GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 6521/1
File Number: DER2015/000542-1
Duration of Permit: From 1 August 2015 to 1 August 2017

PERMIT HOLDER

Mark Christian Dixon
Margaret Ann Dixon

LAND ON WHICH CLEARING IS TO BE DONE

Lot 9004 on Deposited Plan 201648, Meerup.

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 2.11 hectares of native vegetation within the areas cross hatched yellow on the attached Plan 6521/1.

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*:

   (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the clearing area to be cleared;

   (b) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and

   (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

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

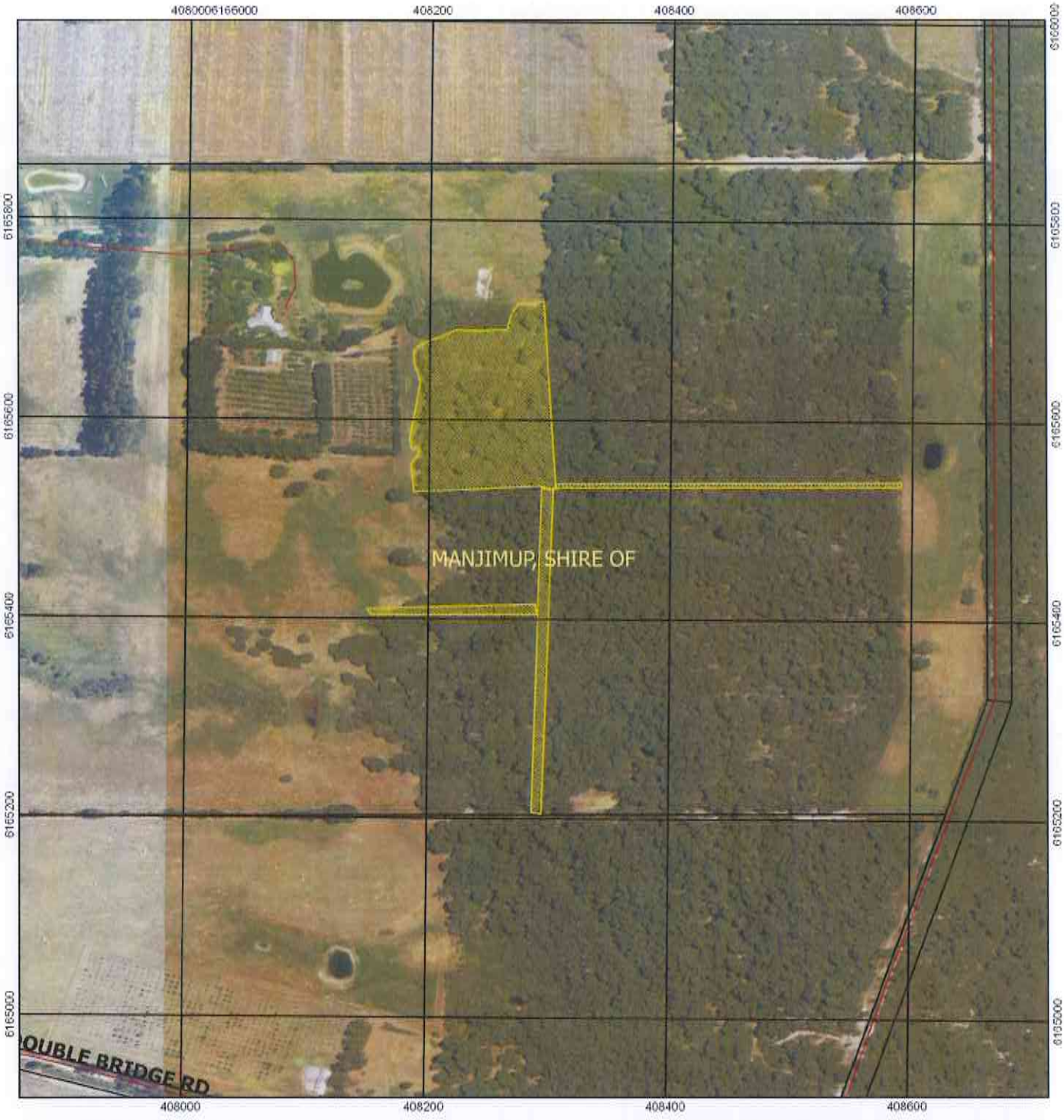
(c) not indigenous to the area concerned.

M Warnock
SENIOR MANAGER
CLEARING REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

2 July 2015

Plan 6521/1



Legend

- Clearing Instruments Proposal
- Roads
- LGA
- Cadastre

Virtual Mosaic (LGATE-V001)

N

1:3,439

MGA 94
Geocentric Datum of Australia 1994

Date 2/7/15

M Warnock

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

GOVERNMENT OF
WESTERN AUSTRALIA

Government of Western Australia
Department of Environment Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6521/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Mrs Margaret Dixon
Mr Mark Christian Dixon

1.3. Property details

Property: LOT 9004 ON PLAN 201648, MEERUP
Colloquial name:
Local Government Authority: MANJIMUP, SHIRE OF

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.11		Mechanical Removal	Grazing & pasture

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 2 July 2015

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description
Beard Vegetation Association 23 is described as low woodland; jarrah-banksia (Shepherd et al, 2001).

Beard Vegetation Association 1134 is described as medium woodland; jarrah (south coast) (Shepherd et al, 2001).

Mattiske vegetation complex Cleave (CV) is described as: woodland of Melaleuca preissiana on drainage areas in the hyperhumid zone (Mattiske and Havel, 1998).

Mattiske vegetation complex Hawk (HK) is described as: open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Agonis flexuosa on mild slopes in the hyperhumid zone (Mattiske and Havel, 1998).

Mattiske vegetation complex Blackwater (BWp) is described as: Mosaic of low open woodland of Melaleuca preissiana, low open woodland of Melaleuca cuticularis, open heath of Myrtaceae-Proteaceae spp. and sedgelands of Restionaceae spp. on low lying flats in hyperhumid and perhumid zones (Mattiske and Havel, 1998).

Clearing Description
The clearing of 2.11 hectares of native vegetation within Lot 9004 on Deposited Plan 201648, Meerup, is for the purpose of establishing pasture and fencelines.

Vegetation Condition
Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

Comment
The condition of the vegetation was determined through aerial imagery and a site inspection undertaken by the Department of Agriculture and Food Western Australia (Commissioner of Soil and Land Conservation 2015).

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 clearing of 2.11 hectares of native vegetation within Lot 9004 on Deposited Plan 201648, Meerup, is for the purpose of establishing pasture and fencelines.

The application area has been amended, reducing the area from 2.18 hectares to 2.11 hectares to remove a low lying area associated with the minor watercourse located to the north of the application area.

Several priority flora species have been recorded in the local area (10 kilometre radius). Many of these are Priority 3 and 4 species. Priority 3 species are known from several locations, and do not appear to be under imminent threat, and Priority 4 species are considered to have been adequately surveyed, and are considered not currently threatened or in need of special protection, but could be if present circumstances change. Given that there are other suitable areas of extensive undisturbed vegetation nearby, the proposed clearing is unlikely to impact on the conservation status of these species (Parks and Wildlife, 2014).

The local area also includes one mapped Priority 1 species and one Priority 2 species. These species are both growing in association with the Meerup River, located approximately 1.8 kilometres south of the application area. Given the distance to the Meerup River and lack of flowing watercourses on site, the proposed clearing is not likely to impact on these species (Parks and Wildlife, 2014).

There are no threatened or priority ecological communities mapped within the local area (10 kilometre radius).

Several fauna species of conservation significance have been recorded within the local area (10 kilometre radius), including southern brush-tailed phascogale (Phascogale tapoatafa subsp. tapoatafa) and quokka (Setonix brachyurus) (Parks and Wildlife 2007-). Carnaby's cockatoo (Calyptorhynchus latirostris) Baudin's cockatoo (Calyptorhynchus baudinii) and forest red-tailed black-cockatoo (Calyptorhynchus banksii subsp. naso) are also known within the local area (10 kilometre radius) (Commonwealth of Australia, 2012).

The vegetation under application provides suitable habitat for indigenous terrestrial fauna species including the quokka (Setonix brachyurus). The quokka is listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 (Parks and Wildlife 2007-). However, given that understorey of greater density occurs with the extensive nearby mapped paluslope wetland, the application area is not likely to provide significant habitat for quokka or other terrestrial fauna species.

The application area also provides suitable foraging habitat for Baudin's cockatoo, forest red-tailed black cockatoo and Carnaby's cockatoo, all listed as rare or likely to become extinct under the Wildlife Conservation Act 1950. Given that there is approximately 80 per cent vegetation remaining in the local area of the proposed clearing (10 kilometre radius), it is unlikely that the 2.11 hectares of vegetation under application constitutes significant foraging habitat for these species.

The proposed clearing may increase the potential for weeds and dieback to spread into the adjacent vegetated areas. Weed and dieback mitigation measures would assist in mitigating this risk.

The area under application contains vegetation in very good (Keighery 1994) condition, however the local area (10 kilometre radius) retains approximately 80 per cent vegetation in similar or better condition and the clearing as proposed is unlikely to impact upon rare or priority flora or significant habitat for fauna.

Therefore the clearing as proposed is not likely to comprise a high biological diversity.

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

Methodology

References:
Commonwealth of Australia (2012)
Keighery, B.J. (1994)
Parks and Wildlife (2007-)
Parks and Wildlife (2014)

GIS Databases:
SAC Bio Datasets (Accessed April 2014)

(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

Two fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius), these being, southern brush-tailed phascogale (Phascogale tapoatafa subsp. tapoatafa) and quokka (Setonix brachyurus) (Parks and Wildlife , 2007-). Carnaby's cockatoo (Calyptorhynchus latirostris), Baudin's cockatoo (Calyptorhynchus baudinii) and forest red-tailed black-cockatoo (Calyptorhynchus banksii subsp. naso) are also known within the local area (10 kilometre radius) (Commonwealth of Australia, 2012).

A site inspection undertaken by the Department of Agriculture and Food Western Australia indicates that the majority of the trees within the area under application appear to be juvenile (Commissioner of Soil and Land Conservation 2015). These trees are not expected to provide significant breeding habitat for the Baudin's, Carnaby's or forest red-tailed black cockatoos, or habitat for southern brush-tailed phascogale.

The application area provides suitable foraging habitat for black cockatoos as these species forage on the seeds, nuts and flowers of a large variety of plants including proteaceous species (banksia, hakea, grevillea), as well as allocasuarina and eucalyptus species, Corymbia calophylla and a range of introduced species (Valentine and Stock, 2008). Given that there is approximately 80 per cent vegetation remaining in the local area of the proposed clearing (10 kilometre radius), and that much of this is contained within National Parks and State Forest, it is unlikely that the 2.11 hectares of vegetation under application constitutes significant foraging habitat for these species.

The quokka has a preference for dense low vegetation offering protection from predators within close proximity to fresh water throughout the year to necessitate the species high water requirements (DotE, 2014). The vegetation under application may provide suitable habitat for this species, however only a small portion of the area under application occurs within a wetland. Suitable habitat is likely to occur within wetland vegetation of considerably greater density located immediately east. This dense western vegetation is associated with a mapped paluslope (seasonally inundated slope) that comprises approximately 400 hectares.

Given the above the clearing as proposed is not likely comprise significant habitat for fauna.

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

Methodology

References:
Commissioner of Soil and Land Conservation (2015)
Commonwealth of Australia (2012)
DotE (2014)
Parks and Wildlife (2007-)
Valentine L. E. & Stock W. (2008)

GIS Databases:
SAC Bio Datasets (Accessed April 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

No rare flora species have been recorded within the local area (10 kilometre radius). The closest record of rare flora is located approximately 14.7 kilometres south east of the area under application on a different soil and vegetation type to the area of proposed clearing.

Given the above, it is not likely that the vegetation under application includes, or is necessary for the continued existence of this species.

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

Methodology

GIS Databases:
SAC Bio Datasets (Accessed April 2015)

(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 (TEC) mapped within the local area (10 kilometre radius), therefore the vegetation under application is not likely to comprise or be necessary for the maintenance of a TEC.

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

Methodology

GIS Databases:
SAC Bio Datasets (Accessed April 2015)

(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 at variance to this Principle

There is approximately 80 per cent native vegetation remaining in the local area of the proposed clearing (10 kilometre radius).

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).

The Warren Bioregion, Shire of Manjimup and mapped Beard Vegetation Associations 23 and 1134 retain approximately 79, 84, 72 and 87 per cent pre-European vegetation remaining respectively (Government of Western Australia, 2013). The Mattiske vegetation complexes mapped within the application area, Cleave, Blackwater and Hawke, retain approximately 80, 85 and 84 per cent native vegetation respectively.
The application area contains vegetation in a very good (Keighery, 1994) condition, however the area under application is not within an area that has been extensively cleared.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion*				
Warren	833,985	663,203	79	84
Shire*				
Shire of Manjimup	697,368	586,905	84	94
Beard Vegetation Association in Bioregion*				
23	37,736	27,221	72	75
1134	14,409	12,587	87	88
Mattiske Vegetation Complex **				
Cleave	2,038	1,624	80	63
Blackwater	33,367	28,411	85	77
Hawke	3,394	2,862	84	82

* Government of Western Australia (2013)
** Ref Parks and Wildlife (2015)

Methodology

References:
Commonwealth of Australia (2001)
Government of Western Australia (2013)
Keighery, B.J. (1994)
Parks and Wildlife (2015)

GIS Databases:
- Pre European Vegetation
- Mattiske vegetation complexes

(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 minor watercourse is located adjacent to the southern portion of the application area. A paluslope (seasonally inundated slope) wetland is located within a portion of the eastern end of the application area.

A site inspection undertaken by the Department of Agriculture and Food Western Australia (DAFWA) advised that there is a small waterway located at the northern edge of the application area (Commissioner of Soil and Land Conservation 2015). The applicant has amended the application to remove the low lying area associated with the minor watercourse located to the north of the application area.

The closest major watercourse is Meerup River located approximately 1.8 kilometres from the area under application.

The areas that intersect the wetland and are adjacent to the minor watercourse south of the application area comprise a small linear portion of the area under application required for fence lines (0.18 hectares). The majority of the area under application required for pasture (1.93 hectares) is not located within a wetland and watercourse and is separated from the wetland and southern watercourse by a vegetated buffer.

The vegetation under application is considered to be growing in association with a wetland and watercourse, however impacts to these areas will be minimal and the clearing as proposed is not likely to have a significant impact on the environmental values of the wetland or watercourse.

The clearing as proposed is at variance to this principle.

Methodology

References:
Commissioner of Soil and Land Conservation (2015)
GIS Databases:
Geomorphic Wetlands, Augusta to Walpole

(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 comprises mapped soil type Cb40 which is described as Swampy plains comprising chief soils of leached sands, some of which have a thin peaty surface (Northcote et al 1960 - 1968).

The Commissioner of Soil and Land Conservation (2015) has advised that the area under application is located on the lower and mid-slope position of the landscape and has been mapped by The Department of Agriculture and Food Western Australia (DAFWA) to be a mixture of two soil types; Hawk Subsystem Map Unit 254NfHK and Blackwater Podzols Phase Map Unit 254BrBWp. The Hawk subsystem is described as gently inclined slopes with red gradational soils and orange sand and earths. The Blackwater subsystem is described as flat and poorly drained with wet and semi-wet soils and pale deep sands.

A site inspection identified a low lying area associated with a minor waterway near the north west of the application area and that land degradation in the form of waterlogging is likely to occur within this area (Commissioner of Soil and Land Conservation 2015). The applicant reduced the original application area from 2.18 hectares to 2.11 hectares to exclude this low lying area. Therefore land degradation in the form of waterlogging is not likely to result from the proposed clearing.

A land degradation assessment undertaken by DAFWA determined that given the soil types present, the clearing as proposed is not likely to contribute to wind erosion. In addition the area under application has a low risk of water erosion because of the lack of land slopes (Commissioner of Soil and Land Conservation 2015).

Given the above the clearing as proposed is not likely to cause appreciable land degradation.

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

Methodology

References:
Commissioner of Soil and Land Conservation (2015)
Northcote, K. H. et al. (1960-68)

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 area is Boorara-Gardner National Park located approximately 90 metres from the application area.

Given the distance of the National Park to the area under application the clearing as proposed is not likely to have an impact on the environmental values of this conservation area.

The local area is extensively vegetated and the area under application is not likely to provide a significant fauna corridor between remnant vegetation and nearby nature reserves.

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

Methodology

GIS Databases:
Parks and Wildlife 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 is not likely to be at variance to this Principle

A minor watercourse is located adjacent to the southern portion of the application area. A paluslope (seasonally inundated slope) wetland is located within a portion of the eastern end of the application area.

A site inspection undertaken by the Department of Agriculture and Food Western Australia (DAFWA) advised that there is a small waterway located at the northern edge of the application area (Commissioner of Soil and Land Conservation 2015). The applicant has amended the application to remove the low lying area associated with the minor watercourse located to the north of the application area.

The closest major watercourse is Meerup River located approximately 1.8 kilometres from the area under application.

The areas under application that intersect the wetland and are located adjacent to the minor watercourse south of the application area comprise a small linear portion of the area under application required for fence lines. The majority of the area under application required for pasture (1.93 hectares) is no located within a wetland and watercourse and is separated from the wetland and southern watercourse by a vegetated buffer.

The clearing as proposed may increase runoff and sedimentation into the wetland and adjacent watercourse, however the impacts are likely to be short term and minimal and the clearing as proposed is not likely cause a significant deterioration in the quality of surface water.

Groundwater salinity mapped within the application area is between 500 and 1000 milligrams per litre total dissolved solids (marginal). Given this low salinity level, it is considered that the proposed clearing will not lead to a perceptible rise in the watertable and thus an increase in groundwater salinity levels.

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

Methodology References:
Commissioner of Soil and Land Conservation (2015)

GIS Databases:
Geomorphic Wetlands, Augusta to Walpole
Groundwater Salinity, Statewide
Hydrography, Hierachy

(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**
Given the extensive areas of surrounding vegetation, it is unlikely that the proposed clearing of 2.11 hectares will cause or exacerbate the incidence or intensity of flooding.

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

Methodology GIS Databases:
-Geomorphic Wetlands, Augusta to Walpole

Planning instruments and other relevant matters.

Comments The original application proposed to clear 2.18 hectares of native vegetation. The Commissioner of Soil and Land Conservation (2015) identified a low lying area associated with a minor watercourse within the north west portion of the application area that was likely to cause appreciable land degradation in the form of waterlogging. Therefore the original application was at variance to principle (g). The applicant reduced the application area to 2.11 hectares and excluded the low lying area from the application.

The Shire of Manjimup (2015) has advised that they have no objection and that there are no planning or other matters that would affect the proposal. The land is zoned by Local Planning Scheme No. 4 as 'General Agriculture' and planning approval for clearing vegetation is not required. The purpose of the clearing does not require local government planning approval (Shire of Manjimup 2015).

No Aboriginal Sites of Significance have been recorded within the application area.

Methodology References:
- Shire of Manjimup (2015)

GIS Databases:
- Hydrology linear

4. References

Commissioner of Soil and Land Conservation (2015); Land Degradation Advice and Assessment Report for clearing permit application CPS 6521/1 received 4 June 2015; Department of Agriculture and Food Western Australia (Ref. A916217).

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, Canberra.

DotE (2014) Setonix brachyurus in Species Profile and Threats Database, Department of the Environment, Canberra.

Government of Western Australia (2013) 2013 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2013. WA Department of Parks and Wildlife, 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.

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.

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.

Parks and Wildlife (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/. Accessed April 2015

Parks and Wildlife (2014) Flora Advice. Additional information for Clearing Permit Application CPS 6249/1. DER Ref A832710

Parks and Wildlife (2015) 2015 South West Forest and Swan Coastal Plain Vegetation Complex Statistics: a report prepared

for the Department of Environment Regulation. Current as of March 2015. Department of Parks and Wildlife, Perth, Western Australia.
Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia
Shire of Manjimup (2015) Advice for Clearing Permit Application CPS 6521/1 – Lot 9004 (287) Meerup Road, Meerup. Western Australia. DER Ref: A904307.
Valentine L. E. & Stock W. (2008) Food Resources of Carnaby's Black-Cockatoo (Calyptorhynchus latirostris) in the Gnangara Sustainability Strategy study area. Unpublished report to the Forests Products Commission.