Department of Environment and Conservation

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

**Permit application No.:** 2541/1

**Permit type:** Purpose Permit

### 1.2. Proponent details

**Proponent's name:** MR Garry Price Midland Brick Company Pty Ltd

### 1.3. Property details

**Property:** LOT 3 ON DIAGRAM 38894 (House No. 1115 MORANGUP MORANGUP 6083)

**Local Government Area:** Shire Of Toodyay

**Colloquial name:**

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|---|---|---|---|
| 1 | | Mechanical Removal | Extractive Industry |

## 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 association:<br>1006 - Mosaic; medium woodland; jarrah, wandoo and powderbark.<br>(SAC Bio Datasets 06/08/2008; Shepherd, 2006) | The area under application (1ha) is located within Lot 3, which is an 180.5ha property (zoned rural). The proposed clearing is for the expansion of an existing clay extraction quarry.<br><br>A majority of the area under application (~0.9ha) was considered to be in very good condition. The vegetation under application is described as Corymbia calophylla woodland over open heath. Soils observed on site were heavy brown sands with laterite. Within the area under application there is colonising Banksia sessilis, which may be an indication of previous disturbance from dieback.<br><br>Native flora species within the area under application included: Corymbia calophylla, Eucalyptus wandoo, Banksia sessilis, Adenanthos sp, Acacia pulchella, Hakea lissocarpha, Xanthorrhoea preisii, Daviesia sp, Lepidosperma sp, Drosera sp, Leschenaultia sp, Stylidium sp, Hibbertia sp, Banksia nivea and Pterostylis sp (snail orchid) with no weed species observed. | Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994) | The condition of the native vegetation under application was sourced from the site inspection (DEC, 2008). |
| Heddle Vegetation Complex:<br>Yalanbee Complex In Low Rainfall - No description available.<br>(Heddle et al, 1980) | | | |
| Mattiske Vegetation Complexes:<br>Coolakin (Ck) - Woodland of Eucalyptus wandoo with mixtures of Eucalyptus patens, Eucalyptus marginata subsp. thalassica and Corymbia calophylla on the valley slopes in arid and perarid zones.<br><br>Yalanbee (Y6) - Woodland of Eucalyptus wandoo-Eucalyptus accedens, less consistently open forest of Eucalyptus marginata fs24 subsp. thalassica-Corymbia calophylla on lateritic uplands and breakaway landscapes in arid and perarid zones.<br>(Mattiske Consulting 1998) | | | |
| As above | The eastern section of the area under application | Good: Structure significantly altered by | The condition of the native vegetation under application was sourced from the site inspection (DEC, 2008). |

| | |
|---|---|
| (~0.1ha) was considered to be in good condition. There were signs of disturbance, less native flora species and no weed species observed in this section. | multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994) |

## 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 majority of the area under application is in very good condition with signs of disturbance on the southern edge from the existing quarry and on the northern edge from access tracks (DEC, 2008). Native flora species within the area under application included: Corymbia calophylla, Eucalyptus wandoo, Banksia sessilis, Adenanthos sp, Acacia pulchella, Hakea lissocarpha, Xanthorrhoea preisii, Daviesia sp, Lepidosperma sp, Drosera sp, Leschenaultia sp, Stylidium sp, Hibbertia sp, Banksia nivea and Pterostylis sp (snail orchid) with no weed species observed (DEC, 2008).

The vegetation under application comprises dense leaf litter, lower-storey and middle-storey with a minimal over-storey, and is therefore not likely to provide significant feeding habitat for Carnaby's Black-Cockatoo, but may provide habitat for ground dwelling fauna such as the Chuditch and Shield-backed Trapdoor Spider.

Despite the condition of the vegetation, given the relatively small area proposed to be cleared and the level of disturbance from current quarry activities, it is not considered likely that the area under application comprises a high level of biological diversity.

**Methodology**

Reference:
- DEC (2008)

### (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**

There are eight fauna species of conservation significance that have been recorded within the local area (10km radius), being:
-Chuditch (Dasyurus geoffroii; Vulnerable)
-Western Brush Wallaby (Macropus irma; P4)
-Tammar Wallaby (Macropus eugenii derbianus; P5)
-Black-flanked Rock-wallaby (Petrogale lateralis lateralis; Vulnerable)
-Shield-backed Trapdoor Spider (Idiosoma nigrum; Vulnerable)
-Carnaby's Black-Cockatoo (Calyptorhynchus latirostris; Endangered)
-Westralunio carteri (Mollusc; P4)
-Carpet Python (Morelia spilota imbricata; P4)

The nearest recorded fauna species, Shield-backed Trapdoor Spider, was recorded approximately 1.7km north-east of the area under application. The habitat critical to survival of important populations of this species consist of open York gum (Eucalyptus loxophleba), salmon gum (E. salmonophloia), and wheatbelt Wandoo (E. capillosa) woodland, where Jam (Acacia acuminata) forms a sparse understorey in heavy clay soils (DEC, 2008a). Given the habitat requirements, the Shield-backed Trapdoor Spider is not likely to occur within the area under application.

The Black-Cockatoo is known to feed on a large variety of plants including Proteaceous species (e.g. banksia, dryandra and grevillea), marri nuts (Corymbia calophylla), jarrah (Eucalyptus marginata) and tuart (Eucalyptus gomphocephala) (Birds Australia WA, 2006).

DEC Fauna Habitat Notes (2007) indicate that Chuditch occupy large home ranges, is highly mobile and appears able to utilise bush remnants and corridors and that Western Brush Wallaby occur in areas of forest and woodland supporting a dense shrub layer.

A site inspection (DEC, 2008) of the area under application identified the vegetation as predominantly Corymbia calophylla woodland over open heath, in very good condition. This area under application may provide habitat for ground dwelling fauna such as Chuditch and feeding habitat for Carnaby's Black-Cockatoo. No hollows were observed within the area under application during the site inspection (DEC, 2008).

Given the relatively small area proposed to be cleared and the level of disturbance from current quarry activities, the vegetation under application is not considered to provide significant habitat for native fauna; therefore the clearing as proposed is not considered likely to be at variance to this Principle.

**Methodology**

References:

- Birds Australia WA (2007)
- DEC (2008)
- DEC (2008a)
- DEC Fauna Habitat Notes.xls February (2007)

GIS Database:
- SAC Bio Datasets 07/08/2008

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments**

**Proposal may be at variance to this Principle**

There are seven known records of three species of rare flora in the local area (10km radius), being:
- Caladenia huegelii
- Grevillea flexuosa
- Thelymitra stellata

The nearest known record is Caladenia huegelii located approximately 9.1km north north-east of the area under application. Of the three species of rare flora, Thelymitra stellata occurs on similar soils and within the same vegetation associations (Heddle and Mattiske vegetation complexes) as the area under application.

Thelymitra stellata grows in gravelly loam among low scrub in jarrah and wandoo woodland, and in low heath on lateritic hill tops; flowering late September November (Brown et al, 1998).

In addition, nine species of priority flora are known to occur within the local area, being:
-Asterolasia grandiflora (P4)
-Banksia nivea subsp. Morangup (P2)
-Calytrix sylvana (P4)
-Chordifex chaunocoleus (P4)
-Gastrolobium nudum (P2)
-Grevillea candolleana (P2)
-Templetonia drummondii (P4)
-Verticordia citrella (P2)
-Verticordia serrata var. linearis (P3)

Of these nine species, Grevillea candolleana (P2) and Chordifex chaunocoleus (P4) occur within the same vegetation complexes and on the same soil type as the area under application.

A flora and vegetation survey (Cardno BSD, 2008) was undertaken in September 2007 within approximately 1 hectare of vegetation, immediately east of the area under application. One priority flora species, Calytrix sylvana, was identified within the subject site (Cardno BSD, 2008), which comprises the same soils and vegetation associations as the area under application.

Given the occurrence of Thelymitra stellata, Calytrix sylvana, Grevillea candolleana and Chordifex chaunocoleus within the same vegetation complexes and on similar soils as those under application, it is considered that the vegetation to be cleared may include suitable habitat for Thelymitra stellata (Endangered), Calytrix sylvana (P4), Grevillea candolleana (P2) and Chordifex chaunocoleus (P4); and an appropriately timed flora survey will be required to determine if these species are present (DEC, 2008b). Therefore, the clearing as proposed is may be at variance to this Principle.

**Methodology**

Reference:
- Brown et al (1998)
- Cardno BSD (2008)
- DEC (2008b)

GIS Databases:
- Heddle Vegetation Complexes
- Pre-European Vegetation
- SAC Bio Datasets 07/08/2008
- 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 (10km radius). The nearest recorded TEC is located approximately 28km south-west of the area under application. This TEC has been identified as being Floristic Community Type 20b: Banksia attenuata and/or E. marginata woodlands on the eastern side of the Swan Coastal Plain.

Given the area under application is located on the Darling Plateau and not on the Swan Coastal Plain, the

vegetation applied to be cleared is not likely to comprise or is necessary for the maintenance of a threatened ecological community. Therefore the clearing as proposed is not likely to be at variance to this Principle.

**Methodology** GIS Database:
- SAC Bio Datasets 06/08/2008

**(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 identified as Beard vegetation type 1006 and Mattiske vegetation complexes Coolakin and Yalanbee, of which there is 50.4%, 42.9% and 51.4% of native vegetation remaining, respectively (Shepherd, 2006; Mattiske Consulting, 1980). In addition, the area under application is located within the Jarrah Forest Bioregion, of which there is 53.8% of native vegetation remaining.

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents the clearance of ecological communities with an extent below 30% of that present Pre-European settlement (Commonwealth of Australia, 2001). The Beard vegetation type and the Mattiske vegetation complexes in the area under application are above the recommended minimum of 30% representation. Further, vegetation mapping of the local area (5km radius) shows ~62% remnant vegetation to be remaining.

Given that there is 53.8% of Pre-European extent remaining in the Bioregion; 50.4%, 42.9% and 51.4%of Pre-European extent remaining of the vegetation associations; and there is approximately 62% remnant vegetation remaining in the local area, the area under application is not considered to be significant as a remnant of native vegetation. Therefore, the clearing as proposed is considered not likely to be at variance to this Principle.

| | Pre-European (ha) | Current extent (ha) | Remaining (%) | In secure tenure (%) |
|---|---|---|---|---|
| IBRA Bioregion | | | | |
| Jarrah Forest* | 4,506,674 | 2,426,079 | 53.8 | NA |
| Shire of Toodyay** | 173,440 | 88,082 | 50.8 | NA |
| Local Area (5km radius) | ~7,850 | ~4,900 | ~62.0 | |
| Beard vegetation type* | | | | |
| 1006 | 44,909 | 22,624 | 50.4 | 44.1 |
| Heddle vegetation complexes | | | | |
| Yalanbee Complex | No information available | | | |
| Mattiske vegetation complexes*** | | | | |
| Coolakin (Ck) | 1,338,992 | 573,908 | 42.9 | NA |
| Yalanbee (Y6) | 1,583,884 | 814,609 | 51.4 | NA |

* (Shepherd, 2006)
** (Shepherd et al, 2001)
*** (Mattiske Consulting, 1980)

**Methodology** References:
- Commonwealth of Australia (2001)
- Mattiske Consulting (1998)
- Shepherd et al (2001)
- Shepherd (2006)

GIS Databases:
- Heddle Vegetation Complexes
- Pre-European Vegetation
- Interim Biogeographic Regionalisation of Australia
- NLWRA, Current Extent of Native Vegetation
- SAC Bio Datasets 06/08/2008

**(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 with the closest water bodies being a major tributary of Mortigup Brook and minor tributaries of Jimperding Brook located approximately 115m west and 260m east of the applied area. Further, a site inspection (DEC, 2008) of the area under application

did not identify any wetland dependant vegetation.

Given the distance to the nearest watercourses from the area under application, the clearing as proposed is considered not likely to be at variance to this Principle.

**Methodology** Reference:
- DEC (2008)

GIS Databases:
- Hydrography, linear
- Hydrography, linear (hierarchy)
- Rivers

### (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 landform of the area under application and its surrounds can be described as low hilly to hilly terrain (Northcote et al, 1960). The chief soils are hard acidic yellow mottled soils along with sandy acidic yellow mottled soils, all of which contain moderate to large amounts of ironstone gravels in their surface horizons (Northcote et al, 1960). These soils are not considered to be at risk of wind erosion and may be at risk to water erosion.

Contour mapping identifies gentle relief (~6% gradient) (Wells, 1988) with the area under application located upper slope in the landscape. The clearing as proposed (1ha of native vegetation) may result in an increase in surface water runoff causing erosion gullies.

Given the gravel in the surface horizons and the associated water erosion risk, the clearing as proposed is considered to may be cause appreciable land degradation; however, this will be managed under the Extractive Industry Licence.

**Methodology** References:
- Northcote et al (1960)
- Wells (1988)

GIS Databases:
- Soils, Statewide
- 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**

There is one DEC managed reserve within the local area (5km radius), being an un-named Miscellaneous Reserve (also identified as a System 6 Conservation Reserve) located 4.3km south-west of the area under application.

Given the distance of the area under application to the reserve, and the relatively small proposed to be cleared (1ha) it is not likely that the clearing of the vegetation under application will impact on the environmental values of the any nearby conservation areas.

**Methodology** GIS databases:
- DEC Managed Lands and Waters
- System 6 Conservation Reserves

### (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 wetlands or watercourses mapped within the area under application with the closest water bodies being a major tributary of Mortigup Brook and minor tributaries of Jimperding Brook (both watercourses flow into the Avon River) located approximately 115m west and 260m east of the applied area. The area under application is located upper slope in the landscape with topographic contours identifying Mortigup Brook Jimperding Brook as being down-gradient of the area under application.

The area under application is not located in a Public Drinking Water Source Area and there is a low salinity risk.

Given the distance to the nearest watercourses and the low salinity risk, the clearing as proposed is not considered likely to cause deterioration in the quality of surface water.

**Methodology** GIS Databases:

- Hydrography, linear
- Hydrography, linear (hierarchy)
- Public Drinking Water Source Areas (PDWSAs)
- Salinity Risk LM 25m - DOLA 00
- 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**

There are no wetlands or watercourses mapped within the area under application with the closest water bodies being a major tributary of Mortigup Brook and minor tributaries of Jimperding Brook located approximately 115m west and 260m east of the applied area, and as such it is not considered that the clearing as proposed is likely to cause or increase the incidence or intensity of localised flooding. Therefore, this clearing proposal is not likely to be at variance to this Principle.

**Methodology**

GIS Databases:
- Hydrography, linear
- Rivers

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

**Comments**

The area under application is within the Proclaimed Surface Water Area of Avon River Catchment. Therefore any abstraction of surface water above the riparian rights (>1,500kL) would require a licence. This application is for the extraction of clay and is not associated with surface water extraction.

The Shire of Toodyay (2008) has approved an Excavation Licence and Planning Consent to Midland Brick Company Pty Ltd for Lot 3 Morangup Road, which expires 17 July 2018.

There is no other RIWI Act Licence, Works Approval or EP Act Licence that affects the areas under application.

Lot 3 on Plan 38894 is freehold land. Lot 3 is zoned rural under the local Town Planning Scheme.

**Methodology**

Reference:
- Shire of Toodyay (2008)

GIS databases:
- RIWI Act, Areas
- Town Planning Scheme Zones

## 4. Assessor's comments

**Comment**

The assessable criteria have been addressed and the clearing as proposed is may be at variance to Principles (c) and (g).

## 5. References


Cardno BSD (2008) Flora and vegetation inspection, Cardno BSD, Western Australia (TRIM Ref DOC51874)

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

DEC (2008) Site Inspection Report for Clearing Permit Application CPS 2541/1, Lot 3 Morangup Road, Suburb. Site inspection undertaken 06/07/2008. Department of Environment and Conservation, Western Australia (TRIM Ref ED2061).

DEC (2008a) Trapdoor Spider habitat preferences. Advice to Swan Region Native Vegetation Protection Officer. Received from Avon Mortlock-Yilgarn Regional Office, Nature Conservation Branch, Department of Environment and Conservation, Western Australia. Received 20/03/2008. (TRIM Ref DOC48715)

DEC (2008b) Advice from Perth Hills District office on the likelihood of the occurrence of rare and priority flora within the area under application, Department of Environment and Conservation, Western Australia. (TRIM Ref DOC61144)

Heddle, 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 Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.

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. (2006). 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status.

Resource Management Technical Report 249. Department of Agriculture, Western Australia.
Shire of Toodyay (2008) Additional information provided (Email), Shire of Toodyay (TRIM Ref DOC60036)
Wells (1988) A method of assessing water erosion risk in land capability studies - Swan Coastal Plain & Darling Range, Resource Management Technical Report No. 73, Department of Agriculture, Western Australia.

## 6. 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) |