permit application was received on 5 April 2019 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 is at variance to principle (f), may be at variance to principle (h), and is not or not likely to be at variance to the remaining principles.

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

The Delegated Officer also took into consideration that upgrades to the road will provide a public benefit.

Given the above, the Delegated Officer decided to grant a clearing permit subject to avoid and minimise, dieback and weed management and reporting conditions.

2. Site Information

Clearing Description

The application is to clear one hectare of native vegetation within a 10 hectare footprint within the North Walpole road reserve for the purpose of road safety and upgrade (see Figure 1).

Vegetation Description

The application area has been mapped as the following Mattiske vegetation complexes (Mattiske and Havel, 1998):

- Hazelvale (HA): Mosaic of a low woodland to woodland of *Eucalyptus marginata* subsp. *marginata-Eucalyptus patens*, low forest of *Agonis juniperina-Callistachys lanceolata* with closed heath of Myrtaceae spp. on sandy plains in the hyperhumid zone.
- Keystone (Kb): Mosaic of tall open forest of *Eucalyptus guilfoylei-Eucalyptus jacksonii-Eucalyptus diversicolor* on slopes of major hills rising above coastal plain with *Allocasuarina decussata-Banksia grandis-Agonis flexuosa* on slopes in hyperhumid and perhumid zones and tall open forest of *Eucalyptus brevistylis-Eucalyptus marginata* subsp. *marginata-Corymbia calophylla* and the occasional *Eucalyptus megacarpa* near rock outcrops in hyperhumid and perhumid zones.
- Mattaband (MTy1): Open forest of *Eucalyptus marginata* subsp. *marginata-Corymbia calophylla-Banksia grandis* on low undulating uplands in perhumid and humid zones.
- Keystone (Ky): Open forest of *Eucalyptus marginata* subsp. *marginata-Corymbia calophylla-Banksia grandis* on mild slopes of hills in perhumid zone and open forest

A site visit of the application area undertaken by Department of Water and Environmental Regulation (DWER) officers identified two vegetation communities within the application area, being;

- A - Closed *Eucalyptus diversicolor* forest with scattered *Eucalyptus marginata* over occasional *Agonis flexuosa* over a dense mixed shrubland of *Lepidosperma* sp., *Leucopogon verticillatus* and *Pteridium esculentum*; and
- B - Dense *Eucalyptus marginata* and *Corymbia calophylla* forest with scattered *Agonis flexuosa* over a mixed native shrubland comprising of *Lepidosperma* sp., *Leucopogon verticillatus* and *Pteridium esculentum* (DWER, 2019).

Vegetation Condition

The application area was determined to range in condition from Very Good to Degraded. Keighery (1994) vegetation condition ratings are defined as follows:

- Pristine: Pristine or nearly so, no obvious signs of disturbance.
- Excellent: Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species.
- Very Good: Vegetation structure altered; obvious signs of disturbance.
- Good: Vegetation structure significantly altered by very obvious signs of multiple disturbance; retains basic structure or ability to regenerate.
- Degraded: Basic vegetation structure severely impacted by disturbance; scope for regeneration but not to a state approaching Good condition without intensive management.
- Completely Degraded: The structure of the vegetation is no longer intact and the area is completely or almost completely without native species.

Soil type

Three soil types have been mapped within the application area (Department of Primary Industries and Regional Development (DPIRD), 2019):

- Hazelvale subsystem is described as narrow sandy plains; slight stream incision. Humus podzols on crests of spurs; Teatree scrub. Yellow duplex soils on valley flanks; Jarrah-Marri low forest. Peaty podzols on minor valley floors; sedges and reeds.
- Keystone yellow duplex phase subsystem is described as gravelly yellow duplex soils; Jarrah-Marri forest.
- Keystone brown duplex phase subsystem is described as brown gravelly duplex soils and red of yellow earths; much laterite. Marri-Karri-Red Tingle-Yellow Tingle forest.

The soils observed within the application area comprise of brown/yellow loamy soils and loamy gravely soils (DWER, 2019).

Local area description

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

Comment

Vegetation condition and description was obtained through a site visit conducted by DWER officers in May 2019 (DWER, 2019).

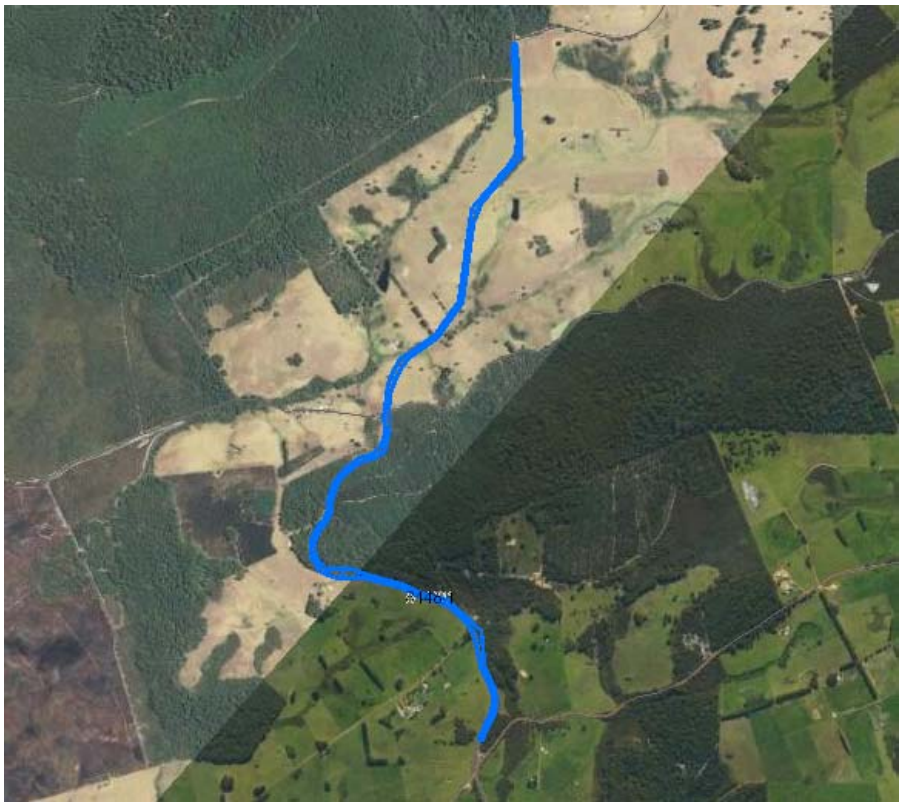


Figure 1: Application area for CPS 8448/1 hatched blue.

3. Minimisation and mitigation measures

The applicant provided the following avoidance and mitigation measures during the assessment of the application (Shire of Manjimup, 2019);

- The applicant has reduced the amount of clearing from 10 hectares to one hectare within a 10 hectare footprint.
- It is estimated that the road will be widened by one metre on both sides of the road for 4.6 kilometres.
- The applicant has advised that they will not clear more than 50 trees and will only remove trees that are deemed a risk to road user safety.

4. Assessment of application against clearing principles

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

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

The vegetation within the application area is considered to range from degraded to very good (Keighery, 1994) condition. The western side of North Walpole Road reserve within the southern portion of the application area is mostly devoid of native vegetation with an understorey dominated by introduced grasses. Only a few scattered shrubs were observed periodically along this stretch of the road. The majority of the vegetation along the eastern side of North Walpole Road reserve within the southern end and central sections of the application area is considered to be in a very good (Keighery, 1994) condition with the exception of a small stretch of road that comprises of a stand of mature *Eucalyptus diversicolor* trees in a degraded (Keighery, 1994) condition. The northern end of the application area ranged from a completely degraded to good (Keighery, 1994) condition, where there are large stretches of previously cleared areas that contained little to no native vegetation (DWER, 2019).

As discussed under Section 2, two vegetation communities within the application area were identified during a site visit (DWER, 1994). Vegetation association B was observed in a good to very good (Keighery, 1994) condition. Vegetation association A was observed throughout the remainder of the application area ranging from a completely degraded to very good (Keighery, 1994) condition. Both vegetation associations have been previously cleared in some areas of the road reserve, and this was evident where only stands of mature *Eucalyptus diversicolor*, *Eucalyptus marginata* and *Corymbia calophylla* trees remained (DWER, 2019).

Two Priority Ecological Communities (PECs) have been mapped within a 10 kilometre radius of the application area, being *Reedia spathacea - Empodisma gracillimum - Schoenus multiglumis* dominated peat paluslopes and sandy mud floodplains of the Warren Biogeographical Region PEC (P1) and Subtropical and Temperate Coastal Saltmarsh PEC (P3). Vegetation consistent with these PECs was not observed within the application area (DWER, 2019). Therefore, the proposed clearing is not likely to impact a PEC.

Three priority 2 (P2) listed moss and flora species have been recorded within the local area. The two moss species occur within habitat that does not occur within the application area (WA Herbarium, 1998-). The P2 flora species, *Chamaexeros longicaulis*, occurs within a different soil type to the application area and is considered not likely to occur within the proposed clearing area (WA Herbarium, 1998-). Furthermore, this species is known to occur within grey or white sand or sandy clay with lateritic gravel soils (WA Herbarium, 1998-), which was not observed within the application area (DWER, 2019).

An additional six priority 3 (P3) and 4 (P4) listed flora species occur within the local area within the same soil and vegetation type as the application area. These P3 and P4 species are known from several locations including populations within the nearby Mount Frankland South National Park. The proposed clearing of one hectare is not considered to impact significant habitat for these species nor significantly impact their conservation status or their occurrence at the local or regional scale. Furthermore, the Department of Biodiversity, Conservation and Attractions (DBCA) advised that priority flora species are considered unlikely to occur within the application area. DBCA regional staff are very familiar with this location and are not concerned that any conservation significant species will be impacted (DBCA, 2019).

As discussed under Principle (b), the proposed clearing is not likely to impact significant habitat for local or threatened fauna species.

As discussed under Principle (c), the proposed clearing is not likely to impact on suitable habitat for threatened flora species.

As discussed under principle (d), no state listed threatened ecological communities (TEC) listed under the *Biodiversity Conservation Act* 2016 (BC Act) occur within the local area of the application. No Commonwealth listed TECs (under the *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act)) have been mapped within the local area. Given this, it is not considered for the proposed clearing to impact state or Commonwealth listed TECs.

Given the above, the proposed clearing is not considered to comprise of an area that contain a high level of biodiversity. The proposed clearing is not likely to 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.

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

Fourteen fauna species, listed as Threatened under the BC Act within the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* and 16 other species of conservation importance have been recorded within the local area (DBCA, 2007-).

Seven of these species are migratory birds recorded in close proximity to the Nornalup Inlet. Therefore, the habitat for these species is not considered to occur within the application area.

A further seven species (one amphibian, one mammal, two fish and three crustacean) are associated with rivers and wetland habitats. These habitat types do not occur within the application area and therefore it is not likely for the proposed clearing to impact habitat for these species.

Carnaby's cockatoo (*Calyptorhynchus latirostris*), listed as endangered, Baudin's cockatoo (*Calyptorhynchus baudinii*) and forest red-tailed cockatoo (*Calyptorhynchus banksii* subsp. *naso*) (collectively herein referred to as black cockatoos), listed as vulnerable under both the BC Act and the EPBC Act have been recorded within the local area. Black Cockatoos breed in large hollow-bearing trees, generally within woodlands or forests or in isolated trees (Commonwealth of Australia, 2012). 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 high proportion of younger trees occur throughout the majority of the application area. However, large mature growth trees were littered throughout the application area comprising of largely *Eucalyptus diversicolor* species with a few isolated *Eucalyptus marginata* and *Corymbia calophylla* (DWER, 2019). There were no trees containing sizable hollows suitable for black cockatoo species observed within the application area (DWER, 2019). The applicant has advised that clearing of large trees will be restricted to those that only are deemed a risk to road user safety.

The red-tailed phascogale (*Phascogale calura*) has been recorded within the local area. The preferred habitat of the red-tailed phascogale is *Allocasuarina* spp. woodlands with hollow-bearing *Eucalyptus* spp. trees. No hollows suitable for red-tailed phascogales were observed within the application area (DWER, 2019).

The western ringtail possum (*Pseudocheirus occidentalis*), has been recorded within the local area and feeds on *Agonis flexuosa* (DEWHA, 2009). As the application area contains areas of peppermint trees (*Agonis flexuosa*) within the understorey, habitat for the Western ringtail possum may occur. No dreys were observed within the application area during the site visit (DWER, 2019) and the application area does not occur within core habitat for this species (DEWHA, 2009). It is not considered for the proposed clearing to impact significant habitat for the western ringtail possum.

The mystical pygmy trapdoor spider (*Bertmainius mysticus*) and tingle pygmy trapdoor spider (*Bertmainius tingle*) have been recorded within the local area. Both these species occurs within Walpole National Park and habitat for these species is not likely to occur within the application area.

Western Australian pill millipede (*Cynotelopus notabilis)* is a short range endemic species restricted to high rainfall areas along the south coast of Western Australia and are found along creek lines, in gullies and rocky outcrops amongst leaf litters and under logs (DEC, 2009). This species is known from south of the application area and it is not considered for the proposed clearing to impact on this habitat.

The application area occurs between two large remnant patches of native vegetation, however as portions of the application area are completely devoid of native vegetation, the proposed clearing is not considered to impact or sever an ecological linkage for fauna between vegetation patches.

The application area is in close proximity to the Mount Frankland South National Park and the Walpole-Nornalup National Park which contains vegetation in similar or better condition compared to that which occurs within the application area. Given this, and noting the relatively small size and linear shape of the application area and its location adjacent to an existing road, the application area is not likely to contain significant habitat for the remaining eight fauna species (woylie (*Bettongia penicillata* subsp. *ogilbyi*), chuditch (*Dasyurus geoffroii*), western ground parrot (*Pezoporus flaviventris*), quokka (*Setonix brachyurus*), peregrine falcon (*Falco peregrinus*), short-nosed snake (*Elapognthus minor*), water rat (*Hydromys chrysogaster*), quenda (*Isoodon fusciventer*) and the tammar wallaby (*Notamacropus eugenii* subsp. *derbianus*)), mapped within the local area.

Given the above, 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, threatened flora.

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

Six threatened flora species have been recorded within the local area, being *Reedia spathacea*, *Microtis globula*, *Drakaea micrantha, Banksia verticillata, Kennedia glabrata* and *Diuris drummondii.* These species occur within the following habitat types;

- *Reedia spathacea* occurs within peaty sand with swamps and along river edges (Brown et al., 1998).
- *Microtis globula* occurs after summer fires with peaty soils in seasonally wet swamps (Brown et al., 1998).
- *Drakaea micrantha* inhabits grey sands in common sheoak and jarrah woodlands (Brown et al., 1998).
- *Banksia verticillata* occurs within coastal areas in granite fissures and deeper soil around the edges of outcrops (Brown et al., 1998).
- *Kennedia glabrata* occurs on shallow pockets of soil on granite outcrops in association with mosses and herbs (Brown et al., 1998).
- *Diuris drummondii* is found within low-lying depressions in peaty and sandy clay winter wet swamps (Brown et al., 1998).

A site visit of the application area did not identify vegetation growing in association with swamps or granite outcrops (DWER, 2019). Therefore, it is not considered for the application area to contain suitable habitat for the species listed above growing with swamps or granite outcrops to occur within the application area.

Drakaea micrantha occurs sporadically over a wide range between Perth and Albany. Suitable habitat includes grey sands in *Allocasuarina fraseriana* and *Eucalyptus marginata* woodland or forest. It usually grows on firebreaks and in disturbed sites where competition from other plants has been removed. A good proportion of the disturbed areas on the road verge is dominated by kikuyu grass and bracken. The forested areas of the road verge are Karri, Jarrah mix and don't appear suitable habitat. It is therefore considered highly unlikely that Drakaea micrantha would occur within the application area (DBCA, 2019).

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

No state listed TECs have been recorded within the local area. Therefore, the proposed clearing is not likely to be part of, or is necessary for the maintenance of a TEC.

Given the above, 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 is not at variance to this Principle

Aerial imagery and available GIS datasets indicate that the local area retains approximately 67 per cent (approximately 20,000 hectares) of native vegetation cover.

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 below, the mapped IBRA bioregion, and Mattiske vegetation complexes retain greater than the recommended 30 per cent representation threshold.

The application area is not considered a significant remnant and is not located within an area that has been extensively cleared. The proposed clearing is not likely to be at variance to this Principle.

Table 1: Vegetation extent statistics

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	% Current extent in DBCA managed land (proportion of current extent)	% Pre-European extent remaining within DBCA managed land*
IBRA Bioregion					
Warren	833,986	660,310	79	85	-
Mattiske Vegetation Complex					
Kb: Keystone	29,634	23,213	78	-	62

HA: Hazelvale	7,276	2,982	41	-	15
MTy1: Mattaband	3,196	2,901	91	-	86
Keystone (Ky)	15,013	13,482	90	-	82

(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 to this Principle

The application area intersects a minor perennial water course (approximately 70 metres north of the intersection of Bee Road). The DWER site inspection found the vegetation associated with the mapped minor perennial watercourse comprised of mostly weedy grasses and very little native riparian vegetation (DWER, 2019).

A Palusplain (seasonally inundated slope) is mapped on either side of North Walpole Road and at it's closest point occurs approximately 10 metres from the application area (on the Eastern side of the application area). Given the limited clearing in the vicinity of the Palusplain (0.022 hectares) and that there is a 10 metre distance from the mapped Palusplain, it is not considered for the proposed clearing to significantly impact vegetation growing in association with this wetland.

Noting the proposed clearing area contains riparian vegetation, the proposed clearing is 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 stated in Section 2, there are three mapped soil subsystems within the application area, being Hazelvale Subsystem, Keystone yellow duplex phase subsystem and Keystone brown duplex phase subsystem (DPIRD, 2019).

Two soil types were observed throughout the application area during the site visit, they being red lateritic soils and brown loamy/clayey, lateritic soils (DWER, 2019).

Table 2: Land degradation risks of each mapped soil sub-system.

Risk categories	Hazelvale Subsystem	Keystone brown duplex Phase	Keystone yellow duplex Phase
Wind erosion	50-70% of the map unit has a high to extreme hazard	10-30% of the map unit has a high to extreme hazard	50-70% of the map unit has a high to extreme hazard
Water erosion	10-30% of the map unit has a very high to extreme hazard	30-50% of the map unit has a very high to extreme hazard	10-30% of the map unit has a very high to extreme hazard
Salinity	<3 % of the map unit has a moderate to very high risk	<3 % of the map unit has a moderate to very high risk	<3 % of the map unit has a moderate to very high risk
Flood risk	10-30% of the map unit has a moderate to high hazard	<3 % of the map unit has a moderate to very high hazard	<3 % of the map unit has a moderate to very high hazard
Water logging	30-50% of the map unit has a moderate to very high to risk	<3 % of the map unit has a moderate to very high hazard	30-50% of the map unit has a moderate to very high to risk

Based on the mapped land degradation risk outlined above (Table 2), the proposed clearing has a low likelihood of causing land degradation in the forms of salinity and an increase in flooding (DPIRD, 2019).

Two of the three mapped soil sub-systems have a high to extreme risk of wind erosion and one of the soil sub-systems have a moderate risk of water erosion (DPIRD, 2019). However, noting the size of the application area, its location adjacent to an existing road and that the presence of bare soils will be minimal due to the construction of the road, the proposed clearing is not likely to cause appreciable land degradation in the form wind or water erosion.

Thirty to fifty per cent of two of the mapped soil sub-systems have a moderate to very high risk of waterlogging (DPIRD, 2019). However, given the relatively small area proposed to be clearing (1 hectare) along a 4.6 kilometre distance and minimal riparian vegetation will be cleared, it is considered for waterlogging to be negligible.

Given the above, the proposed clearing is not considered to cause appreciable land degradation and 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 may be at variance to this Principle

A small portion of the application area (200 metres of the 4.5 kilometre length) is adjacent to the Mount Frankland South National Park. The disturbance caused by the proposed clearing may increase the risk of weeds and dieback being spread into this conservation area. Hygiene management practices will assist in minimising the risk of spread of weeds and dieback.

Given the above, the proposed clearing may 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

Groundwater salinity within the application area is mapped 500-1000 total dissolved solids, milligrams per litre. This level of groundwater salinity is classified as 'fresh'. Given this level, the proposed clearing is not likely to increase groundwater salinity.

As discussed in Principle (f), the application area intersects a minor perennial watercourse and a palusplain is mapped on either side of the application area. The watercourse mapped within the application area may contain surface water, thus the proposed clearing may increase sedimentation in the watercourse and potentially degrade the quality of surface water. Although the proposed clearing may cause sedimentation of surface water within the watercourse, the impact is likely to be minimal and short term during the clearing process. Surface water will be managed through the drainage design of the road.

Noting that the mapped palusplain is at a minimum of 10 metres from the application area and with the presence remnant vegetation buffering the clearing and the palusplain wetland, the proposed clearing is not considered to impact on surface water within the palusplain wetland.

Given the above, 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 at variance to this Principle

As discussed under Principle (g), the risk of flooding caused by the proposed clearing is minimal. Based on the low mapped flood risk, the proposed clearing is not likely to cause or exacerbate, the incidence or intensity of flooding.

Given the above, the proposed clearing is not at variance to this Principle.

Planning instruments and other relevant matters.

The proposed clearing is located within P1 and P2 areas of the Walpole Weir Catchment Area public drinking water source area (PDSWA), as listed under the *Rights in Water and Irrigation Act 1914.* The purpose of the clearing (road upgrade) is considered a compatible land use within these areas. It is not expected that the removal of the small amount of trees would have any impact on water quality however it is recommended that the applicant follow the best practice guidelines for the construction, operation and maintenance of roads near sensitive water resources (Water Quality Protection Note #44).

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

The clearing permit application was advertised on the DWER website on 16 April 2019 with a 21 day submission period. Twelve public submissions have been received in relation to this application during the submission period. Eight of the submissions support the application stating that the road is dangerous and requires widening to ensure the safety of both local users that include trucks and school buses and tourists who visit Walpole (Submission, 2019c, 2019d, 2019f, 2019k, 2019h, 2019j, 2019k, 2019l, 2019m). Four of the submissions advised that there was a lack of information on the extent of the proposed clearing and on the road design as well as a lack of public consultation. The submissions also raised concerns that flora and fauna surveys have not been undertaken and that threatened and priority flora and fauna may be impacted by the clearing (Submission 2019e, 2019g, 2019i, 2019f). One submission raised concerns that the application has not been referred under the EPBC Act as it may impact Commonwealth listed species (Submission, 2019i). The four submissions also raised concerns that the application area contains old growth karri trees that are a tourist attraction and that avoid and minimise considerations were not undertaken. Numerous alternative safety measures were proposed including reducing speed, installing signage and barriers and clearing only on one side of the road that has the least significant vegetation. There were also recommendations made to mitigate the clearing by revegetated of cleared paddocks adjacent to the road if the land owner agrees.

The concerns relating to the proposed clearing (high biodiversity and priority flora) have been addressed in Principle (a). As discussed under principles (a), (b) and (c) the proposed clearing is not likely to impact significant habitat for threatened and priority flora and fauna or communities. In addition, the applicant has reduced the amount of clearing from 10.23 hectares to one hectare and reduced the clearing footprint to one metre on either side of the road. An avoid and minimise clearing condition will be placed on the Permit to ensure clearing of native vegetation is only undertaken once other alternatives have been considered. Please see the above report for more details.

5. References

Brown, Andrew., Thomson-Dans, Carolyn., and Marchant, Neville (1998) Western Australia's Threatened Flora. Department of Conservation and Land Management.

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
Commonwealth of Australia (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/. Accessed June 2019
Department of Biodiversity, Conservation and Attractions (DBCA) (2019) Species and Communities and Regional advice for Clearing Permit Application CPS 8448/1 (DWER Ref: A1822479).
Department of Primary Industries and Regional Development (2019) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: **Error! Hyperlink reference not valid.** (accessed July 2019).
Department of Water and Environmental Regulation (DWER) (2019) Site Inspection Report for Clearing Permit Application CPS 8448/1. Site inspection undertaken 15 May 2019 (DWER Ref: A1803208).
Government of Western Australia (2018) 2017 South West Vegetation Complex Statistics. Current as of October 2017. WA Department of Biodiversity, Conservation and Attractions, Perth, https://catalogue.data.wa.gov.au/dataset/dbca
Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
Shire of Manjimup (2019) Clearing application CPS 8448/1 and supporting documentation. (DWER Ref: A1779063)
Submission (2019a) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 15 April 2019 (DWER Ref: A1803800).
Submission (2019b) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 29 April 2019 (DWER Ref: A1783966).
Submission (2019c) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 3 May 2019 (DWER Ref: A1783966).
Submission (2019d) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 3 May 2019 (DWER Ref: A1785555).
Submission (2019e) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 6 May 2019 (DWER Ref: A1786277).
Submission (2019f) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 6 May 2019 (DWER Ref: A1786095).
Submission (2019g) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 6 May 2019 (DWER Ref: A1786103).
Submission (2019h) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 6 May 2019 (DWER Ref: A1786422).
Submission (2019i) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 7 May 2019 (DWER Ref: A1786414).
Submission (2019j) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 26 April 2019 (DWER Ref: A1783871).
Submission (2019k) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 3 May 2019 (DWER Ref: A1784760).
Submission (2019l) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 3 May 2019 (DWER Ref: A1785667).
Submission (2019m) Submission received in response to Clearing Permit Application CPS 8448/1. Received on 6 May 2019 (DWER Ref: A1786005).
WA Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. http://florabase.dpaw.wa.gov.au/ (Accessed 01/09/2019).

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

.