



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 3886/1

File Number: DEC6916

Duration of Permit: From 28 October 2010 to 28 October 2015

PERMIT HOLDER

Midland Brick Company Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 8 on Plan 10872 (TOODYAY RED HILL 6056)

Lot 10 on Plan 10872 (TOODYAY RED HILL 6056)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 4.63 hectares of native vegetation, within the area hatched yellow on attached Plan 3886/1.

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. 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 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.

3. Period in which clearing is authorised

The Permit Holder shall not clear native vegetation unless extracting clay within 3 months of the authorised clearing being undertaken.

4. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the areas shall be inspected by a *fauna specialist* who shall identify *habitat trees* suitable to be utilised as habitat by fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice 2010(2)*.
- (b) Prior to clearing, any *habitat trees* identified by condition 4(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice 2010(2)*.

- (c) Within one week prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna clearing person* to remove and relocate fauna identified under condition 4(b).

5. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) within 3 months following completion of mining activities, *revegetate* and *rehabilitate* the area cross-hatched yellow on attached Plan 3886/1 by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (ii) ripping the pit floor and contour batters within the extraction site; and
 - (iii) laying the vegetative material and topsoil retained under condition 5(a) on the cleared area(s)
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 5(b) of this Permit:
 - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 5(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.

6. 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 species composition, structure and density of the cleared area;
 - (ii) 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;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).
- (b) In relation to fauna management pursuant to condition 4 of this Permit:
 - (i) the location of each habitat tree identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (ii) the species name of fauna reasonably likely to utilise, or that have been observed utilising, the habitat tree(s); and
 - (iii) the location and date where relocated fauna was released, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings.
- (c) In relation to the revegetation and rehabilitation of areas pursuant to condition 5 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares); and
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*.

7. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 6 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.

- (b) Prior to 28 July 2015, the Permit Holder must provide to the CEO a written report of records required under condition 6 of this Permit where these records have not already been provided under condition 7(a) of this Permit.

Definitions

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

condition means the rating given to native vegetation using the *Keighery scale* and refers to the degree of change in the structure, density and species present in the particular vegetation in comparison to undisturbed vegetation of the same type;

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;

ecological community/ies means a naturally occurring biological assemblage that occurs in a particular type of habitat (English and Blythe, 1997; 1999);

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

fauna clearing person means a person who has obtained a licence from the Department, issued pursuant to the *Wildlife Conservation Regulations 1970* authorising them to take fauna;

fauna specialist means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

fill means material used to increase the ground level, or fill a hollow;

habitat tree(s) means trees that have a diameter, at average adult human chest height, of greater than 70cm, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts;

Keighery scale means the vegetation condition scale described in *Bushland Plant Survey: A Guide to Plant Community Survey for the Community (1994)* as developed by B.J. Keighery and published by the Wildflower Society of WA (Inc). Nedlands, Western Australia;

local provenance means native vegetation seeds and propagating material from natural sources within 50 kilometres of the area cleared.

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;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

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*

28 September 2010

Plan 3886/1



LEGEND

- | | |
|-----------------------------|-----------------------------|
| Clearing Instruments | Towns |
| Areas Approved to Clear | Swan Coastal Plain North |
| Road Centrelines | 20cm Orthomosaic - Landgate |
| Cadastre | 2009 |



Scale 1:6093
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

Date 28/9/10

Kelly 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

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1. Application details

1.1. Permit application details

Permit application No.: 3886/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Midland Brick Company Pty Ltd

1.3. Property details

Property: LOT 8 ON PLAN 10872 (Lot No. 8 TOODYAY RED HILL 6056)
LOT 10 ON PLAN 10872 (Lot No. 10 TOODYAY RED HILL 6056)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
4.63		Mechanical Removal	Clay Extraction

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
Beard Vegetation Associations: 3 - Medium forest; jarrah-marri Mattiske Vegetation Complex: Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla on lateritic uplands in subhumid and semiarid zones. Hedde Vegetation Complex: Dwellingup - No Description Available	The proposal is to clear 4.63 hectares of native vegetation within the City of Swan for clay extraction. The vegetation within the area under application is open in the northern and southern sections with evidence of historical disturbance. There are several tracks within the area and some limited weed invasion. The majority of the area consists of an over storey of Corymbia calophylla (Marri), Banksia sessilis and Banksia nivea and an understorey predominantly consisting of Xanthorrhoea preissii, Xanthorrhoea gracilis, Hibbertia hypericoides, Grevillea pilulifera, Hakea undulata, Hypocalymma robustum, Patersonia occidentalis, Acacia pulchella and Drosera species. The vegetation in the centre of the area under application is dense and the majority of the area under application has a dense leaf litter (DEC 2010).	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The vegetation condition has been determined using available aerial imagery and information obtained during a site inspection undertaken by DEC.

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 proposal is to clear 4.63 hectares of native vegetation in good to excellent (Keighery 1994) condition within the City of Swan for clay extraction. The vegetation within the area under application is open in the northern and southern sections with some evidence of historical disturbance. There are several tracks within the area and

some limited weed invasion. The vegetation in the centre of the area under application is dense and the majority of the area under application has a dense leaf litter (DEC 2010).

The John Forest National Park is located within 100 metres of the area under application and the area proposed to be cleared is an extension of an active 15 hectare clay extraction site and bordered also by a landfill facility.

There are seven records of threatened fauna recorded in the local area (10km Radius). The vegetation under application is unlikely to provide an ecological link or corridor for native fauna due to the adjacent extractive industry, landfill site and the high level of disturbance in the area. There are four potential habitat trees containing hollows within the area under application (DEC 2010) however a fauna relocation condition will reduce the impact of the clearing upon individual species that may be using these hollows.

There are 2 records of declared rare flora (DRF) recorded in the local area (10km radius) however these species are associated with granite hills and outcrops and a site inspection conducted by DEC staff did not identify suitable habitat for these species. A flora survey conducted on 11 August 2005 did not identify any DRF species within the area under application (Land Form Research 2006).

Considering that the vegetation types associated with the area to be cleared are well represented regionally and locally and considering the high quality vegetation represented within the surrounding area it is unlikely that the area under application comprises a high level of biological diversity in a local context and the clearing is not likely to be at variance to this clearing principle.

Methodology DEC (2010)
Land Form Research (2006)
Shepherd et al (2009)
Keighery (1994)
GIS database:
- Mattiske Vegetation (01/03/1998)
- Pre European Vegetation - DA 01/01
- Swan Coastal Plain North 20cm Orthomosaic - Landgate 2009
- SAC Biodatasets - accessed 25 August 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 may be at variance to this Principle

The following threatened fauna species are recorded within the local area (10 km radius):

- Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*) - VU
- Baudin's Black-Cockatoo (*Calyptorhynchus baudinii*) - EN
- Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*) - EN
- Chuditch (*Dasyurus geoffroii*) - VU
- Water-rat (*Rakali Hydromys chrysogaster*) - P4
- Quenda (*Isodon obesulus fusciventer*) - P5
- Western Brush Wallaby (*Macropus irma*) - P4

The vegetation within the area under application is open in the northern and southern sections with some evidence of historical disturbance. There are several tracks within the area and some limited weed invasion. The vegetation in the centre of the area under application is dense and the majority of the area under application has a dense leaf litter.

Lot 8 and Lot 10 are adjacent to John Forest National Park and the proposed clearing is located 100m north of the National Park. The vegetation under application is unlikely to provide an ecological link or corridor for native fauna due to the adjacent extractive industry and the high level of disturbance in the area. There are four potential habitat trees containing hollows within the area under application (DEC 2010) however a fauna relocation condition will reduce the impact of the clearing upon individual species that may be utilising these hollows.

Given the presence of four potential habitat trees within the area under application the clearing may be at variance to this clearing principle.

Methodology DEC (2010)
GIS database:
- Swan Coastal Plain North 20cm Orthomosaic - Landgate 2009
- SAC Biodatasets - accessed 25 August 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 are 2 records of declared rare flora (DRF) recorded in the local area (10km Radius) which occur in the same mapped vegetation and soil types as those found within the area under application:

- Acacia aphylla
- Grevillea flexuosa

These species are associated with granite hills and outcrops and suitable habitat for these species is unlikely to occur within the application area (DEC 2010). A flora survey conducted on 11 August 2005 did not identify any DRF species within the area under application (Land Form Research 2006) and given this, the proposal is not likely to be at variance to this clearing principle.

Methodology

- DEC (2010)
- Land Form Research (2006)
- Shepherd et al (2009)
- Keighery (1994)
- GIS database:
 - Mattiske Vegetation (01/03/1998)
 - Pre European Vegetation - DA 01/01
 - Swan Coastal Plain North 20cm Orthomosaic - Landgate 2009
 - SAC Biodatasets - accessed 25 August 2010

(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 2 threatened ecological communities (TEC) recorded within the local area (10km radius):

- Eucalyptus calophylla - Xanthorrhoea preissii woodlands and shrublands; and
- Shrublands and woodlands of the eastern side of the Swan Coastal Plain

These communities are mapped within different vegetation and soil types to those within the area under application and are located 5.7km south west of the area to be cleared and it is therefore not likely that the area to be cleared comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Given the above the proposal is not likely to be at variance to this principle

Methodology

- DEC (2010)
- GIS database:
 - Mattiske Vegetation (01/03/1998)
 - Pre European Vegetation - DA 01/01
 - Swan Coastal Plain North 20cm Orthomosaic - Landgate 2009
 - SAC Biodatasets - accessed 25 August 2010
 - Soils, Statewide DA 11/99

(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

	Pre European (ha)	Current extent (ha)	Remaining (%)	% In reserves DEC Managed Land
IBRA Bioregions Jarrah Forrest ^A	4 506 656	2 514 549	55.8	67.2
City of* Swan	104 248	45 326	43.48	27.57
Mattiske Vegetation Complex** D2	86 087	73 632	85.53	69.66
Beard Vegetation Association* 3	2 661 405	1 862 966	70.0	79.81
Beard Vegetation Association with Bioregion*				

* (Shepherd, D.P. 2009)

** (Mattiske Consulting 1998)

^ Area within Intensive Land Use Zone

There is 1 Beard vegetation associations and 1 Mattiske vegetation complex represented within the proposed area and these have more than the 30% threshold level recommended in the National Objectives Targets for Biodiversity Conservation below which, species loss appears to accelerate exponentially at an ecosystem level (EPA 2000).

Given that the vegetation is well represented locally and regionally the vegetation within the proposed area is not likely to be significant as a remnant in a highly cleared landscape and the clearing is not likely to be at variance to this clearing principle.

Methodology Mattiske Consulting (1998)
Shepherd et al. (2009)
EPA (2000)
GIS Databases:
- Swan Coastal Plain North 20cm Orthomosaic - Landgate 2009
- SAC Biodatasets - accessed 25 August 2010
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Mattiske Vegetation - CALM 1/03/1998
- Pre European Vegetation - DA 01/01

(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 watercourses or wetlands within the area under application. Susannah Brook is a significant stream occurring approximately 1.4km north of the area under application and a minor perennial watercourse which is a tributary to Strelley Brook is located approximately 80 metres north of the area under application. A minor perennial watercourse is also mapped 55 metres south of the area under application.

No riparian vegetation was observed within the applied area (DEC 2010).

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

Methodology GIS Databases:
- Swan Coastal Plain North 20cm Orthomosaic - Landgate 2009
- SAC Biodatasets - accessed 25 August 2010
- ANCA wetlands - Environment Australia 26/3/99
- CALM Managed Lands and Waters - CALM 01/06/05
- EPP Lakes Policy Area - DEP 14/05/97
- EPP, Wetlands 2004 (DRAFT) - EPA 21/7/04
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06
- Ramsar wetlands - DEC 03

(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 area under application has a low risk of salinity. The soils are shallow to moderately deep gravelly brownish sands, pale brown sands and earthy sands overlying lateritic duricrust (King, P.D. and Wells, M.R. 1990). These soil types have a low risk of water and wind erosion.

The main land degradation risk associated with the removal of the vegetation within the area under application is considered to be water erosion. The area under application is located 80 metres upslope of a minor perennial watercourse which is a tributary to Strelley Brook. The removal of 4.63 hectares of native vegetation may increase surface water runoff resulting in a short term risk of erosion gullies however a staged clearing condition will minimise the risk of any short term land degradation. Revegetation will reduce this risk in the long term.

Given that the area proposed to be cleared will be susceptible to a short term risk of water erosion the proposal may be at variance to this clearing principle.

Methodology King, P.D. and Wells, M.R. (1990) - Accessed through DAFWA NRM Maps (SLIP)
GIS database:
- Average Annual Rainfall Isohyets - WRC 29/09/98

- Annual Evaporation Contours (Isopleths) - WRC 29/09/98
- Hydrogeology, statewide - DOW 13/07/06
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06
- Salinity Risk LM 25m - DOLA 00
- Topographic contours statewide - DOLA and ARMY 12/09/02
- Hydrogeology, Statewide 05 Feb 2002

(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 following conservation areas are located within the local area (10km radius);

- John Forest National Park - 100m south
- Un-named Nature Reserve - 2.3km northwest
- Parkerville Nature Reserve - 3.6km southeast
- Talbot Road Nature Reserve - 5.1km southwest
- Greenmount National Park - 7.8km southwest
- Wooroloo Regional Park - 4.5km southeast
- Un-named Reserve (parklands and recreation) - 7.8km southwest

There are also numerous Land for Wildlife, Bush Forever and Register of the National Estate sites within the local area however due to the high native vegetation representation in the local area it is unlikely that the proposed clearing will negatively impact upon the outlying conservation areas.

The John Forest National Park is located within 100 metres of the area under application however the area proposed to be cleared is an extension of an active 15 hectare clay extraction site and bordered also by a landfill facility. The clearing of an additional 4.63 hectares of native vegetation in this location is unlikely to negatively impact further upon the environmental values of the John Forest National Park and the retention of a 100 metre vegetated buffer will further minimise any potential impacts upon the National Park. Revegetation will reduce the impact in the long term.

The area under application lies within a region that is subject to moderate levels of rainfall and there may be increased potential for the spread of dieback (*Phytophthora cinnamomi*) or weed species through the movement of topsoil. Dieback and weed management would minimise this potential risk.

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

Methodology GIS Databases:

- Register of National Estate - Environment Australia, Australian and world heritage division 12 Mar 02
- System 1 to 5 and 7 to 12 areas DEC 11/7/06
- CALM Managed Lands and Waters - CALM 01/06/05
- 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 may be at variance to this Principle

The area under application has a low risk of salinity and does not include any wetlands or watercourses. The area under application is located 80 metre upslope of a minor perennial watercourse which is a tributary to Strelley Brook. The major water quality risk associated with the removal of 4.63 hectares of native vegetation is an increase in surface water runoff resulting in an increased risk of water erosion and sedimentation in the short term.

Staged clearing would minimise the risk of any short term deterioration in surface water quality and the retention of a 70 metre vegetated buffer to this watercourse will further reduce the risk of any negative impact upon the quality of surface water. Revegetation will reduce this risk in the long term.

Given that the area proposed to be cleared may increase the short term risk of water erosion and sedimentation leading to a reduction in surface water quality the proposal may be at variance to this clearing principle.

Methodology GIS database:

- Evapotranspiration Isopleths - WRC 29/09/98
- Groundwater Salinity Statewide DoW 13/07/06
- Hydrographic catchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05

- Salinity Risk LM 25m - DOLA 00
- Topographic Contours, Statewide - DOLA 12/09/02

(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 is located 80 metres upslope of a minor perennial watercourse which is a tributary to Strelley Brook. The proposal is to clear 4.63 hectares of native vegetation however the area proposed to be cleared is an extension of an active 15 hectare clay extraction site and bordered also by a landfill facility and the clearing as proposed is unlikely to cause, or exacerbate the incidence or intensity of flooding in this area.

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

Methodology References:

GIS Databases:

- Aboriginal Sites of Significance - DIA 02/10
- Cadastre - Landgate 12/09
- Country Area Water Supply Act (Part IIA) Clearing Control Catchments - DoW 29/06/06
- Environmental Impact Assessments - EPA 08/03/05
- Native Title Claims - LA 2/5/07
- Public Drinking Water Source Areas (PDWSAs) - 07/02/06
- RIWI Act, Groundwater Areas - DoW 13/07/06
- RIWI Act, Irrigation Districts - DoW 13/07/06
- Town Planning Scheme Zones - MFP 31/08/98

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

Comments

The area under application is zoned as resource under the local Town Planning Scheme. There are two Aboriginal sites of significance which form a part of the area applied to be cleared.

The clay extraction at this site is a temporary land use and revegetation of the site is required however it is likely that the ultimate end use of the site will be as an extension to the East Metropolitan Regional Council Landfill located adjacent to the area under application.

Methodology References:

GIS Databases:

- Aboriginal Sites of Significance - DIA 02/10
- Cadastre - Landgate 12/09
- Country Area Water Supply Act (Part IIA) Clearing Control Catchments - DoW 29/06/06
- Environmental Impact Assessments - EPA 08/03/05
- Native Title Claims - LA 2/5/07
- Public Drinking Water Source Areas (PDWSAs) - 07/02/06
- RIWI Act, Groundwater Areas - DoW 13/07/06
- RIWI Act, Irrigation Districts - DoW 13/07/06
- Town Planning Scheme Zones - MFP 31/08/98

4. References

DEC (2010) Site Inspection Advice. Department of Environment and Conservation. DEC Ref: A332562

EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority, 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.

King, P.D. and Wells, M.R. (1990). Darling Range rural land capability study. Land Resources Series No. 3. Western Australian Department of Agriculture. - Accessed through DAFWA NRM Maps (SLIP)

Landform Research (2006) Vegetation Assessment, Limestone Resource Area, Lots 8-10, Toodyay Road, Red Hill

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. (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)