



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 4445/1

File Number: DEC14876

Duration of Permit: From 24 October 2011 to 24 October 2013

PERMIT HOLDER

Stargaze Assets Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 5 on Plan 7892 (BULLSBROOK, 6084)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 5.5 hectares of native vegetation within the area cross hatched yellow on attached Plan 4445/1.

CONDITIONS

1. Dieback and weed control

When undertaking any clearing or *revegetation*, 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 area to be cleared;
- (b) shall only move soils in *dry conditions*;
- (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (d) 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;

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*.

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

Kelly Faulkner

MANAGER

NATIVE VEGETATION CONSERVATION BRANCH

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

29 September 2011

Plan 4445/1



LEGEND

- Road Centrelines
 - Cadastre for labelling
 - Clearing Instruments
 - Areas Approved to Clear
- Swan Coastal Plain North
20cm Orthomosaic - Landgate



0 125 m

Scale 1:4385
(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 29/9/11
K Faulkner

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

Our environment, our future
WA Crown Copyright 2002



1. Application details

1.1. Permit application details

Permit application No.: 4445/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Stargaze Assets Pty Ltd

1.3. Property details

Property: LOT 5 ON PLAN 7892 (House No. 91 WALYUNGA BULLSBROOK 6084)

Local Government Area: City of Swan

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 29 September 2011

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
Mattiske Guilford vegetation complex (Mattiske Vegetation, 1998), being an open forest of predominately Eucalyptus marginata subsp. marginata with Corymbia calophylla and E. wandoo over Banksia sessilis and Xanthorrhoea preissii (Mattiske and Havel, 1998).	The amended application is to clear up to 5.5ha of native vegetation within a 11ha footprint for site rehabilitation of a sand extraction site on a 162ha property of which ~82ha is already cleared. The area applied to be cleared is located within and surrounding an existing sand extraction pit on the property.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The description and condition of the vegetation was determined from a DEC site visit (DEC, 2011).
Hedde Guildford Complex: A mixture of open forest to tall open forest of C. calophylla - E. wandoo - E. marginata and woodland of E. wandoo (with rare occurrences of E. lane-pooliei). Minor components include E. rudis - M. raphiophylla (Hedde et al. 1980).	The area under application is very open, consisting predominantly of Banksia sessilis (parrot bush) and Acacia saligna (Golden-Wreath Wattle) middle storey with a scattered Eucalyptus sp. overstorey. There is no distinct ground cover layer however there is an understorey present of species such as Bossiaea spinescens, Daviesia angulata and Jacksonia sternbergiana (native peas), Drosera erythrorhiza (Red Ink Sundew) with scattered Xanthorrhoea preissii (Grass trees) and Macrozamia riedlei (Zamia). Grassy weeds dominate the understorey in some areas.	to Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	
Half of the application area consists of Beard Vegetation Association 3: Medium forest jarrah-marri and half of the application area consists of Beard Vegetation Association 4: medium woodland: marri and wandoo (Shepherd, 2009).			

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 proposed to be cleared consists of an amended area of 5.5ha within a 11ha footprint consisting predominantly of *Banksia sessilis* (parrot-bush), with scattered *Eucalyptus* sp. and *Acacia saligna* (Golden-Wreath Wattle). There is no distinct ground cover layer however there is an understorey present of species such as *Bossiaea spinescens*, *Daviesia angulata*, *Jacksonia sternbergiana* (native peas) and scattered *Xanthorrhoea preissii* and *Macrozamia riedlei*.

The entire application area consists of Heddle's Guildford Complex which has only 5.3% pre-European extent remaining (EPA, 2006). The 5.5 hectares of vegetation under application is considered to be in a degraded to completely degraded (Keighery, 1994) condition and is not considered to be representative of Heddle's Guildford Complex (DEC, 2011).

The applicant agreed to amend the application via correspondence to DEC on 22 September 2011 by reducing the previous 6.5ha area under application to 5.5ha. This involved the removal of 1ha of Heddle's Guildford Complex in good (Keighery, 1994) condition as recommended by DEC to mitigate identified biodiversity issues associated with the clearing of this highly cleared Vegetation Complex.

Given the amended application the proposed clearing is unlikely to be at variance to this Principle.

Methodology

- DEC (2011)
- EPA (2006)
- Keighery (2011)

GIS Databases:

- Heddle Vegetation Complexes

(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

The vegetation under application is located within a 162ha property. The property is bordered to the east by Walyunga National Park, and includes an area of Bush Forever Site 412. The areas to the north, south and east are largely cleared rural properties.

The area under application is very open, consisting predominantly of *Banksia sessilis* (parrot bush) and *Acacia saligna* (Golden-Wreath Wattle) middle storey with a scattered *Eucalyptus* sp. overstorey (DEC, 2011). There is no distinct ground cover layer however there is an understorey present of species such as *Bossiaea spinescens*, *Daviesia angulata* and *Jacksonia sternbergiana* (native peas), *Drosera erythrorhiza* (Red Ink Sundew) with scattered *Xanthorrhoea preissii* (grass trees) and *Macrozamia riedlei* (*Zamia*) (DEC, 2011). Grassy weeds dominate the understorey in some areas (DEC, 2011).

Nine fauna species of conservation significance protected under the Wildlife Conservation Act 1950 are known to occur within the local area (10km), eight listed as ?rare or likely to become extinct? (T) and one listed as ?specially protected? (S). these are:

- Botaurus poiciloptilus* (Australasian Bittern) T
- Calyptorhynchus baudinii* (Baudin's black cockatoo) T
- Calyptorhynchus latirostris* (Carnaby's black cockatoo) T
- Dasyurus geoffroyi* (Western Quoll) T
- Leioproctus douglasiellus* (native bee) T
- Macrotis lagotis* (Bilby) T
- Petrogale lateralis* subsp. *lateralis* (Black-flanked Rock-wallaby) T
- Pseudemydura umbrina* (Western Swamp Turtle) T
- Morelia spilota* subsp. *imbricata* (Carpet Python) S

The seeds of *Banksia sessilis* comprises food resources for *Calyptorhynchus baudinii* (Baudin's black cockatoo) and *Calyptorhynchus latirostris* (Carnaby's black cockatoo) while the flowers provide food for the *Leioproctus douglasiellus* (native bee). No evidence of black cockatoos was sighted during the DEC site visit however the applicant advised they have been previously sighted on the property. Given the close proximity of the applied area to the Walyunga National Park and Bush Forever site 412, it is considered that these conservation areas offer similar or better habitat than the vegetation under application.

Therefore, given the lack of significant habitat and close proximity to conservation areas, the vegetation under application is not considered to comprise significant fauna habitat. Therefore, the proposed clearing is considered not likely to be at variance to this Principle.

Methodology - DEC (2011)
- DEC (2007-)

GIS Databases:

- Bush forever
- DEC Tenure
- SAC Bio Datasets (Accessed 8/8/11)
- Swan Coastal Plain North 20cm Orthomosaic- Landgate 2009

(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 are six rare flora species, all listed as Threatened, known to occur within the local area (5km radius) of the vegetation under application being;

- Caladenia huegelii;
- Eleocharis keigheryi;
- Grevillea christineae;
- Grevillea curviloba subsp. curviloba;
- Grevillea curviloba subsp. incurva; and
- Trithuria occidentalis

The closest known population of rare flora is Trithuria occidentalis 1.8km south of the area under application.

Eleocharis keigheryi, Grevillea curviloba subsp. curviloba, Caladenia huegelii, Grevillea curviloba subs. incurva and Trithuria occidentalis are known to occur within the same mapped vegetation complexes as the area under application. However none of these species are known to occur within the same soil type and/or habitat (e.g. winter wet areas) as the area under application (Western Australian Herbarium 1998-).

Therefore, the proposal is considered not likely to be at variance to this Principle.

Methodology - Western Australian Herbarium (1998-)

GIS Databases:

- Heddle Vegetation Complexes
- Mattiske Vegetation
- Pre-European Vegetation
- SAC Bio Datasets (Accessed 8/8/11)

(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 three known occurrences of Threatened Ecological Communities (TEC) with a 5km radius of the vegetation under application. The closest being Floristic Community Type 15, known as Forests and woodlands of deep seasonal wetlands (Gibson et al. 1994) (Vulnerable), located approximately 2km west of the vegetation under application.

Two TEC's are associated with Bush Forever Site 301, south of the vegetation under application. These TEC are the Critically Endangered Floristic Community Type 3c known as Corymbia calophylla-Xanthorrhoea preissii woodlands and shrublands and Vulnerable Floristic Community Type 8 known as Herb rich shrublands in clay pans (Gibson et al. 1994).

Given the description of the vegetation to be cleared and the distance to nearby occurrences of TEC, the vegetation under application is not considered to comprise the whole, or part of, or be necessary for the maintenance of a TEC.

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

Methodology Gibson et al. (1994)

GIS Databases:

- SAC Bio Datasets (Accessed 8/8/11)

(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 a component of Beard Vegetation Associations 3 and 4, Heddle's

Guildford Complex and Matisse's Guildford Complex of which 18.4%, 20.1%, 5.3% and 6.9% pre-European vegetation extent remains respectively (Shepherd, 2009, Heddle et al 1980, Matisse and Havel, 1998).

The State Government is committed to the National Objectives and Standards that includes a target that prevents clearance of ecological communities with an extent below 30% of that present Pre-European settlement (Commonwealth of Australia 2001). The EPA (2006), however, recognises the Perth Metropolitan Region as a 'constrained area', providing for the reduction of vegetation complexes to a minimum of 10% of the Pre-European extent.

Of the four mapped vegetation communities associated with the area under application, both Heddle and Matisse's Guildford complex are below the State Government's 30% biodiversity conservation target, and whilst the proposal is acknowledged to be located within the 'constrained area', Heddle's Guildford Complex has 5.3% pre-European extent remaining (EPA 2006).

The vegetation has been impacted by historic logging activity and grazing and the 5.5ha under application is considered to be in an degraded to completely degraded (Keighery, 1994) condition (DEC, 2011). Given the condition of the vegetation under application the 5.5ha is not considered to be significant as a remnant of the Guildford Complex of native vegetation and is unlikely to be variance to this Principle.

	Pre-European (ha)	Current Extent Remaining (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,20	587,889	39.2	33.3
Shire*				
City of Swan	104,248	45,326	43.5	27.6
Beard Vegetation Association in Bioregion*				
3	17,364	3,188	18.4	11.1
4	15,897	3,197	20.1	13.2
Heddle Vegetation Complex **				
Guildford Complex	92,462	4,863	5.3%	0.3%
Matisse Vegetation Complex **				
Guildford Complex	6,855.10	472.04	6.89%	1.75%

* (Shepherd, 2009)
** Shepherd, 2007)

Methodology

- Commonwealth of Australia (2001)
- EPA (2000)
- EPA (2006)
- Shepherd (2009)
- Shepherd (2009)

GIS Databases:

- Heddle Vegetation Complexes
- Interim Biogeographic Regionalisation of Australia
- Matisse Vegetation
- Pre-European Vegetation

(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 wetlands or watercourses mapped within the area under application. The closest hydrological feature is a Multiple Use Wetland mapped 280m to the north and west of the vegetation under application.

Given the geology, topography and flora species observed on site, and the distance to hydrological features, the vegetation under application is not considered to be growing in, or in association with, and environment associated with a watercourse or wetland.

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

Methodology

GIS Databases:

- Geomorphic Wetlands (Mgt Catagories) Swan Coastal Plain
- Hydrography, linear

- Topographic Contours, Statewide

(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 located on a gently sloping terrace on hard acidic yellow soils containing ironstone gravels (Northcote et al, 1960-68) and deep, rapidly draining siliceous yellow brown sands and pale or bleached sands with yellow-brown subsoil (Commissioner of Soil And Land Conservation, 2011).

The area under application comprises deep rapidly drained siliceous yellow brown sands, and pale or bleached sands with yellow-brown subsoil (Commissioner Of Soil And Land Conservation, 2011). The removal of vegetation as proposed is unlikely to contribute to wind erosion if the clearing and sand extraction is completed in a progressive fashion (in cells) over a number of years (Commissioner of Soil And Land Conservation, 2011). The risk of salinity, water erosion and waterlogging causing land degradation is low (Commissioner of Soil And Land Conservation, 2011).

Given the above, it is considered that the clearing as proposed may be at variance to this Principle for wind erosion.

Methodology - Commissioner of Soil And Land Conservation (2011)
- Northcote et al (1960-68)

GIS Databases:

- Swan Coastal Plain North 20cm Orthomosaic- Landgate 2009
- 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 is not likely to be at variance to this Principle

The 5.5ha of native vegetation under application is located within a 162ha property. The areas to the North, South and East are largely cleared rural properties.

There are three conservation areas located within close proximity to the vegetation under application, being Bush Forever sites 296 (~57ha) and 412 (~48ha), and Walyunga National Park (>1,800ha) located 146m, 550m and 1.1km from the applied area respectively.

The vegetation under application is separated from Bush Forever Site 296 (Ellen Brook Upper Swan) by a major regional road, the Great Northern Highway to the west. Therefore the proposed clearing is not considered likely to impact on the environmental values of this conservation area.

Bush Forever Site 412 (Walyunga Rd Bushland, Bullsbrook) and Walyunga National Park are located east of the applied area.

Whilst the vegetation under application is located within relatively close proximity to these conservation areas, the applied area is separated by pasture.

Given the surrounding buffers (e.g. road and pasture) and the distance to nearby conservation areas the proposed clearing is not considered likely to impact on the environmental values of nearby conservation areas.

Methodology GIS Databases:
- DEC Tenure
- Road Centrelines
- Swan Coastal Plain North 20cm Orthomosaic - Landgate 2009

(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 vegetation under application is located on a gently sloping terrace on hard acidic yellow soils containing ironstone gravels (Northcote et al, 1960-68) and deep, rapidly draining siliceous yellow brown sands and pale or bleached sands with yellow-brown subsoil (Commissioner Of Soil And Land Conservation, 2011).

There are no wetlands or watercourses mapped within the area under application. The closest surface hydrological feature is a Multiple Use Wetland mapped approximately 280m to the north and west of the vegetation under application.

The Commissioner of Soil and Land Conservation (2011) advises the proposed clearing is not likely to contribute to nutrient enrichment of surface and /or groundwater bodies.

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

Methodology - Commissioner Of Soil And Land Conservation (2011)
- Northcote et al (1960-68)

GIS Databases:

- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Hydrography, linear
- Topographic Contours, 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 vegetation under application is located on a gently sloping terrace on hard acidic yellow soils containing ironstone gravels (Northcote et al, 1960-68) and deep, rapidly draining siliceous yellow brown sands and pale/bleached sands (DAFWA, 2006).

Given the high permeability and deep nature of soils on site, the proposed clearing is not considered likely to cause, or exacerbate, the incidence or intensity of flooding.

Methodology - Commissioner Of Soil And Land Conservation (2011)
- Northcote et al (1960-68)

GIS Databases:

- Topographic Contours, Statewide

Planning instruments, Native Title, Previous EPA decisions or other matters.

Comments

The City of Swan (2011) has advised against any further clearing of the Guildford Complex. The City currently is assessing a Development Application on the property for reshaping and the importation of inert fill. They have forwarded this application to the Western Australian Planning Commission (WAPC) for their determination (City of Swan, 2011). The City is currently processing an application for a licence to extract sand over the area under application for the current owner as the previous owner cancelled their extraction licence for the same area.

The applicant has advised that after sand excavation activities are completed the area will be filled and utilised for grazing and pasture (DEC, 2011).

The vegetation under application is associated with an Aboriginal Site of Significance. It is the responsibility of the applicant to ensure that no Sites are damaged through the clearing process.

The clearing under application falls within the proclaimed Swan Groundwater Area and Swan River System Surface Water Areas under the RIWI Act 1914. The Department of Water considered the application and had no comments (DoW, 2011).

The area under application falls under Town Planning Zone Z- Landscape. The City of Swan advised that Extractive Industry was an A class use that could be considered within Landscape zoned areas. The area under application is zoned as a Rural Resource Zone under the Metropolitan Regional Scheme.

Methodology - City of Swan (2011)
- DoW (2011)

GIS Databases:

- Aboriginal Sites of Significance
- RIWI Act, Groundwater Areas
- RIWI Act, Surfacewater Areas
- Town Planning Scheme
- Metropolitan Regional Scheme.

4. References

City of Swan (2011) Direct Interest Submission for clearing permit application CPS 4445/1 Received 14/7/2011. City of Swan, Western Australia (DEC REF A419817).

Commissioner of Soil and Land Conservation (2011) Land degradation assessment report. Department of Agriculture and Food Western Australia (DEC REF: A421616).

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

- DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed 8/8/2011.
- DEC (2007) Advice from the Native Vegetation Conservation Branch in relation to the assessment of Principle (e) for clearing permit application CPS 1389/1. Received 06/02/2007 (TRIM Ref. DOC15298).
- DEC (2011) Site Inspection Report for Clearing Permit Application CPS 4445/1, Lot 5 Walyunga Rd, Bullsbrook. Site inspection undertaken 27/7/2011. Department of Environment and Conservation, Western Australia (DEC REF A419807).
- DoW (2011) Direct Interest Submission for clearing permit application CPS 4445/1 Received 25/7/2011. Department of Water, Western Australia (DEC REF A415806).
- Gibson N., Keighery B., Keighery G., Burbidge A. and Lyons M. (1994) A Floristic Survey of the Southern Swan Coastal Plain. Western Australian Department of Conservation and Land Management and the Western Australian Conservation Council.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- 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.
- Shepherd, D.P. (2007) 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.
- 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.

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	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)