



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 3967/1

File Number: 2010/007109-1

Duration of Permit: From 5 March 2012 to 5 March 2016

PERMIT HOLDER

Moreshill Pty. Limited

LAND ON WHICH CLEARING IS TO BE DONE

Lot 3910 on Deposited Plan 210000 (Nilgen 6044)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 11.14 hectares of native vegetation within the combined areas shaded yellow on attached Plan 3967/1.

CONDITIONS

1. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

2. Wind erosion management

The Permit Holder shall not clear native vegetation unless horticultural activities commence within 3 months of the clearing being undertaken.

3. Native vegetation conservation (conservation covenant)

- (a) In respect to the area shaded red on attached Plan 3967/1, the Permit Holder shall enter into a conservation covenant, agreement to reserve or some other form of binding undertaking to establish and maintain vegetation.
- (b) The conservation covenant, agreement to reserve or some other form of binding undertaking to establish and maintain vegetation shall include, but not be limited to, the following conditions:
 - (i) native vegetation in the area subject to the conservation reserve must not be cleared, other than for clearing required under the *Bush Fires Act 1954*;
 - (ii) the land subject to the conservation reserve shall not be used for the purpose of cultivation of crops or pasture, or for the de-pasturing of any stock; and
 - (iii) the conservation reserve is to apply in perpetuity and be registered on the title of the property;
- (c) The Permit Holder is to execute and return the conservation covenant, agreement to reserve or some other form of binding undertaking outlined in condition 3(a) of this permit prior to 5 September 2012.

4. Records must be kept

The Permit Holder must maintain the following records for activities done 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 or decimal degrees;
 - (ii) the date that the area was cleared; and
 - (iii) the size of the area cleared (in hectares).
- (b) In relation to native vegetation conservation of areas pursuant to condition 3 of this Permit, within one month of executing and returning the conservation covenant, agreement to reserve or other form of binding undertaking the Permit Holder shall notify the CEO in writing that the conservation covenant, agreement to reserve or other form of binding undertaking has been completed.

5. 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 4 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 5 December 2015, the Permit Holder must provide to the CEO a written report of records required under condition 4 of this Permit where these records have not already been provided under condition 5(a) of this Permit.

Definitions

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

dieback means the effect of *Phytophthora* species on native vegetation;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

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 a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.



Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

9 February 2012

Plan 3967/1



LEGEND

Clearing Instruments

- Areas Subject to Conditions
- Areas Approved to Clear
- Road Centrelines
- Cadastre for labelling

Local Government Authorities

Wedge Island 1.4m
Orthomosaic - Landgate
2004



0 750 m

Scale 1:25095

(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.

Date 9/2/12
K Peulknner

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.



Department of Environment and Conservation

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1. Application details

1.1. Permit application details

Permit application No.: 3967/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Moreshill Pty Ltd

1.3. Property details

Property: LOT 3910 ON PLAN 210000 (House No. 1289 NILGEN NILGEN 6044)
Local Government Area:
Colloquial name: Shire of Gingin

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 9 February 2012

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 is mapped as: Beard vegetation association 1029 - Shrublands; scrub-heath dryandra-calothamnus association with Banksia prionotes on limestone in the northern Swan Region (Hopkins et al 2001; Shepherd 2009)	The amended areas under application (a total of 11.14 ha) are located within Lot 3910 (a 1,123 ha property). The proposed clearing is for the purpose of horticulture. The vegetation under application can be described as Banksia woodland over a midstorey and understorey of native plants within four areas (4.9 ha, 3.9 ha, 1.8 ha and 3.7 ha) and scattered native trees in four other smaller areas. The vegetation included Banksia attenuata, Banksia menziesii, Eucalyptus todtiana, Nuytsia floribunda, Calothamnus sp, Conospermum sp, Conostylis sp, Synaphea sp and Thysanotus sp.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994) Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994) Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The vegetation description was determined at a site visit conducted by DEC officers on 11 October (DEC, 2010). The vegetation under application was considered to be in degraded to very good (Keighery, 1994) condition.

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 vegetation under application is described as Banksia woodland over a midstorey and understorey of native plants. The vegetation included Banksia attenuata, Banksia menziesii, Eucalyptus todtiana, Nuytsia floribunda, Calothamnus sp, Conospermum sp, Conostylis sp, Synaphea sp and Thysanotus sp. (DEC 2010). The vegetation under application was considered to be in degraded to very good (Keighery, 1994) condition (DEC 2010).

Within the local area (10 km radius) there are records of five priority flora species, the closest being *Isotropis cuneifolia* subsp. *glabra* (P2) which is located approximately 1.6 km north-west from the applied area and occurs within different vegetation complex and soil type as the areas under application.

The vegetation under application is likely to provide suitable foraging habitat for a range of foraging bird species, in particular, Carnaby's black cockatoo which has been recorded within the local area.

Whilst the vegetation under application has the potential to support a range of native fauna species, it is not considered that the applied area comprises a high level of biological diversity.

Methodology References:
- DEC (2010)
- Keighery (1994)
GIS Databases:
- SAC Bio Databases (26/10/2010)

(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 at variance to this Principle

A site inspection identified that the areas under application comprised *Banksia* woodland over a midstorey and understorey of native plants within four areas (average size of 3 ha) with some scattered native trees. The vegetation included *Banksia attenuata*, *Banksia menziesii*, *Eucalyptus todtiana*, *Nuytsia floribunda*, *Calothamnus* sp, *Conospermum* sp, *Conostylis* sp, *Synaphea* sp and *Thysanotus* sp. (DEC 2010). The vegetation under application was considered to be in degraded to very good (Keighery, 1994) condition (DEC 2010). A flock of about 25 specially protected Carnaby's black cockatoos (*Calyptorhynchus latirostris*) was observed in banksia trees approximately 5 km south of the application area; observed on-site were kangaroo and emu scats, and rabbit diggings (DEC 2010).

There are four records of Carnaby's black cockatoos within the local area (10 km radius) with the closest record being 4.0 km north-west of the applied area. Carnaby's black cockatoos are known to feed on the seeds and nectar from the flowers of Proteaceous trees and shrubs, vegetation which is similar to that found within the areas under application. Shah (2006) concludes that *Banksia* sp. constitutes more than half of the native plant diet of this species with the entire landscape of the Swan Coastal Plain considered important throughout the non-breeding season for this species. The vegetation under application includes *Banksia* species, therefore has the potential to provide suitable feeding habitat for the Carnaby's black cockatoo and other local foraging bird species.

DEC considers that the cumulative impacts from the reduction of Carnaby's black cockatoo foraging habitat on the Swan Coastal Plain has resulted in vegetation that provides a food source for the species being identified as significant habitat. The continual net loss of significant habitat will continue to reduce available food resources for Carnaby's black cockatoos and contribute to its ongoing decline.

Given the application comprises areas of vegetation in good (Keighery, 1994) or better condition and is likely to provide suitable foraging habitat for specially protected Carnaby's black cockatoos; it is considered that the vegetation proposed to be cleared (11.14 ha in total) comprises significant habitat for fauna indigenous to Western Australia.

DEC acknowledges that Nilgen Nature Reserve is likely to have comparable and more extensive extent of habitat than that of the vegetation under application; however, given the information above, it is considered that the areas under application comprise significant habitat values.

Given the above, it is considered that the proposal in its current form is at variance to this Principle. The applicant has proposed to covenant a 44 hectare parcel of land adjacent to the Bashford Nature Reserve to mitigate the loss of foraging habitat.

Methodology References:
- DEC (2010)
- Ecoscape (2011)
- Keighery (1994)
- Shah (2006)
GIS Databases:
- SAC Bio Databases (26/10/2010)

(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

There is one known record of rare flora within a 10 km radius of the areas under application. This rare flora, *Eleocharis keigheryi* is located approximately 1.6 km north-west of the applied area and is known to occur

within a different vegetation complex and soil type to those identified within the areas under application.

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

Methodology GIS Databases:
 - Pre-European Vegetation
 - SAC Bio Databases (26/10/2010)
 - Soils, Statewide

(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 known occurrences of threatened ecological communities (TEC) within the local area (10 km radius), with the closest known occurrence being identified as Floristic Community Type SCP 07 - Herb rich saline shrublands in clay pans, which is located approximately 40 km south-east of the areas under application.

Given the distance and that this TEC is found on different soils and within a different vegetation complex to the applied area, the proposed clearing is not likely to impact on, or be necessary for the maintenance of a TEC. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Databases:
 - Pre-European Vegetation
 - SAC Bio Databases (26/10/2010)
 - Soils, Statewide

(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 vegetation under application is mapped as Beard vegetation association 1029 of which there is 71.4% of pre-1750 extent remaining in the bioregion (Shepherd 2009).

The areas under application are located within the Shire of Gingin of which there is 55.2% of pre-1750 extent remaining. The vegetation under application is also within the Swan Coastal IBRA Bioregion of which there is 39.1% of pre-1750 extent remaining.

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 vegetation types under application retain more than the 30% threshold level. The Beard vegetation type retains more than the 30% threshold level.

The areas under application are significant as a remnant in the local area due to its habitat values. However, given the high representation levels of the vegetation under application, the local landscape is not considered to be extensively cleared. Therefore, the proposed clearing is not likely to be at variance to this Principle.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregions				
Swan Coastal Plain*	1,501,209	587,889	39.1	
Shire of Gingin *	319,670	176,644	55.2	
Beard Vegetation Association:*				
1029 (within State)	71,035	50,933	71.7	39.5
1029 (within SCP bioregion)	68,329	48,791	71.4	38.2

* (Shepherd 2009)

Methodology References:
 - Commonwealth of Australia (2001)
 - Shepherd (2009)
 GIS Databases:
 - Pre-European Vegetation
 - Interim Biogeographic Regionalisation of Australia
 - SAC Bio Databases (26/10/2010)

(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 not likely to be at variance to this Principle

There are no mapped wetlands or watercourses within a 5 km radius of the areas under application. The closest hydrological feature is Caro Brook, which is located approximately 6.4 km north-east of the areas under application. In addition, the Indian Ocean is located approximately 11 km to the west.

During the site inspection (DEC 2010) the vegetation under application was identified as being representative of an upland vegetation community.

Given the distance to the nearest watercourse and the vegetation representing an upland vegetation community, the vegetation under application is not considered to be growing in, or in association with, an environment associated with a watercourse or wetland. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:

- DEC (2010)

GIS Databases:

-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain

-Hydrography, linear

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

Comments Proposal may be at variance to this Principle

The vegetation under application is identified as containing soil type JK9. These soils are associated with undulating dune landscape with some steep dune slopes and underlain by aeolianite at depth; the chief soils are brown sands and associated siliceous sands (Northcote et al 1960-68). The identified soils generally have a low risk of water logging and a nil to low risk of salinity.

The main land degradation risk associated with the removal of vegetation on the identified soil type is a very high risk of wind erosion (DAFWA 2010). The high wind erosion potential is due to the sandy nature of the soils and without appropriate vegetation cover, windbreaks or adequate dust suppression on exposed surfaces the proposal may result in appreciable land degradation.

The areas under application are the last substantial sections of native vegetation on the eastern side of Lot 3910 (an area that covers approximately 750 ha). The vegetation under application is likely to have provided a windbreak therefore the proposed clearing may cause the eastern side of the property to be susceptible to wind erosion, likely to result in appreciable land degradation. Therefore, the proposed clearing may be at variance to this Principle.

The consultant (Ecoscape 2011) engaged by the applicant provided supporting information to DEC on 16 February 2011, outlining that the pivot irrigation that will be installed will result in the areas proposed to be cleared being sown with crops or under pasture, acting as a wind barrier and subsequently a management option for possible wind erosion.

Given the above, it is considered that the proposal in its current form may be variance to this Principle.

Methodology

References:

- DAFWA (2010)

- Ecoscape (2011)

- Northcote et al (1960-68)

GIS Databases:

- NLWRA, Current Extent of Native Vegetation

- Salinity Risk LM 25m - DOLA 00

- 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 nearest conservation areas are Nilgen Nature Reserve, located adjacent (south-west) of Lot 3910 and Bashford Nature Reserve located adjacent (north) of Lot 3910.

The consultant (Ecoscape 2010) engaged by the applicant provided preliminary information to DEC on 3 DEC 2010, advising that although the areas under application are within Lot 3910 they are located approximately 1.4 km south-east of Bashford Nature Reserve and approximately 2.8 km north-east of Nilgen Nature Reserve.

Although the property is adjacent to the Nature Reserves, given the distance of the applied areas to the conservation areas, it is considered the proposed clearing is not likely to impact on the environmental values of nearby conservation areas through the introduction of weeds and dieback. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology Reference:
- Ecoscape (2010)
GIS Database:
- 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 is not likely to be at variance to this Principle**

There are no mapped wetlands or watercourses within a 5 km radius of the areas under application. The closest hydrological feature is Caro Brook, which is located approximately 6.4 km north-east of the areas under application. In addition, the Indian Ocean is located approximately 11 km to the west.

Given the high infiltration rates of the sandy soil identified within the areas under application, and the distance to the nearest watercourse or wetland, it is not considered likely that the proposed clearing would cause deterioration in the quality of surface or underground water.

Methodology GIS Databases:
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Hydrography, linear
- 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 areas under application are located within an undulating landscape. The soils identified on site are described as siliceous sands which have a low risk of water logging due to their poor water holding capacity (DAFWA 2010).

Given that there is a low risk of water logging associated with the identified soil type on-site and the high permeability of these sandy soils, it is not considered likely that the proposal would cause or increase flooding.

Methodology Reference:
- DAFWA (2010)
GIS Database:
- Soils, Statewide

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

Comments

In response to DEC's letter of 11 November 2010, which raised environmental issues pertaining to the proposed clearing, the applied area of 14.9 ha was amended to 11.14 ha.

As a result of a meeting with DEC on 20 December 2011, the applicant provided an offset package involving the covenanting of 44 hectares of native vegetation adjacent to Bashford Nature Reserve (DEC Ref: A471639).

Lot 3910 is freehold land, zoned rural under the local Town Planning Scheme. The Shire of Gingin (2010) advised it had no comments to provide. Planning approval for this proposal has been provided.

A submission (2010) was received for this proposal, commenting that the removal of these last pieces of remnant vegetation will make the site more prone to wind erosion. In addition, it is important for an intact biodiverse system for control of pest insects. These issues have been addressed under Principle (g).

There are no aboriginal sites of significance within the applied area.

The areas under application are within the Proclaimed Groundwater Area of Gingin. Therefore any abstraction of groundwater would require a licence. A groundwater licence for this proposal has been provided.

The vegetation under application is located in the area defined in EPA Position Statement No. 2 (EPA 2000). EPA Position Statement No. 2 states that significant clearing of native vegetation has already occurred on agricultural land, and this has led to a reduction in biodiversity and increase in land salinisation; accordingly, from an environmental perspective any further reduction in native vegetation through clearing for agriculture cannot be supported. However, in exceptional circumstances the EPA would consider supporting clearing in the agricultural area if:

- (a) There are alternative mechanisms for protecting biodiversity.
- (b) The area to be cleared is relatively small, depending on the scale at which biodiversity changes over the area, including extent of vegetation in the surrounding area and recognising that values will vary for different ecosystems.
- (c) The proponent demonstrates that the elements set out in Section 4.3 of this Position Statement are being met. This will require extensive local and regional biodiversity work.
- (d) Land degradation, including aquatic environments and threatening processes, such as dieback, salinisation or disruption of catchment processes, on-site and off-site would not be exacerbated.

The application meets point (a) and point (d) can be managed through appropriate management techniques.

Carnaby's black cockatoo is classified as Endangered under Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999. The clearing as proposed may result in a loss of habitat for this species; therefore, this proposal is likely to require referral to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities under the EPBC Act 1999.

Methodology

References:

- Ecoscape (2011)
 - Shire of Gingin (2010)
 - Submission (2010)
 - DEC Ref: A471639
- ##### GIS Databases:
- Aboriginal Sites of Significance
 - EPA Position Paper No 2 Agriculture Region
 - RIWI Act, Groundwater Areas
 - Town Planning Scheme Zones

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2010) Site Inspection Report for Clearing Permit Application CPS 3967/1, Lot 3910 Nilgen Road, Nilgen. Site inspection undertaken 11/10/2010. Department of Environment and Conservation, Western Australia. DEC Ref A340493
- Department of Agriculture and Food WA (2010) Land Degradation Advice and Assessment Report for clearing permit application CPS 3967/1 received 10/11/2010; Department of Agriculture and Food Western Australia. DEC Ref A347071
- Ecoscape (2010) Information for Clearing Permit CPS 3967/1 Moreshill Pty Ltd, Preliminary Response to DEC Letter Dated 11 November 2010. Ecoscape (Australia) Pty Ltd. DEC Ref A354029
- Ecoscape (2011) Modification to Clearing Permit CPS 3967/1 Moreshill Pty Ltd, Response to DEC Letter Dated 11 November 2010. Ecoscape (Australia) Pty Ltd. DEC Ref A369315
- Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western 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.
- Shepherd, D.P. (2009) Adapted from: 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.
- Shire of Gingin (2010) Direct Interest Submission for Clearing Permit Application CPS 3967/1, Shire of Gingin. DEC Ref A341858
- Submission (2010) Direct Interest Submission for Clearing Permit Application CPS 3967/1, Chittering Landcare Group. DEC Ref A336974

5. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)

TEC
WRC

Threatened Ecological Community
Water and Rivers Commission (now DEC)