



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 5341/1  
 Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **Limestone Building Block Co Pty Ltd**

### 1.3. Property details

Property: Mining Lease 70/339  
 Local Government Area: City of Wanneroo  
 Colloquial name:

### 1.4. Application

|                    |           |                    |                     |
|--------------------|-----------|--------------------|---------------------|
| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
| 2.7                |           | Mechanical Removal | Mineral Production  |

### 1.5. Decision on application

Decision on Permit Application: Grant  
 Decision Date: 8 August 2013

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

**Vegetation Description** Beard vegetation associations have been mapped for the whole of Western Australia. One Beard vegetation association has been mapped within the application area (GIS Database):

**Beard vegetation association 6:** Medium woodland; tuart & jarrah (Government of Western Australia, 2013; GIS Database).

A level 2 flora and vegetation survey of the application area and surrounding vegetation (referred to as the survey area) was undertaken in early Spring (2 and 12 October 2009) and late Spring (24 November 2009). Four vegetation communities were identified within the application area (Coffey Environments, 2010);

**OWEG:** Open woodland of *Eucalyptus gomphocephala* to 20 metres over tall shrubland of *Acacia rostellifera* and *Banksia sessilis* to 3.5 metres over open Shrubland of *Xanthorrhoea preissii* to 1.8 metres over low open Shrubland of *Phyllanthus calycinus*, *Banksia nivea* and *Jacksonia sericea* to 0.8 metres over very open sedgeland of *Lepidosperma ?pubisquamum* to 0.3 metres over very open herbland of *Desmocladius flexuosus* and *Urospermum picroides\** to 0.3 metres. This vegetation type was in an excellent to very good condition;

**OHMs:** Open heath of *Melaleuca systema* and *Acacia rostellifera* to 1.8 metres over low open Shrubland of *Grevillea preissii* to 0.8 metres over very open herbland of *Desmocladius asper* and *Galium divaricatum\** to 0.2 metres with occasional *Banksia sessilis* to 2 metres. This vegetation type was in a good to degraded condition;

**LWEm:** Low woodland of *Eucalyptus marginata*, *Allocasuarina fraseriana* and *Banksia attenuata* to 7 metres over tall open Shrubland of *Xanthorrhoea preissii* to 2.1 metres over open Shrubland of *Hakea lissocarpa* to 1.2 metres over low Shrubland of *Hibbertia hypericoides* to 0.7 metres over very open sedgeland of *Mesomelaena pseudostygia* to 0.6 metres with scattered *Eucalyptus gomphocephala*. This vegetation type was in an excellent condition; and

**WEg:** Woodland of *Eucalyptus gomphocephala* to 20 metres over open Shrubland of *Xanthorrhoea preissii* to 2 metres over with scattered *Banksia grandis*. This vegetation type was in an excellent to very good condition.

**Clearing Description** Limestone Building Block Company has applied to clear up to 2.7 hectares of native vegetation for the expansion of limestone mining operations.

Vegetation and topsoil will be cleared using a bulldozer. The vegetation and topsoil will be stockpiled separately for use in rehabilitation.

**Vegetation Condition** Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);

To:

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

**Comment**

The application area is located in the greater Perth metropolitan area of Western Australia and is situated approximately 14.5 kilometres south-east of Yanchep in the suburb of Nowergup (GIS Database).

The vegetation condition was assessed during a survey undertaken by botanists from Coffey Environments (2010).

### 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 at variance to this Principle**

The application area is located within the Perth subregion of the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Perth subregion is characterised by Heath and/or Tuart woodlands on limestone, *Banksia* and Jarrah-*Banksia* woodlands on Quaternary marine dunes of various ages, and Marri on colluvial and alluvials. The Perth subregion forms part of the South West Botanical Province which has a very high degree of species diversity (Mitchell et al., 2002).

Coffey Environments (2010) recorded four vegetation communities within the application area, and an additional area was mapped as regrowth/rehabilitated. The vegetation ranged from 'excellent' to 'degraded' condition (Coffey Environments, 2010; Keighery, 1994).

The flora and vegetation survey (Coffey Environments, 2010) identified a total 122 native and 35 non-native flora species. No Threatened Flora was recorded within the application area, however two priority species; *Stylidium maritimum* (Priority 3) and *Jacksonia sericea* (Priority 4), were recorded within the survey area. The Priority species *Jacksonia sericea* is located within the application area (Coffey Environments, 2010). Approximately 113 individuals of *Jacksonia sericea* were recorded within the survey area (Coffey Environments). Approximately seven of the individuals will be disturbed by the proposed clearing based on mapping by Coffey Environments (2010). This species has been recorded from Gnangara, Koondoola, Mullaloo and Neerabup and appears to be a disturbance opportunist (Coffey Environments, 2010; DEC 2013a).

Several occurrences of one Threatened Ecological Community (TEC) and three Priority Ecological Communities (PEC's) occur within 6 kilometres of the application area (Coffey Environments, 2010; GIS Database). The vegetation survey and a computer floristic analysis (PATN) identified the vegetation types **OHMs**, **OWEg** and **TOSXp** comprised similarities to the Priority 3 'Northern Spearwood shrublands and woodlands' PEC. Vegetation type **OHMs** was also comprised of some similarities to the Endangered (State) 'Limestone ridges: *Melaleuca huegelii* – *Melaleuca acerosa* (currently *M. systema*) shrublands on limestone ridges' TEC. The mapped TEC has been excluded from the application area, however may still be impacted by edge effects as it occurs nearby to the application area (with a 70 metre buffer zone) (DEC, 2013b). DEC (2013b) state that the vegetation assessment and mapping has not been accurate in this area and the TEC may occur in some of the areas within the application area mapped as the PEC. The TEC is known from approximately 190 hectares whilst there are a total of 35 occurrences of the PEC presently recorded on the Department of Environment and Conservation's TEC database with a total area of 1,012 hectares (DEC, 2010). There is approximately 0.1 hectares of the application area mapped as the PEC (GIS database).

A fauna survey carried out by Western Wildlife (2008) reported five species of frog, 48 species of reptiles, 94 species of birds and 22 species of mammals that may potentially occur within the application area. The vegetation within the application area has the potential to comprise of high faunal diversity, especially of reptile and bird species.

The vegetation within the application area is part of an area of remnant native vegetation known as Bush Forever Site No. 290 which covers an area of approximately 406.9 hectares (Government of Western Australia, 2000). The vegetation within this portion of Bush Forever Site No. 290 has been mapped as Cottesloe – Central and Southern vegetation complex (Coffey Environments, 2010; GIS Database) and the condition of this vegetation ranges from "excellent" to "degraded" (Coffey Environments, 2010).

The presence of priority flora and PEC's within the application area, with an adjacent TEC, raises the diversity of the area from a floristic perspective. Aerial imagery confirms that the local area has largely been cleared for horticultural and plantation purposes (GIS Database). Given the extent of land clearing that has occurred in the local area and the quality of vegetation within the application area, the vegetation within the application area is likely to represent an area of higher ecosystem and species diversity than the surrounding landscape. The potential impacts to biodiversity may be mitigated by the implementation of an offset condition.

Based on the above, the proposed clearing is at variance to this Principle.

**Methodology**

Coffey Environments (2010)  
 DEC (2010)  
 DEC (2013a)  
 DEC (2013b)  
 Government of Western Australia (2000)  
 Keighery (1994)  
 Mitchell et al. (2002)  
 Western Wildlife (2008)  
 GIS Database:

- Heddle Vegetation Complexes (Vegtype)
- IBRA WA (Regions - Subregions)
- Perth Metropolitan North 15cm Orthomosaic - Landgate 2011
- Threatened Ecological Sites Buffered

**(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 level 1 fauna survey of the application area was undertaken by Western Wildlife which comprised of a desktop review of the available literature and databases, and a site visit on 15 September 2008 (Western Wildlife, 2008).

The desktop survey revealed that five species of frog, 48 species of reptiles, 94 species of birds and 22 species of mammal may potentially occur within the application area (Western Wildlife, 2008).

There were two main faunal habitats recorded within the application area by Western Wildlife (2008);

1. *Banksia/Eucalypt* Woodland; and
2. Limestone Closed Shrubland.

These habitats were considered to be in an 'excellent' to 'good' condition and likely to support a relatively intact community of native fauna species (Keighery, 1994; Western Wildlife, 2008).

There are seven species of conservation significance listed as either threatened species under the *Environment Protection and Biodiversity Conservation Act (EPBC) 1999* or protected under Western Australian legislation (*Wildlife Conservation Act 1950*), which may potentially occur within a 5 kilometre radius of the application area (DEC, 2013a). Based on habitat type and vegetation mapping associated with the application area, Western Wildlife (2008) identified the following conservation significant fauna species as potentially occurring within the application area;

- Carnaby's Cockatoo (*Calyptorhynchus latirostris*) (EPBC Act – Endangered; WC Act – Schedule 1);
- The Graceful Sun Moth (*Synemon gratiosa*) (EPBC Act – Priority 4);
- The Carpet Python (*Morelia spiltoa imbricata*) (WC Act – Schedule 4; DEC – Priority 4);
- Western Brush Wallaby (*Macropus irma*) (DEC – Priority 4); and
- Quenda (*Isodon obesulus* subsp. *fusciventer*) (DEC – Priority 5).

The Carnaby's Cockatoo is listed as endangered under the EPBC Act, with populations declining dramatically due to land clearing for agriculture in regional areas and for urban development around Perth (Shah, 2006). Surveys of Carnaby's Cockatoo populations and their feeding and roosting habits show that the Northern Region of the Swan Coastal Plain appears to be an important area throughout the feeding and roosting season (Shah, 2006). The application area has particular importance in the suitability of the vegetation to provide foraging habitat for Carnaby's Cockatoo (DEC, 2013b). The vegetation within the application area comprises of various *Banksia*, *Eucalyptus*, *Hakea* and *Grevillea* species which are considered important feed sources for Carnaby's Cockatoo (SEWPaC, 2013a). Advice from the DEC (2013b) state that Carnaby's Cockatoo are recorded in the area, and from the survey by Coffey Environments (2012), there are eight flora species recorded in the area known to be a food source for Carnaby's Cockatoos (DEC, 2013b; Shah 2006). This includes *Banksia attenuata* and *B. sessilis* which Shah (2006) and Valentine & Stock (2008) noted as two principal native food sources for Carnaby's Cockatoos while observing the birds foraging on the Swan Coastal Plain. DEC (2013b) advises that both vegetation types described in the fauna survey would contain a number of flora that this species feeds on, including most of the dominant species recorded for the sites. The application area is deemed to be effective Carnaby's Cockatoo feeding habitat (DEC, 2013b).

While small areas of foraging habitat around the metropolitan area support only small numbers of birds for short periods of time, the progressive loss of small areas is an on-going concern for this species (SEWPaC, 2013a; Western Wildlife, 2008). The loss of 2.7 hectares of high quality Carnaby's Cockatoo feeding habitat will impact the species, as these vegetation types would be significant for this species especially as the clearing will target certain vegetation associations which may provide food sources for this species at specific times of the year (DEC, 2013b). The potential impact to Carnaby's Cockatoo habitats may be mitigated by the implementation of an offset condition.

The Graceful Sun Moth has been found to occur on Spearwood dune soils, with low open woodlands or open forest dominated by *Banksia* and *Eucalyptus* (SEWPaC, 2013b). The numbers of species are low and are restricted to two sub-populations in distinct fragments within Warwick Conservation Reserve and very small areas in Koondoola Bushland, Errina Road Bushland, Marangaroo Bushland, Landsdale Road Bushland, Gumblossom Reserve, Shenton Bushland and Whiteman Park (SEWPaC, 2013b). The soil and vegetation complexes within the application area have the potential to represent suitable habitat for this endangered species. A Graceful Sun moth survey of the application area and adjoining vegetation was conducted on 15 and 25 March and 1 and 6 April 2010. Whilst suitable habitat was recorded in the study area, no adult Graceful Sun moths were recorded.

The Carpet Python has been recorded from semi-arid coastal and inland habitats that comprise of *Banksia* woodland, Eucalypt woodland and grasslands (DEC, 2012a). This species is known to occur in the Yanchep

National Park which is located approximately 6 kilometres north-west from the application area (DEC, 2012a). The Carpet Python may be present within the application area given the presence of suitable habitat. The Carpet Python favours areas of heath over limestone found in the Limestone Closed Shrubland habitat. The proposed clearing is not core habitat for the species; however it is still likely to result in some loss of habitat for this species (Western Wildlife, 2008).

Government of Western Australia (2000) states that Bush Forever Site No. 290 provides suitable habitat for the Quenda which is known to inhabit dense scrubby vegetation up to one metre high (DEC, 2012b). The Quenda has been recorded at a range of locations that include Neerabup National Park, Wanneroo, Carabooda, Pinjar and Burns Beach (Landform Research, 2008; DEC, 2012b). It is likely that this species would utilise the habitat within the application area. The Western Brush Wallaby is likely to occur in areas of forest or woodland where there is a dense, shrubby understorey (Western Wildlife, 2008). The Western Brush Wallaby has also been recorded at nearby locations that include Neerabup National Park, Nowergup and Pinjar (Landform Research, 2008). The proposed clearing is likely to result in habitat loss for both of these species.

The vegetation under application forms part of an area of remnant native vegetation known as Bush Forever Site No. 290 which covers an area of approximately 406.9 hectares (Government of Western Australia, 2000). Large areas surrounding this remnant area of vegetation have been cleared for horticultural and plantation purposes. Given the extent of land clearing that has occurred in the local area and the quality of vegetation within the application area, the vegetation under application is considered important habitat for fauna species in the local area. Assessment of aerial imagery demonstrates that the vegetation under application, as well as the adjoining vegetation within the Bush Forever Site No. 290 forms part of an important linkage to adjacent bushland to the north and south of the application area (GIS Database, Government of Western Australia, 2000). This vegetation provides connectivity between remnant native bushland and is likely to allow fauna movements. The proposed clearing would reduce this fauna linkage, and available fauna habitat in the local area (Western Wildlife, 2008).

The application area overlays limestone therefore consideration needs to be given to subterranean fauna such as Stygofauna and Troglifauna species. Stygofauna are obligate aquatic subterranean animals that live within fresh or saline groundwater systems associated with karst (limestone caves/fissures) (Humphreys, 2006). Troglifauna are obligate fauna that live in air chambers in caves and/or rock fissures above such systems (Humphreys, 2006). Although the clearing of native vegetation may not directly impact subterranean fauna, the removal of trees may have a detrimental impact on Stygofauna and Troglifauna if the tree roots had been utilised as a food source (Humphreys, 2006).

Based on the above, the proposed clearing is at variance to this Principle.

**Methodology** DEC (2012a)  
DEC (2012b)  
DEC (2013a)  
DEC (2013b)  
Government of Western Australia (2000)  
Humphreys (2006)  
Keighery (1994)  
Landform Research (2008)  
SEWPaC (2013a)  
SEWPaC (2013b)  
Shah (2006)  
Valentine & Stock (2008)  
Western Wildlife (2008)  
GIS Database:  
- Perth Metropolitan North 15cm Orthomosaic - Landgate 2011

**(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**

According to available databases, there are no records of Threatened Flora within the application area (GIS Database). A search of the Department of Environment and Conservation's Threatened and Priority Flora databases identified 11 records of the Threatened Flora species *Eucalyptus argutifolia* as occurring within a 5 kilometre radius of the application area (DEC, 2013a).

Coffey Environments (2010) conducted a level two flora and vegetation survey of the application area in early Spring (2 and 12 October 2009) and late Spring (24 November 2009). No Threatened Flora was recorded within the survey area.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** Coffey Environments (2010)  
DEC (2013a)  
GIS Database:

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

The application area is within the buffer zone of the Threatened Ecological Community (TEC) '*Melaleuca huegelii* - *M. systema* shrublands on limestone ridges (Gibson et al. 1996 type 26a)' (DEC, 2013a; 2013c; Coffey Environments, 2010, GIS Database). The local area (10 kilometre radius) contains 32 occurrences of this endangered TEC.

This TEC has been identified in the south and along the eastern edge of Mining Lease 70/339, but has been excluded from the application area and provided with a 70 metre buffer at the closest point between the TEC and the application area (GIS Database). The most significant threats to this community type are clearing for mining, too frequent fire, weed invasion, impacts of recreation use and illegal rubbish dumping.

The proposed clearing will increase the risk of this adjacent TEC being affected by edge effects (DEC, 2013b; 2013c). The TEC Interim Recovery Plan (Luu & English, 2005) states that critical habitat for the TEC comprises of areas of similar habitat within 200 metres of the TEC, as the vegetation buffers provide potential habitat for natural range extensions. The application area includes several areas of Priority Ecological Community (PEC) (FCT24) vegetation and is adjacent to the TEC. DEC (2013a) state that the vegetation assessment and mapping has not been accurate in this area and the TEC may occur in some of the areas mapped as the PEC. Given its proximity to the TEC and the potential for the mapped PEC to also be the TEC, the application area is may be necessary for the maintenance of this TEC.

Accumulation of dust resulting from the end land use may have a physical effect on the functioning of these plant communities due to increased stress. The clearing of vegetation and excavation of the limestone adjacent to the TEC will cause degradation to the TEC (DEC, 2013b), however providing dust impacts are controlled, the proposed buffer width may be sufficient to avoid most edge effects (DEC, 2013d). DEC (2013d) note that that the buffer provides for reduced direct and indirect impacts on the TEC/PEC, but also provides for supporting vegetation to be retained that borders these communities, and which thus assist in maintaining the ecological processes in these communities.

Based on the above, the proposed clearing may be at variance to this Principle.

**Methodology** Coffey Environments (2010)  
DEC (2013a)  
DEC (2013b)  
DEC (2013c)  
DEC (2013d)  
Landform Research (2012)  
Luu & English (2005)  
GIS Database:  
- Threatened Ecological Sites Buffered

**(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 at variance to this Principle**

The application area falls within the Perth subregion of the Swan Coastal Plain Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). Approximately 39% of the pre-European vegetation remains within the bioregion (Government of Western Australia, 2013). The vegetation within the application area is recorded as:

**Beard vegetation association 6:** Medium woodland; tuart & jarrah (Government of Western Australia, 2013; GIS Database).

Beard vegetation association 6 retains approximately 24.88% of its pre-European extent which is less 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).

The area proposed to be cleared is considered a significant remnant of native vegetation known as Bush Forever Site No. 290 which covers an area of approximately 406.9 hectares (Government of Western Australia, 2000; GIS Database). Bush Forever aims to retain a minimum of 10% of each vegetation complex in the Perth Metropolitan Region (Government of Western Australia, 2000). The vegetation complex for this portion of Bush Forever Site No. 290 has been happed as Heddle Vegetation Complex Cottesloe – Central and South (GIS Database). Approximately 36% of Heddle Vegetation Complex Cottesloe – Central and South remains (Government of Western Australia, 2000).

|   | Pre-European area (ha)* | Current extent (ha)* | Remaining %* | Conservation Status** | Pre-European % in IUCN Class I-IV Reserves (and post clearing %) |
|---|-------------------------|----------------------|--------------|-----------------------|--|
| IBRA Bioregion - Swan Coastal Plain       | 1,501,221               | 587,708              | ~39.15       | Depleted              | 10.77 (25.85)  |
| IBRA Subregion - Perth                    | 1,117,757               | 473,909              | ~42.40       | Depleted              | 11.95 (26.20)  |
| Local Government - Wanneroo               | 67,698                  | 31,541               | ~46.59       | Depleted              | 8.32 (16.66)   |
| Beard vegetation associations - State     |                         |                      |              |                       |  |
| 6   | 56,343                  | 14,019               | ~24.88       | Vulnerable            | 3.55 (13.38)   |
| Beard vegetation associations - Bioregion |                         |                      |              |                       |  |
| 6   | 56,343                  | 14,019               | ~24.88       | Vulnerable            | 3.55 (13.38)   |
| Beard vegetation associations - subregion |                         |                      |              |                       |  |
| 6   | 56,343                  | 14,019               | ~24.88       | Vulnerable            | 3.55 (13.38)   |
| Hedde Vegetation Complex                  |                         |                      |              |                       |  |
| Cottesloe – Central and South             | 34,439                  | 12,362               | ~36.00       | Depleted              | 18   |

\* Government of Western Australia (2013)

\*\* Department of Natural Resources and Environment (2002)

Whilst it is acknowledged that Beard vegetation association 6 and Hedde Vegetation Complex Cottesloe– Central and South are above recognised thresholds (Government of Western Australia, 2000), assessment of aerial imagery confirms that the local area has been largely cleared for horticultural and plantation purposes (GIS Database). The vegetation under application forms part of a significant area of remnant native vegetation (Bush Forever site No. 290). This bushland is considered an important ecological linkage to adjacent bushland to the south and west (Government of Western Australia, 2000).

Based on the above, the proposed clearing is at variance to this Principle.

**Methodology** Department of Natural Resources and Environment (2002)  
EPA (2000)  
Government of Western Australia (2000)  
Government of Western Australia (2011)  
GIS Database:  
- IBRA WA (regions - subregions)  
- 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 at variance to this Principle**

According to available databases, there are no permanent watercourses or wetlands within the application area (GIS Database). Coffey Environments (2010) did not identify any riparian vegetation growing within the application area.

Based on the above, the proposed clearing is not at variance to this Principle.

**Methodology** Coffey Environments (2010)  
GIS Database:  
- Geodata, Lakes  
- 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 soils within the application area comprises of limestone ridges overlain by yellow or brown sands (Landform Research, 2008). Soil coverage is low on the ridges, whilst in the swales and lower elevations the limestone is covered by deeper sand sheets (Landform Research, 2008). Topographic information indicates that slope within the application area varies between approximately 2% on the flat plains, to approximately 8% in areas closer to limestone ridges (Landform Research, 2008; GIS Database).

The sandy and porous nature of the soils within the application area indicates that the sites are well drained (Landform Research, 2012). The absence of any significant overland flows would thereby minimise the risk of water erosion.

There is no known risk of acid sulphate soils associated with the area under application (GIS Database).

In areas where the limestone ridge rises to the surface there is likely to be a negligible wind erosion risk due to the hard and binding nature of the limestone material. In the areas that are overlain by deeper sand sheets there is likely to be a moderate wind erosion risk due to the high sand content and the relative ease at which these materials may be transported by wind (Landform Research, 2008). Potential impacts of this risk may be minimised through the implementation of a staged clearing condition.

Based on the above, the proposed clearing may be at variance to this Principle.

**Methodology** Landform Research (2008)  
Landform Research (2012)  
GIS Database:  
- Acid Sulfate Soil Risk Map, Swan Coastal Plain  
- 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 at variance to this Principle**

The application area is located within the Gngangara-Moore River State Forest which is managed by the Department of Parks and Wildlife (GIS Database). The Gngangara-Moore River State Forest encompasses an area in excess of 50,000 hectares; however a large portion of this State Forest is covered by pine plantation (GIS Database).

The application area is located within Bush Forever Site No. 290 which covers an area of approximately 406.9 hectares (Government of Western Australia, 2000). Bush Forever Site No. 290 is considered an important ecological linkage to adjacent bushland to the north, south and west (Government of Western Australia, 2000). Assessment of aerial imagery demonstrates that the area under application contributes to an important linkage between the vegetation to the north and the south of existing quarries, and connects with remnant native vegetation on adjoining properties to the west. The proposed clearing of this vegetation would reduce this linkage and connectivity and is likely to have direct and potentially indirect adverse impacts on Bush Forever Site No. 290 (Department of Planning, 2013; GIS Database). The Department of Planning (2013) also note that Bush Forever Site No. 290 has been identified as feeding and roosting habitat for the Carnaby's Cockatoo.

Given the location of the application area within Bush Forever Site No. 290 and the Gngangara-Moore River State Forest the proposed clearing may also impact on the environmental values of this area through the increased potential for intrusion of dieback or weed species (Department of Planning, 2013).

Considering the area under application contains a high level of biodiversity and significant fauna habitat this area is likely to perform important linkage functions for fauna moving between conservation areas (Coffey Environments, 2010; Western Wildlife, 2008).

Given the close proximity of the application area to the conservation areas listed above the clearing as proposed will impact the environmental values of these areas through the increase potential for the intrusion of weeds and dieback and through the decreased capacity for fauna dispersal.

Based on the above, the proposed clearing is at variance to this Principle.

**Methodology** Coffey Environments (2010)  
Department of Planning (2013)  
Government of Western Australia (2000)  
Western Wildlife (2008)  
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**

The eastern half of the application area is located within the Gngangara Underground Pollution Control Area which is managed for Priority 1 (P1) water source protection (GIS Database). The application area is located within the proclaimed Gngangara groundwater area under the *Rights in Water and Irrigation Act 1914* (GIS Database). Any groundwater extraction and/or taking or diversion of surface water for the purposes other than domestic and/or stock watering is subject to licence by the Department of Water.

Landform Research (2012) advises that depth to groundwater is approximately 25 meters. The application area has a ground water that has been recorded at levels less than 500 milligrams per litre Total Dissolved Solids (GIS Database). The soils within the application area comprise of limestone ridges overlain by yellow or brown sand (Landform Research, 2008). The sandy and porous nature of the soils indicates that the application area is likely to be considered well drained as there is no surface drainage due to the porosity and permeability of the limestone, with precipitation draining to the water table (Landform Research, 2012). Although the proposed clearing may increase the amount of rainwater that infiltrates to the groundwater, given the nature of the overlying materials, the proposed clearing is not likely to adversely impact the quality of groundwater within the Gngangara Underground Water Pollution Control Area. The proposed clearing of 2.7 hectares of native vegetation is unlikely to further deteriorate the quality of underground water (GIS Database).

There are no permanent watercourses within the application area (GIS Database). Any surface water within the application area is likely to only remain for short periods following significant rainfall events. The proposed clearing is not likely to cause deterioration in the quality of any surface water within or outside of the application area.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** Landform Research (2008)  
Landform Research (2012)  
GIS Database:  
- Geodata, Lakes  
- Hydrography, Linear  
- Public Drinking Water Source Areas  
- RIWI Act, Groundwater Areas  
- Groundwater Salinity, 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 watercourses or wetlands within the application area (GIS Database).

The vegetation is not growing in association with any low lying areas which may be prone to seasonal inundation. The soils within the application area comprises of limestone ridges overlain by yellow or brown sand (Landform Research, 2012). Soil coverage is low on the ridges, whilst in the swales and lower elevations the limestone is covered by deeper sand sheets (Landform Research, 2012). The sandy and porous nature of the soils indicates that the application area is likely to be considered well drained (Landform Research, 2012). The proposed clearing is not likely to cause or increase the incidence of flooding.

Based on the above, the proposed clearing is not likely to be at variance to this Principle

**Methodology** Landform Research (2012)  
GIS Database:  
- Hydrography, linear

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

**Comments**

There are three Native Title claims over the area under application. The claim WC11/9 was registered at the National Native Title Tribunal on 11 October 2011. The claim WC11/2 was filed at the Federal Court on 1 February 2011 and the claim WC 03/6 was filed at the Federal Court on 6 October 2003. The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

The clearing permit application was advertised on 26 November 2012 by the Department of Mines and Petroleum (DMP) inviting submissions from the public. Two submissions were received. One submission



received did not support the clearing permit application and provided the following advice:

- That the proposed clearing may impact on an area of remnant vegetation;
- That the proposed clearing may impact on priority ecological communities, threatened ecological communities, priority and threatened flora, and conservation significant fauna listed under the *Wildlife Conservation Act 1950* and impact on important roosting and feeding habitat for Rare Fauna listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act);
- That no referral has been made as part of the requirements of the EPBC Act to the Department of Sustainability, Environment, Water, Population and Communities (SEWPaC); and
- That the application area is located within State Forest and Bush Forever.

The above mentioned issues have been addressed throughout the clearing application assessment report in Principles (a), (b), (c), (d), (e) and (h).

The DMP have advised the proponent of their obligations to refer the proposal to SEWPaC if the proposal meets the requirements under the EPBC Act referral guidelines for the Carnaby's Black Cockatoo.

The other submission received requested the proponent to engage monitors at the commencement of clearance work and the details of the nature of the vegetation. A written response was provided.

Mining Lease 70/339 is located within a 'Priority Resource Location Area', as identified within State Planning Policy 2.4: Basic Raw Materials (SPP 2.4). Priority Resource Locations are considered regionally significant resources which should be recognised for future basic raw materials extraction and not be constrained by incompatible land uses or development (Western Australian Planning Commission, 2010a). SPP 2.4 is designed to facilitate the extraction of basic raw materials close to major markets in the metropolitan region. The policy recognises the importance of ensuring the extraction of basic raw materials occurs with minimal detriment to the environment, including regionally significant bushland and in a manner that allows for the future use and development consistent with the long-term planning intentions for the area (Western Australian Planning Commission, 2010a). SPP 2.4 does not remove obligations to identify environmental constraints that may determine the extent and/or manner in which a proposal can be implanted (Western Australian Planning Commission, 2010a). SPP 2.4 specifically states that the development of land for the extraction of basic raw materials should not adversely affect the environment. It is for this reason that key legislation for the protection of the environment, including the clearing provisions of the *Environmental Protection Act 1986*, applies to limestone extraction.

State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan Region (SPP 2.8) provides a policy and implementation framework for the management and protection of bushland in the Perth Metropolitan Region (Western Australian Planning Commission, 2010b). The policy does not prevent development provided that it is consistent with the policy and other planning and environmental considerations (Western Australian Planning Commission, 2010a). The policy contains a specific policy measure identified under sections 5.1.2.2 relating to 'Bush Forever Areas – Urban, Industrial or Resource Development' where land includes significant bushland identified as a priority resource location, key extraction area or extraction area, as identified in SPP 2.4 (Western Australian Planning Commission, 2010a). Section 5.1.2.2 allows decision makers to recognise regionally significant bushland as constrained by existing commitments and approvals, including existing mining operations, which may continue to operate in accordance with their existing levels of extraction approvals (Western Australian Planning Commission, 2010a).

DMP has considered SPP 2.4 and SPP 2.8 during the assessment of this clearing permit application, and has also considered information provided by the proponent and the Geological Survey of Western Australia highlighting the importance of the Wanneroo high grade limestone resource to the continued development of housing and infrastructure in the Perth northern corridor. Planning publications for the City of Wanneroo and Perth were also considered in this assessment (Western Australian Planning Commission, 2007; 2010a; 2010b).

Limestone Building Blocks Co Pty Ltd has previously applied to clear native vegetation on Mining Lease 70/339. Under clearing permit application CPS 3107/1 Limestone Building Blocks Co Pty Ltd applied to clear up to 4 hectares of native vegetation within area under the current application area and within the Threatened Ecological Community immediately east of the application area (GIS Database). CPS 3107/1 was partially granted by the DMP on 24 February 2011 with only 0.62 hectares granted subject to conditions including the requirement for an offset condition as the proposal was considered to be 'at variance' to Principles (a) (b) (d) and (h) (GIS Database). This decision was appealed by Limestone Building Blocks Co Pty Ltd; however the appeal was subsequently dismissed by the Minister for Environment (Appeal Number C004 of 2011).

**Methodology** Western Australian Planning Commission (2007)  
Western Australian Planning Commission (2010a)  
Western Australian Planning Commission (2010b)  
GIS Database:  
- Aboriginal Sites of Significance  
- Native Title Claims - Determined by the Federal Court  
- Native Title Claims - Registered with the NNTT

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## 5. Glossary

### Acronyms:

|                 |   |
|-----------------|---|
| <b>BoM</b>      | Bureau of Meteorology, Australian Government  |
| <b>CALM</b>     | Department of Conservation and Land Management (now DEC), Western Australia   |
| <b>DAFWA</b>    | Department of Agriculture and Food, Western Australia   |
| <b>DEC</b>      | Department of Environment and Conservation, Western Australia   |
| <b>DEH</b>      | Department of Environment and Heritage (federal based in Canberra) previously Environment Australia                       |
| <b>DEP</b>      | Department of Environment Protection (now DEC), Western Australia   |
| <b>DIA</b>      | Department of Indigenous Affairs  |
| <b>DLI</b>      | Department of Land Information, Western Australia   |
| <b>DMP</b>      | Department of Mines and Petroleum, Western Australia  |
| <b>DoE</b>      | Department of Environment (now DEC), Western Australia  |
| <b>DoIR</b>     | Department of Industry and Resources (now DMP), Western Australia   |
| <b>DOLA</b>     | Department of Land Administration, Western Australia  |
| <b>DoW</b>      | Department of Water   |
| <b>EP Act</b>   | Environmental Protection Act 1986, Western Australia  |
| <b>EPBC Act</b> | Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)   |
| <b>GIS</b>      | Geographical Information System   |
| <b>ha</b>       | Hectare (10,000 square metres)  |
| <b>IBRA</b>     | Interim Biogeographic Regionalisation for Australia   |
| <b>IUCN</b>     | International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union |
| <b>RIWI Act</b> | Rights in Water and Irrigation Act 1914, Western Australia  |
| <b>s.17</b>     | Section 17 of the Environment Protection Act 1986, Western Australia  |
| <b>TEC</b>      | Threatened Ecological Community   |

### Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005. Department of Conservation and Land Management, Como, Western Australia*} :-

- P1** **Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2** **Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3** **Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4** **Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R** **Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):** taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X** **Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

- Schedule 1** **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3** **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4** **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2** **Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3** **Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4** **Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5** **Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

**Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999*)**

- EX** **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W)** **Extinct in the wild:** A native species which:  
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or  
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR** **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN** **Endangered:** A native species which:  
(a) is not critically endangered; and  
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- VU** **Vulnerable:** A native species which:  
(a) is not critically endangered or endangered; and  
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
- CD** **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.