



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 6024/1
File Number: DER2014/000028-1
Duration of Permit: 30 August 2014 to 30 August 2016

PERMIT HOLDER

Steven Lester Westcott
Kate Westcott

LAND ON WHICH CLEARING IS TO BE DONE

Lot 1 on Diagram 6601, Elleker

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.54 hectares of native vegetation within the area shaded yellow on attached Plan 6024/1.

CONDITIONS

1. 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 *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;

DEFINITIONS

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

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

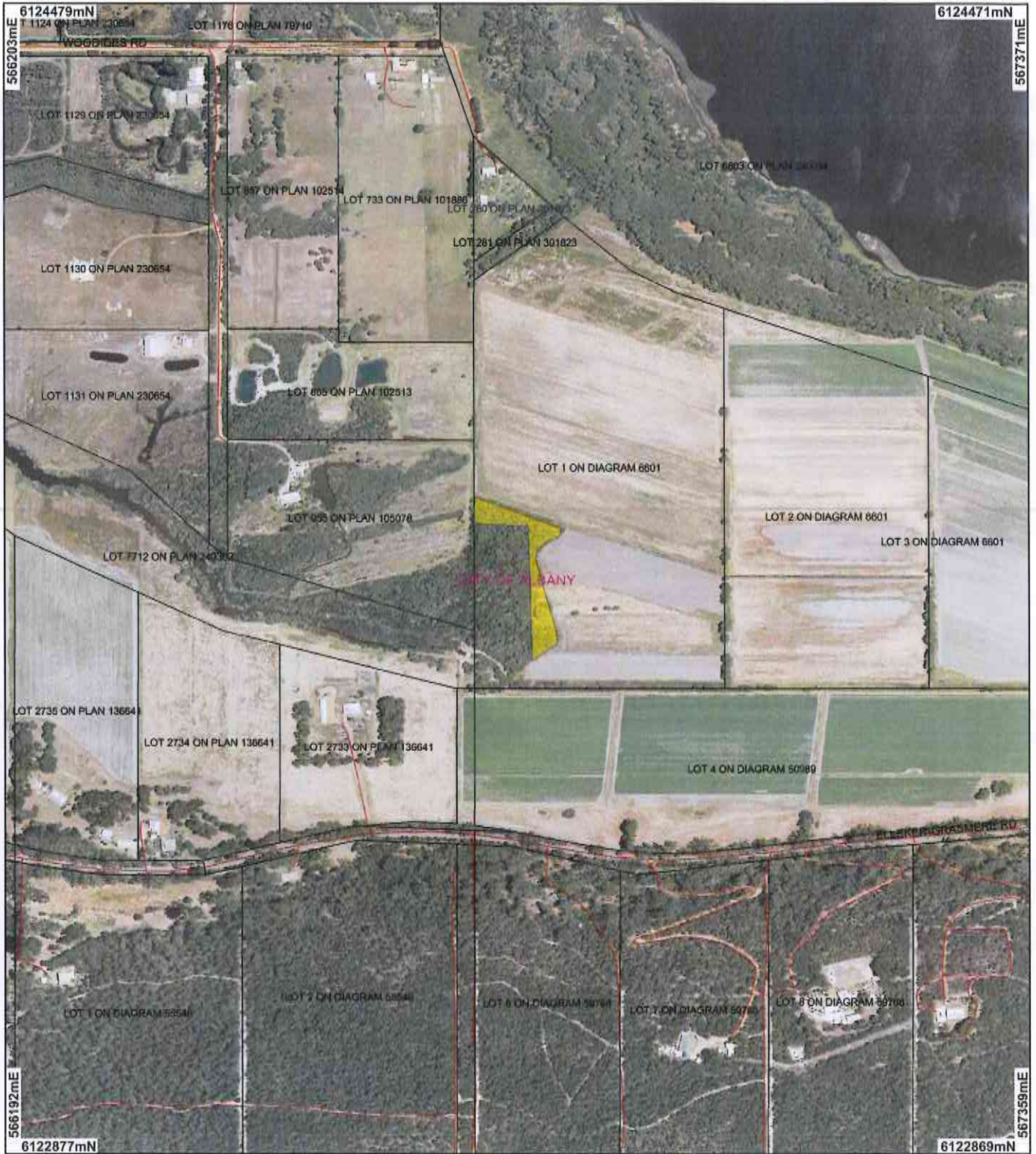
A handwritten signature in black ink, appearing to read "M Warnock".

M Warnock
SENIOR MANAGER
CLEARING REGULATION

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

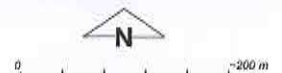
31 July 2014

CPS 6024/1



LEGEND

- Road Centrelines
 - Local Government Authorities
 - Cadastre for labelling
 - Clearing Instruments
 - Areas Approved to Clear
- Albany 50cm Orthomosaic - Landgate 2007



Scale 1:7000
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

M Warnock Date *31/7/14*
M Warnock

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

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Government of Western Australia
Department of Environment Regulation

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* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.



Clearing Permit Decision Report

Government of Western Australia
Department of Environment Regulation

1. Application details

1.1. Permit application details

Permit application No.: 6024/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Steven Lester and Kate Westcott

1.3. Property details

Property: LOT 1 ON DIAGRAM 6601 (ELLEKER 6330)

Local Government Area: City of Albany

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.54		Mechanical Removal	Dam construction or maintenance

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 31 July 2014

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
The vegetation under application has been mapped as: Beard Vegetation Association 51: Sedgeland; reed swamps, occasionally with heath Beard Vegetation Association 423: Shrublands; Acacia scrub-heath (unknown spp.) (Shepherd et al, 2001).	The clearing of 0.54 hectares of native vegetation is for the purposes of constructing drainage, improving agricultural efficiency, vehicle access and fencing.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The vegetation condition was determined by aerial imagery.

3. Assessment of application against clearing principles

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

Comments

Proposal is not likely to be at variance to this Principle

The proposed clearing consists of 0.54 hectares of native vegetation within Lot 1 on Diagram 6601, Elleker, for the purposes of constructing drainage, improving agricultural efficiency, vehicle access and fencing. The vegetation under application ranges from good to very good (Keighery, 1994) condition.

There are numerous records of priority flora species mapped within a 10 kilometre radius of the application. The majority of the priority species are mapped on different soil types to the application area with the exception of nine species. Seven of these nine species are priority 3 and priority 4 status. Priority 3 species are generally known from collections from several different localities not under imminent threat whilst Priority 4 species are considered to have been adequately surveyed and not in need of special protection but could be if circumstances change (DEC, 2012). The two priority 1 species could potentially be present in the application area, however the probability is low (Parks and Wildlife, 2014). Therefore the clearing proposed is unlikely to have an impact on the conservation status of these species.

The closest priority ecological community (PEC) is located approximately three kilometres north east of the application area and is known as 'Banksia coccinea thicket' (Priority 1). Given the different vegetation type of the application area, the vegetation is not likely to be a representative of this PEC.

A number of fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within a 10 kilometre radius, including: Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's Cockatoo (*Calyptorhynchus baudinii*), Carnaby's Cockatoo (*Calyptorhynchus latirostris*), Western Ringtail Possum (*Pseudocheirus Occidentalis*) and Australasian Bittern (*Botaurus poiciloptilus*). The vegetation under application may provide suitable habitat for the Australasian Bittern. However, suitable habitat is likely to be located near the perennial watercourse and perennial lake that are in close proximity to the application area and therefore the clearing proposed is not likely to have a significant impact on this species.

There is approximately 50 per cent of native vegetation remaining in the local area (10 kilometre radius).

The disturbance caused by the proposed clearing will increase the risk of weeds and dieback spreading into adjacent vegetation. Weed and die back management practices will help mitigate this risk.

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

Methodology

References:

- DEC (2012)
- Keighery (1994)

GIS Databases:

- NLWRA, Current Extent of Native Vegetation
- SAC Bio Datasets (Accessed May 2014)
- DEC Tenure

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

Comments

Proposal is not likely to be at variance to this Principle

A number of fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within a 10 kilometre radius, including: Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's Cockatoo (*Calyptorhynchus baudinii*), Carnaby's Cockatoo (*Calyptorhynchus latirostris*), Western Ringtail Possum (*Pseudocheirus Occidentalis*) and Australasian Bittern (*Botaurus poiciloptilus*).

The vegetation under application is mapped as Beard vegetation association 51: Sedgeland; reed swamps, occasionally with heath, and Beard vegetation association 423: Shrublands; Acacia scrub-heath. The preferred foraging habitat for Forest red-tailed black Cockatoo, Baudin's Cockatoo and Carnaby's Cockatoo 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 habitat preference for these species, the area under application is unlikely to provide significant habitat for black cockatoo species.

The application area may provide suitable habitat for the Australasian Bittern. This species favours freshwater habitats, particularly those dominated by sedges, rushes and reeds that grow over peaty substrates (Department of Environment, 2011). However, favourable habitat is also located in close proximity to the application area and therefore the clearing as proposed is not likely to have a significant impact on habitat for this species.

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

Methodology

References:

- Commonwealth of Australia (2012)
- Department of Environment (2014)

GIS Databases:

- SAC Bio Datasets - accessed May 2014

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

Comments

Proposal is not likely to be at variance to this Principle

The closest mapped rare flora species to the application area occurs approximately 3.6 kilometres south west of the application area. This species preferred habitat is in swampy depressions and on hill slopes (Western Australian Herbarium 1998-). Suitable habitat for this species is not located within the application area. Therefore it is not likely that the proposed clearing includes or is necessary for the continued existence of rare flora.

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

Methodology References:
 - Western Australian Herbarium (1998-)
 GIS Databases:
 - SAC Bio Datasets (Accessed May 2014)

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

Comments **Proposal is not likely to be at variance to this Principle**
 There are no threatened ecological communities mapped within the local area (10 kilometre radius), therefore the application area is not likely to comprise the whole or part of, or be necessary for the maintenance of a threatened ecological community.

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

Methodology GIS Database:
 - SAC Bio Datasets - accessed May 2014

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

Comments **Proposal is not likely to be at variance to this Principle**
 The area under application is located within the Southern Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion retains approximately 54 per cent of its pre-European vegetation extent (Government of Western Australia, 2013).

The vegetation under application comprises of Beard vegetation associations 51 and 423 of which there is approximately 39 per cent and 90 per cent respectively of their pre-European extent remaining within the Southern Jarrah Forest bioregion (Government of Western Australia, 2013).

The area under application is located within the City of Albany, within which there is approximately 38 per cent pre-European extent remaining (Government of Western Australia, 2013). Approximately 24 per cent of this vegetation falls within Department of Parks and Wildlife managed land.

The vegetation under application is in a good to very good (Keighery, 1994) condition, however given there is a large remnant of vegetation in close proximity to the application area and the vegetation representations outlined above, the area under application is not likely to be a significant remnant in an extensively cleared area.

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

	Pre-European (ha)	Current Extent Remaining (ha)	Extent Remaining (%)	Extent in DPaW Managed Lands (%)
IBRA Bioregion				
Southern Jarrah Forest	4,506,660	2,457,732	54	68
Shire				
City of Albany	431,370	166,839	38	24
Beard Vegetation Association in Bioregion				
51	19,962	7,923	39	29
423	3,478	3,133	90	82

Methodology References:
 -Government of Western Australia (2013)
 -Keighery (1994)
 GIS Databases:
 - DPaW Tenure
 -NLWRA, Current Extent of Vegetation Remaining

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

Comments **Proposal is at variance to this Principle**
 A non-perennial swamp lies within the application area and is subject to seasonal water logging. A perennial lake, 'Lake Powell', is located approximately 360 metres north east of the application area. The North Creek Drain, a narrow open channel, is mapped within metres from the southern boundary of the application area.

Given the application area is mapped within a non-perennial swamp and connects with upstream and downstream wetland environments that are in close proximity to the application area, the proposed clearing will impact upon vegetation growing in association of these water systems. The Department of Parks and Wildlife (2014a) has advised potential impacts to the wetland within and surrounding the application area include the reduction of flora and fauna habitat, the increase of erosion, a decline in water quality, the alteration of hydrological processes and a reduction in the naturalness of the ecosystem.

In order to minimise the impacts of the proposed clearing on native vegetation growing in association with the non-perennial swamp, the applicant has reduced the application area by 0.26 hectares.

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

Methodology References:
-DPaW (2014a)

GIS Datasets:
- Hydrography linear

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

Comments **Proposal is not likely to be at variance to this Principle**
The application area is mapped within soil type Cb41, which is described as low-lying wet plains with swamps and lakes, some estuarine areas: chief soils are leached sands some of which have thin peaty surface horizons (Northcote et al 1960 - 1968).

Wind erosion is unlikely to occur within the application area due to the soil types present and the extent of the proposed clearing (Commissioner of Soil and Land Conservation 2014).

The Commissioner of Soil and Land Conservation (2014) has advised the risk of eutrophication and water logging is possible due to the intensive horticultural activities on the property, the seasonal inundation of the area due to the non-perennial swamp within the application area and the occasional flooding of Lake Powell. However, it is unlikely that the proposed clearing will significantly increase these impacts given the small size of the clearing area.

Ground water salinity levels in the local area have been mapped as marginal (Water and River Commission, 2000) at 500 - 1000 milligrams per litre total dissolved solids. The Commissioner of Soil and Land Conservation (2014) has advised that no salinity was observed on site and that the risk of salinity causing land degradation is low.

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

Methodology References:
- Northcote et al (1960 - 1968)
- Commissioner of Soil and Land Conservation (2014)
- Water and River Commission (2000)

GIS Databases:
- Soils, statewide

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments **Proposal is not likely to be at variance to this Principle**
The closest conservation reserve, Lake Powell Nature Reserve, is located 600 metres east of the application area. Given the intensive horticultural activities that currently occur between the application area and the reserve, it is unlikely that the proposed clearing will increase the spread of weeds and dieback or impact upon the environmental values of the conservation area.

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

Methodology GIS Databases:
-DEC Tenure

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

Comments **Proposal may be at variance to this Principle**
A non-perennial swamp is mapped within application area and is subject to seasonal water logging. A perennial lake, 'Lake Powell', is located 360 metres north east of the application area. The North Creek Drain is mapped within metres from the southern boundary of the application area.

The non-perennial swamp is located within the East Torbay sub-catchment of the Torbay Inlet catchment. Historically, the drainage of this catchment was considered to be a series of connected waterways and wetlands. Over the years the catchment has been significantly modified due to the alteration of waterways to managed drains and changes to drain alignments for land use purposes resulting in many wetlands in the catchment having significantly altered water regimes. The Torbay Inlet and Lake Powell drainage catchment is reported to be one of the most significantly altered catchment systems on the South Coast (Parks and Wildlife, 2014a).

The North Creek Drain flows through the non-perennial swamp within the application area providing hydrological and ecological connectivity between upstream and downstream environments. The North Creek Drain is a narrow open channel which flows west from Ewart Swamp, south-east of Lake Powell, through the non-perennial swamp (within metres from the southern boundary of the application area), before forming a wide channel with vegetated margins, and flowing west to Lake Maranarup and subsequently into Torbay Inlet (Parks and Wildlife, 2014a). The proposed clearing and drainage works are likely to impact upon the hydrological regime of the non-perennial swamp through the removal of water from the wetland to the North Creek Drain as well as result in water from the broader wetland area being manipulated (Parks and Wildlife, 2014a).

The Torbay Inlet catchment area has been reported to be subject to sedimentation, poor water quality, intense algal blooms and acidification. The Department of Parks and Wildlife (2014a) has identified the application area and surrounding land as being of high to moderate risk of acid sulfate soils. The North Creek Drain has commonly recorded significantly high water column nutrient concentrations and depleted dissolved oxygen concentrations. The proposed clearing and subsequent drainage works have the potential to result in the generation of actual acid sulfate soils which may impact upon the non-perennial swamp, surrounding dry land, North Creek Drain and downstream wetland environments (Parks and Wildlife, 2014a).

The Commissioner of Soil and Land Conservation (2014) has advised there is a risk of eutrophication due to chemical application from current land use practices on the property. This may have a biological impact on the non-perennial swamp and have a cumulative effect on connecting downstream environments (Parks and Wildlife, 2014a). An incremental increase in nutrient export from the cleared land may occur in the long term (Commissioner of Soil and Land Conservation, 2014).

The applicant has reduced the size of the clearing by 0.26 hectares in order to address the environmental impacts of the proposed clearing on water quality. The reduced size of the clearing will help to minimise the impacts of the proposed clearing and subsequent drainage works on the hydrological regime of the non-perennial swamp within the application area and the connecting upstream and downstream wetland environments.

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

In response to the above assessment, the applicant has advised that trees are to be removed by an excavator to ensure that the disturbance to the surrounding top soil is minimised, therefore reducing the risk of the generation of actual acid sulphate soils. The applicant has also advised no fertilisers are currently being applied to the ground surface and leaf and soil tests are carried out annually to check nutrient levels.

Methodology References:
- Commissioner of Soil and Land Conservation (2014)
- DPaW (2014)
- DPaW (2014a)

GIS Databases:
- Soils, statewide

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

Comments **Proposal is not likely to be at variance to this Principle**
The removal of remnant vegetation is not expected to contribute to flooding given the small size of the proposed clearing.

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

Methodology GIS Datasets:
- Hydrography linear

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments
The original application was to clear 0.8 hectares of native vegetation for the purposes of constructing drainage, improving agricultural efficiency, vehicle access and fencing. The applicant has amended the application and reduced the size of the clearing to 0.54 hectares in order to address the environmental impacts identified in this

assessment.

There are no known Aboriginal Sites of Significance within the application area.

Under the Town Planning Scheme Zone, the application area is zoned as 'general rural'.

No public submissions were received in relation to this application.

Methodology

References:

-DPaW (2014a)

GIS Databases

- Aboriginal Sites of Significance

- Town Planning Scheme Zones

4. References

- Commissioner of Soil and Land Conservation (2014) Advice for Clearing Permit CPS 6024/1 ? Department of Agriculture and Food. Western Australia (DER Ref: A753813).
- DEC (2012) Threatened and Priority Flora List for Western Australia. WA Department of Environment and Conservation, Perth.
- Department of Environment (2011) Commonwealth Listing Advice on *Botaurus poiciloptilus* (Australasian Bittern) (Threatened Species Scientific Committee (TSSC), 2011v) [Listing Advice].
- DPaW (2014) Species and Communities Advice for Clearing Permit CPS 6024/1. Department of Parks and Wildlife. Western Australia (DER Ref: A757986).
- DPaW (2014a) Species and Communities Wetlands Advice for Clearing Permit CPS 6024/1. Department of Parks and Wildlife. Western Australia (DER Ref:A765186).
- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Waters and Rivers Commission (2000). Wetland vegetation. Waters and Rivers Commission, Perth.