



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5672/1
Permit Holder:	Ellenbrook Management Pty Ltd
Duration of Permit:	From 21 June 2014 to 21 June 2019

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 constructing a walk trail.

2. Land on which clearing is to be done

Lot 12842 on Plan 21247 (Reserve 46875), The Vines

3. Area of Clearing

The Permit Holder must not clear more than 0.6 hectares of native vegetation within the area shaded yellow on attached Plan 5672/1.

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.

PART II – MANAGEMENT CONDITIONS

5. Dieback and weed control

The Permit Holder must implement and adhere to the 'Ellenbrook Lexia Walk Trail Phytophthora Dieback and Weed Management Plan, Produced by Dempster LPS Pty Ltd, January 2014'.

A handwritten signature in black ink, appearing to read "M Warnock", written over a horizontal line.

M Warnock
SENIOR MANAGER
CLEARING REGULATION

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

22 May 2014

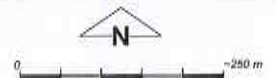
Plan 5672/1



LEGEND

-  Road Centrelines
-  Cadastral
-  Local Government Authorities
-  Clearing Instruments
-  Areas Approved to Clear

Perth Metropolitan Area
Central 15cm Orthomosaic -
Landgate 2012



Scale 1:8972

(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 22/5/14

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. This data has not been quality assured. Please contact map author for details.



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5672/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Ellenbrook Management Pty Ltd

1.3. Property details

Property: LOT 12842 ON PLAN 21247 (Lot No. 12842 MARALLA THE VINES 6069)
Local Government Area: City of Swan
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.6		Mechanical Removal	Recreation

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 22 May 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
Mapped Beard Vegetation Association 949 is described as low woodland; banksia (Shepherd et al 2001).	The Lexia Walk Trail project.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994) To Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The application is to clear 0.6 hectares of native vegetation for the purpose of constructing a walk trail. The proposed walking trail meanders through the Marralla Nature Reserve (Class A), approximately 150 hectares of remnant vegetation adjacent to residential housing estates currently under construction. The area under application ranges from degraded to excellent (Keighery 1994) condition and consists predominantly of banksia woodland. The structure and composition of the banksia woodland varies throughout the applied area. The majority of the area under application contains woodland in very good to excellent (Keighery 1994) condition, dominated by Banksia sp. and with dense mid and understorey. The proposed walk trail passes through palusplain and sumpland wetlands and there are a number of perennial swamps in close proximity. The lower-lying sections of the area under application contain riparian species such as Melaleuca sp. One section of the woodland is dominated by Allocasuarina fraseriana with scattered Banksia sp. and Eucalyptus sp. The proposed walk trail also passes through a small area in a degraded (Keighery 1994) condition with exposed sandy soil and minimal vegetation cover, and there is another section which appears to have been affected by dieback, in a good to degraded (Keighery 1994) condition. The eastern section of the proposed walk trail will follow an existing limestone access track, which has a small population of rare flora growing along the edge of the track. The condition and description of the vegetation was determined by a Department of Environment Regulation site visit on 6 August 2013 (DER 2013) and aerial imagery (Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012).

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 application is to clear 0.6 hectares of native vegetation for the purpose of constructing a walk trail through the Marralla Road Nature Reserve.

The Marralla Road Nature Reserve is a remnant of native vegetation, approximately 150 hectares in size. The vegetation within the nature reserve varies from degraded to excellent (Keighery 1994) condition, the majority being in very good to excellent condition and dominated by *Banksia* sp., *Melaleuca* sp. and *Eucalyptus* sp. with dense mid and understorey (DER 2013). Different vegetation communities exist within the nature reserve. The wetter areas contain riparian vegetation such as *Melaleuca* sp., with dense understorey in very good to excellent (Keighery 1994) condition. There is an area of open *Allocasuarina fraseriana* woodland in good (Keighery 1994) condition but with some weed invasion and signs of disturbance. There are some limited patches in a degraded (Keighery 1994) condition, lacking native vegetation and subject to rubbish dumping and weed invasion. One area on the western side of the reserve appears to have been affected by dieback and there are some dead trees and many fallen logs. Other areas consist of open banksia woodland ranging in condition and species composition (DER 2013).

The proposed walk trail necessitates the clearing of approximately 0.6 hectares of native vegetation in a two metre wide linear strip, which meanders through the nature reserve. The proposed walk trail passes through a variety of vegetation associations, ranging in condition from degraded to excellent (Keighery 1994), however the proposed route has been aligned to pass through areas already subject to disturbance where possible, to avoid and minimise the clearing required in areas of better condition.

The Marralla Road Nature Reserve is a Class A reserve, and in its entirety holds high biodiversity values. The flora composition is diverse due to the different vegetation associations present within the reserve, mostly in very good to excellent (Keighery 1994) condition. Numerous records of rare and priority flora have been made within the local area (10 kilometre radius). Rare flora has been identified in the south eastern corner of the reserve. Numerous records have also been made of fauna species of conservation significance (DEC 2007-), and the banksia woodland provides feeding habitat for state and Commonwealth protected black cockatoo species (SEWPaC 2012).

The Marralla Road Nature Reserve is within the buffer zone of a nearby threatened ecological community (Shrublands and Woodlands on Muchea Limestone) and may contain vegetation representative of this community. The nature reserve also contains Conservation Category wetlands, a high priority for protection due to biodiversity values.

Although the 150 hectare Marralla Road Nature Reserve in its entirety holds high biodiversity values, the proposed clearing of less than 0.6 hectares in a two metre wide strip has been aligned with environmental sensitivity in mind and is intended to follow areas that have already been subject to disturbance, avoiding dense vegetation in excellent (Keighery 1994) condition.

The proposed walk trail will avoid species of trees that are suitable for black cockatoo feeding (DER 2013) such as *Eucalyptus* sp. and *Banksia* sp (SEWPaC 2012). The eastern section of the walk trail will follow an existing access track so that no clearing will be required in close proximity to known rare flora. The proposed clearing is unlikely to significantly impact upon the threatened ecological community or the wetland, or affect the conservation status of any priority flora species.

Considering the size and linear nature of the proposed clearing and the environmentally sensitive alignment, the area under application is not likely to contain high biodiversity values in comparison to the remaining vegetation within the Marralla Road Nature Reserve and other vegetation remnants and conservation areas within the local area.

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

A weed and dieback management plan has been provided which, when implemented will assist in ensuring that the proposed clearing will not impact upon the high biodiversity values of the Marralla Road Nature Reserve.

Methodology

References

- DER (2013)
- DEC (2007-)
- Keighery (1994)
- SEWPaC (2012)

GIS Databases

- SAC Biodatasets - accessed August 2013

(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

Twenty species of fauna of conservation significance have been recorded within the local area (10 kilometre radius) (DEC 2007-). The proposed walk trail passes through Marralla Road Nature Reserve (150 hectares) which is likely to contain suitable habitat for a number of these species.

Carnaby's cockatoo (*Calyptorhynchus latirostris*), which is endemic to south-western Australia and classified as Endangered under the Environment Protection and Biodiversity Conservation Act 1999 and as 'rare or likely to become extinct' under the Western Australian Wildlife Conservation Act 1950, has been recorded within the local area. Baudin's cockatoo (*Calyptorhynchus baudinii*) is listed as Vulnerable under the Environment Protection and Biodiversity Conservation Act 1999 and 'rare or likely to become extinct' under the Wildlife Conservation Act 1950 and has also been recorded in the local area (DEC 2007-). A flock of black cockatoos were sighted during a site inspection by Department of Environment Regulation officers (DER 2013), though it is uncertain whether they were Carnaby's cockatoos or Baudin's cockatoos.

Carnaby's cockatoo and Baudin's cockatoo both feed within the Swan Coastal Plain during the non-breeding season and preferred foraging habitat includes proteaceous woodland containing *Banksia* sp. (SEWPaC 2012). The area under application consists of banksia woodland, the majority of which is in very good to excellent (Keighery 1994) condition. While the Marralla Road Nature Reserve contains significant feeding habitat for black cockatoos, the impact caused by the proposed clearing is likely to be minimal. During construction of the walk trail, the route will be aligned to avoid any habitat trees, or trees that are suitable for black cockatoo feeding (DER 2013) such as *Banksia* sp (SEWPAC 2012). The walk trail will follow cleared and disturbed areas to the extent practicable, in avoidance of impacting upon fauna habitat.

All of the fauna species of conservation significance that may occur within the application area are highly mobile and there is an availability of suitable habitat remaining in the local area. Considering this, and the applicant's intention to avoid clearing any habitat trees, the linear clearing of 0.6 hectares is unlikely to have a significant impact on any of these fauna species.

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

Methodology

References:

- DEC (2007-)
- DER (2013)
- SEWPaC (2012)

(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

Two species of rare flora have been recorded within close proximity to the proposed clearing (within 100 metres).

One species occurs alongside an existing access track on the eastern side of the project area. The eastern section of the walk trail will follow the existing access track so that no clearing is to occur within 50 metres of the marked rare flora.

Another species of rare flora has been recorded approximately 100 metres from the existing access track. The record was made in 1991 when some dead plants were found, but not properly identified. No records have been made since this time and the habitat is now considered possibly unsuitable.

It is unlikely that the proposed clearing will impact upon any rare flora, therefore, the application is not likely to be at variance to this principle.

Methodology

GIS Databases:

- SAC Biodatasets (accessed August 2013)

(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

Numerous threatened ecological communities (TEC) have been mapped within the local area (10 kilometre radius). The closest record is the 'Shrublands and Woodlands on Muchea Limestone' (endangered) which is mapped approximately 700 metres to the south of the proposed clearing, within the same soil and vegetation type. The area under application is within the buffer zone of this TEC and may contain areas that are representative of the TEC.

The proposed clearing is intended to pass through areas with the highest level of existing disturbance and avoid

sections of very dense vegetation in excellent (Keighery 1994) condition. Areas of vegetation that are in the best condition and most likely to be representative of the TEC are likely to remain undisturbed and the impact upon the TEC is likely to be minimal.

The area under application is not likely to be representative of any other TEC's in the local area and unlikely to impact upon them.

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

Methodology **References:**
- Keighery (1994)
GIS Databases:
- SAC Biodatasets - accessed June 2013

(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 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). Within constrained areas (i.e. areas of urban development in cities and major towns) on the Swan Coastal Plain and within the Greater Bunbury Region Scheme and Peel Region Scheme the target for representation of the pre-clearing extent of a particular native vegetation complex is 10 per cent (EPA 2006).

The area under application is mapped as Beard Vegetation Association 949 (Shepherd et al 2001) which retains approximately 58 per cent of its original vegetation extent in the Swan Coastal Plain IBRA Bioregion, of which 53 per cent is protected in government managed land (Government of Western Australia 2013).

Although the vegetation association is well represented, and the City of Swan retains 44 per cent of its original extent (Government of Western Australia 2013), there is only approximately 30 per cent of native vegetation remaining in the local area (10 kilometre radius). The local area has been extensively cleared in recent years while undergoing rapid housing development and the remaining vegetation is becoming increasingly fragmented.

Much of the remaining vegetation in the local area is associated with a wetland system and contains high biodiversity values, supporting flora, fauna and ecological communities of conservation significance.

The proposed walk trail passes through the Marralla Road Nature Reserve (150 hectares) which holds high environmental value. It is a Class A reserve, contains a conservation category wetland, is within a buffer zone for a threatened ecological community, holds records of rare flora and contains significant habitat for fauna of conservation significance. The Marralla Road Nature Reserve in its entirety is significant as a remnant in an extensively cleared area.

However, not all of the Marralla Road Nature Reserve is in excellent (Keighery 1994) condition. There are sections that have been subject to disturbance from recreational activity, rubbish dumping, weed invasion and dieback. The proposal is to clear less than 0.6 hectares in a two metre wide linear strip, through the 150 hectare remnant. The clearing is proposed to follow a route of the highest existing disturbance and avoid areas of dense vegetation in excellent (Keighery 1994) condition. The 'open' nature of the banksia woodland in most parts, allows for the construction of a two metre wide path with minimal clearing of native vegetation. No clearing will occur within close proximity to mapped rare flora, the suitability of the remnant as fauna habitat will remain unchanged and the proposed clearing is unlikely to impact upon the threatened ecological community, the wetland system or any biodiversity values. Therefore, the area under application is not likely to be significant as a remnant in an extensively cleared area.

There is a possibility of the clearing and subsequent walk trail reducing the integrity and ecological significance of the 150 hectare remnant. However, despite fence construction and management attempts, recreational use of the remnant has occurred and is likely to continue, so the reduction of the integrity of the remnant seems inevitable. The construction of the walk trail and interpretive signage may allow some control and education to provide better management outcomes.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion* Swan Coastal Plain	1,501,209	587,889	39	33
Shire* City of Swan	104,252	45,543	44	29
Beard Vegetation Association in Bioregion* 949	209,983	121,247	58	53

Methodology References:
- Commonwealth of Australia (2001)
- EPA (2006)
- Government of Western Australia (2011)
- Shepherd et al. (2001)
GIS Datasets:
- Pre-European vegetation
- NWLRA, Vegetation Extent

(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**

The proposed clearing passes through a dampland in the western section of the walk trail and a palusplain wetland in the northern section of the walk trail. Both of these are Conservation Category wetlands. The area under application contains riparian vegetation associated with the wetland system.

The proposed clearing is less than 0.6 hectares in a linear two metre strip, mostly following areas already subject to disturbance. The majority of the vegetation associated with the wetland system (the surrounding 150 hectare remnant) will be retained and the impacts upon the wetlands are likely to be minimal.

The area under application does include riparian vegetation, therefore, the application is at variance to this principle.

Methodology GIS Databases
- Geomorphic wetlands (Classification), Swan Coastal Plain
- Geomorphic wetlands (Management Categories), Swan Coastal Plain
- Hydrography linear DoW

(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 proposed clearing of 0.6 hectares is a two metre wide linear strip through dense vegetation, and the surrounding vegetation is to be retained. This proposed clearing will not expose any large areas of bare soil to wind and water erosion and the remaining vegetation will continue to act as a natural filter for sedimentation.

The topography of the area under application is flat, the salinity level of 500 to 1000 milligrams per litre is low and the average annual rainfall of 800 millimetres is low to moderate.

The application is not likely to result in appreciable land degradation and therefore is not likely to be at variance to this principle.

Methodology GIS Databases:
- Groundwater Salinity, statewide
- Rainfall, Mean Annual
- Topographic Contours, 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 may be at variance to this Principle**

The area under application is within the Maralla Road Nature Reserve (Class A). The Gnanagara - Moore River State Forest is 2.5 kilometres to the west, Walyunga National Park is 5.5 kilometres to the north east, and there are numerous other nature reserves and conservation areas within the local area (10 kilometre radius). The application area is within a Bush Forever site and was also listed on the former Register of National Estate (Ellenbrook National Estate Area).

The clearing activities and subsequent land use have the potential to impact upon the remaining vegetation of the Maralla Road Nature Reserve, through the spread of weeds and dieback. One section of the proposed walk trail route appears to have already been affected by dieback, and some areas have been affected by weed invasion, therefore the passing of machinery and people through the dieback and weed infested areas into non-infested areas without appropriate management may result in their dispersal. The reduction of the integrity of the Maralla Road Nature Reserve through weed and dieback spread may compromise its ability to act as an ecological stepping stone that allows the movement of fauna and dispersal of flora among other conservation areas and vegetation remnants.

Considering the above, the application may be at variance to this principle.

The applicant has provided a Phytophthora Dieback and Weed Management Plan which, when implemented will help mitigate potential impacts to Maralla Road Nature Reserve.

Methodology GIS Databases:
- Bushforever
- DEC, tenure
- Register of National Estate

(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

The area under application passes through palusplain and sumpland wetlands and is subject to inundation. The clearing that will be required to create a walk trail of two metres in width is minimal as the walk trail will follow the path of the most existing disturbance. The majority of the 150 hectare vegetation remnant will be retained. The remaining vegetation will retain its ability to act as a natural filter, to maintain the current level and quality of the ground water and to prevent any sedimentation of surface water.

The proposed clearing is not likely to cause deterioration in the quality of surface or ground water, therefore, the application is not likely to be at variance to this principle.

Methodology GIS Databases:
- Hydrography linear DoW

(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 area under application passes through palusplain and sumpland wetlands and is subject to inundation. The proposed clearing of 0.6 hectares is linear and the majority of the vegetation within the surrounding nature reserve will remain in tact. The proposed clearing is unlikely to cause or exacerbate flooding.

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

Methodology GIS Databases:
- Topographic Contours, Statewide

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

Comments

The application is to clear 0.6 hectares of native vegetation to construct a walk trail through the Marralla Road Nature Reserve. A weed and dieback management plan has been developed to assist in mitigating impacts to this nature reserve.

The Swan Region of the former Department of Environment and Conservation provided authorisation for Ellenbrook Management Pty Ltd to access the Marralla Road Nature Reserve, on behalf of the Conservation Commission (DEC 2013). The Swan Region is in support of the construction of the Lexia Walk Trail, provided it is constructed in accordance with the plans that were previously endorsed by the region, and a weed and dieback management plan is implemented (DEC 2013).

The City of Swan has no objection to the proposed clearing, however it advises that it is the responsibility of the applicant to obtain any other necessary approvals, consents and licenses that may be required, including a City of Swan building licence (City of Swan 2013).

Approval to Commence Development has been obtained from the Western Australian Planning Commission.

The area under application is within two Aboriginal Sites of Significance (Lord Street and Ellenbrook/Upper Swan sites). An Aboriginal Heritage Survey has been requested by the South West Aboriginal Land and Sea Council (2013). It is the applicant's responsibility to ensure compliance with any obligations under the

Aboriginal Heritage Act 1972.

The area under application is zoned 'parks and recreation' under the Metropolitan Regional Scheme and has not been designated a zone category under the Town Planning Scheme Zones.

Methodology	References
	<ul style="list-style-type: none">- City of Swan (2013)- Department of Water (2013)- DEC (2013)- DER (2013)- South West Aboriginal Land and Sea Council (2013)
	GIS Databases
	<ul style="list-style-type: none">- Aboriginal Sites of Significance- Town Planning Scheme Zones

4. References

- City of Swan (2013) Advice regarding Clearing Permit Application CPS 5672/1, provided on 15 August 2013 (DER Ref: A665325).
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DER (2013) Site Inspection Report for Clearing Permit Application CPS 5672/1. Department of Environment Regulation, 6 August 2013 (DER Ref: A674847).
- DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed 21/08/2013.
- EPA (2006) Guidance for the Assessment of Environmental Factors (in accordance with the Environmental Protection Act 1986), Level of Assessment for Proposals Affecting Natural Areas Within the System 6 Region and Swan Coastal Plain Portion of the System 1 Region, No. 10, June 2006.
- 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.
- SEWPaC (2012) EPBC Act Referral Guidelines for Three Threatened Black Cockatoo Species, April 2012. Department of Sustainability, Environment, Water, Populations and Communities. Commonwealth of 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.
- 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.
- South West Aboriginal Land and Sea Council (2013) Advice regarding Clearing Permit Application CPS 5672/1, provided on 6 August 2013 (DER Ref: A659090).