Department of Industry and Resources

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

**Permit application No.:** 2223/1

**Permit type:** Purpose Permit

### 1.2. Proponent details

**Proponent's name:** **The Griffin Coal Mining Company Pty Ltd**

### 1.3. Property details

**Property:** Coal Mining Leases 12/748 and 12/752

**Local Government Area:** Shire of Collie

**Colloquial name:** Ewington Minesite

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|---|---|---|---|
| 14.98 | | Mechanical Removal | Mineral Production |

## 2. Site Information

### 2.1. Existing environment and information

*2.1.1. Description of the native vegetation under application*

| Vegetation Description | Clearing Description | Vegetation Condition | Comment |
|---|---|---|---|
| The vegetation of the application area is broadly mapped as Beard Vegetation Association 3: Medium forest; jarrah-marri (GIS Database, Shepherd et al., 2001).<br><br>A flora and vegetation survey of parts of the Ewington mine area, which included the majority of the current clearing permit application area, was conducted by Bennett Environmental Consulting Pty Ltd between 10th and 14th October 2007. The survey was conducted using transects and 10m x 10m quadrats, representing all the vegetation types of the survey area (Bennett, 2008).<br><br>Seven vegetation associations were identified within the survey area, three of which were recorded within the current clearing permit application area. These were:<br><br>1. AEC: Low Woodland A or Low Forest A of *Allocasuarina fraseriana*, *Eucalyptus marginata* subsp. *marginata* and *Corymbia calophylla* over Open Low Scrub A of *Xanthorrhoea preissii* over Low Sedges of *Phlebocarya ciliata* in grey sand with occasional gravel pebbles on the surface. This vegetation association made up the majority of the application area.<br><br>2. Ha: Low Woodland A of *Eucalyptus marginata* subsp. *marginata*, *Persoonia longifolia* and *Xylomelum occidentale* over Low Scrub A of *Xanthorrhoea preissii* over Dwarf Scrub D dominated by *Hypocalymma angustifolia* over Open Tall Sedges of mixed taxa in grey sand.<br><br>3. Degraded: A small area at the eastern side of the application area.<br><br>A total of 43 weed species were recorded during the survey. The vegetation condition of the application area varied from Very Good to Degraded, with the overall vegetation condition considered to be Good to Very Good (Bennett, 2008). | The Griffin Coal Mining Company Pty Ltd has applied to clear up to 14.98 hectares of native vegetation within a total application area of approximately 18.5 hectares. The proposed clearing is for the purposes of a coal conveyor, haul road, access roads and other infrastructure associated with the Bluewaters Power Station (Griffin Coal, 2007).<br><br>The proposed clearing area is located approximately 7.6 kilometres east of Collie townsite, and adjacent to the Ewington 2 minesite (GIS Database; Griffin, 2007). | Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).<br><br>To<br><br>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994). | The vegetation condition is derived from the vegetation description provided in Bennett (2008). |

## 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 application area is located within the Southern Jarrah Forest sub-region of the Jarrah Forest Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The Jarrah Forest IBRA bioregion is dominated by a duricrusted plateau of the Yilgarn craton, and characterised by jarrah-marri forest on laterite gravels and, in the eastern part, by marri-wandoo woodlands on clayey soils (CALM, 2002).

Flora and fauna surveys conducted over the application area indicate that the biodiversity of the application area is typical of the Bioregion (Bennett, 2008; Bancroft & Bamford, 2007). These surveys also indicated that the application area has been impacted by weeds, disease, stock grazing and disturbance associated with the nearby mining activities. The vegetation and habitat types occurring within the application area are well represented in the region (Bennett, 2008; Bancroft & Bamford, 2007; GIS Database).

The proposed clearing area has been surveyed by Glevan Consulting (2007) for *Phytophthora* dieback occurrence. The survey found that approximately 50% of the application area was dieback infested, while the southern section of the application area remained uninfested (Glevan Consulting, 2007). As dieback may impact on the biodiversity of the area, Griffin Coal (2004) outlines numerous commitments to prevent and minimise the spread of dieback, such as:

- all machinery and equipment will be clean prior to entering DEC land and upon the commencement of work in the uninfested, uninterpretable and unprotectable areas;
- site works will be undertaken under 'no soil movement conditions' (dry soil) in the uninfested, uninterpretable and unprotectable areas;
- dieback boundaries will be reviewed where operations commence more than 3 years after demarcation in the field;
- all equipment will be clean when moving between relevant hygiene categories;
- the minimum clean down standard will be the removal of all soil and plant material. This will be carried out by either brushing, compressed air blow downs or high pressure water jet wash down;
- for wash down purposes a hardstand will be used. The hardstand will be free of soil and material before wash down commences and before machinery exists the hardstand. Strategic locations will be sited to enable cleaned objects (boots, vehicles, plant or equipment) to enter uninfested areas without becoming reinfested;
- runoff from the hardstand will be contained in a sump sloping away from the uninfested area or contained at the site in a plastic liner and allowed to evaporate. Remaining residue will be disposed of within an infested area;
- vegetation, topsoil and shallow overburden from each hygiene category will be stockpiled and reused only within the category from which it originated. The stockpile will be located such that run-off will not run into a higher hygiene category;
- uninfested material will be placed on the higher elevations during rehabilitation;
- each topsoil and shallow overburden stockpile will be signposted indicating infestation status and the words 'keep off';
- regular surveys will be undertaken to assess the effectiveness of the control measure; and
- to enforce hygiene management, Griffin will work in collaboration with DEC Wellington District Manager to ensure access to uninfested areas within the mining area is constrained by appropriate methods. The need for sign posting will be evaluated in consultation with the relevant authorities (Griffin Coal, 2004).

Weeds are also a problem in the area, with 43 weed species recorded during the vegetation survey of the Ewington mine area (Bennett, 2008). Griffin Coal (2004) currently implements weed control measures at all operating mine-sites. The commitments made include:

- management of weed hygiene will work in conjunction with dieback hygiene management procedures
- all machinery and equipment will be cleaned by manual brushdown, compressed air or water when entering or leaving top soiled areas
- regular site inspections will be conducted
- eradication programmes will be implemented as required to ensure weed infestations are avoided (Griffin Coal, 2004).

It is likely that the impacts of weeds, disease, stock grazing and nearby mining activities will have had a deleterious effect on the biodiversity within the application area. Therefore, the application area is not likely to represent an area of outstanding biodiversity in the Bioregion, in comparison to the remaining native vegetation in the local area.

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

**Methodology**

Bennett (2008).
Bancroft & Bamford, 2007
Glevan Consulting (2007).
Griffin Coal (2004).
CALM (2002).
GIS Database:

- Interim Biogeographic Regionalisation of Australia - EA 18/10/00.
- Interim Biogeographic Regionalisation of Australia (subregions) - EA.
- Pre-European Vegetation - DA 01/01.

**(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 desktop survey conducted by Bamford Consulting Ecologists identified 29 fauna species of conservation significance with the potential to occur within the application area, based on known distributions. Of these, the following five species were considered most likely to occur within the application area, based on habitat preferences:
- *Calyptorhynchus banksii naso* (Forest Red-tailed Black Cockatoo);
- *Calyptorhynchus latirostris* (Carnaby's Cockatoo);
- *Calyptorhynchus baudinii* (Baudin's Cockatoo);
- *Isoodon obesulus fusciventer* (Quenda); and
- *Macropus irma* (Brush Wallaby) (Bancroft et al., 2007).

The Forest Red-tailed Black-Cockatoo is listed as Schedule 1 (Vulnerable) under the *Wildlife Conservation Act 1950*, and is of concern because clearing has greatly reduced the available breeding and feeding habitat (Bancroft et al., 2007). Feral bees and Galahs also compete with *C. banksii naso* for nesting hollows. The range of this subspecies is closely tied to the distribution of Marri (*Corymbia calophylla*) (Bancroft et al., 2007).

The Carnaby's Cockatoo is listed as Endangered under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act), and as Schedule 1 (Endangered) under *the Wildlife Conservation Act 1950*. This type of Cockatoo occurs in the south-west of WA, approximately south-west of a line between the Murchison River (near Kalbarri) and Cape Arid National Park (east of Esperance) (Bancroft et al., 2007). Land clearing and degradation has reduced available breeding sites (tree hollows) and fragmented breeding and feeding sites. Feral bees, galahs and corellas out-compete *C. latirostris* for nesting hollows (Bancroft et al., 2007).

The Baudin's Cockatoo is listed as Vulnerable under the EPBC Act and as Schedule 1 (Endangered) under the *Wildlife Conservation Act 1950*. This type of Cockatoo occurs in the lower south-west of WA, approximately south-west of a line between Morangup (near Bullsbrook) and Waychinicup National Park (east of Albany) (Bancroft et al., 2007). Birds generally breed in the Karri, Marri and Wandoo forests, in the southern parts of the species' range and move north to the Darling Range and Swan Coastal Plain during autumn and winter (non-breeding periods) (Bancroft et al., 2007). Clearing for agriculture and logging has removed nesting and feeding trees for this species (Bancroft et al., 2007).

In general, hollows of sufficient size to support Black-Cockatoos do not form until trees are at least 230 years old, and the majority of nests are found in 300-500 year old trees (Bancroft et al., 2007). In some cases artificial nest hollows (or nest boxes) have been used with great success (Bancroft et al., 2007). Loss of feeding grounds, nesting trees and competition from bees and Corellas have increased the importance of available nesting hollows. Hollows present are of significance to the conservation of Black Cockatoo species.

The Quenda is listed as a Priority 5 species by DEC, and is of concern because habitat clearing and fragmentation, fire, and predation by foxes, cats, and domestic dogs threaten this species (Bancroft et al., 2007). This species occurs in the south-west of WA (Bancroft et al., 2007).

The Brush Wallaby is listed as Priority 5 by the DEC, and is of concern because it is threatened by habitat clearing and fragmentation, predation by foxes and illegal hunting (Bancroft et al., 2007). *M. irma* occurs in the south-west of WA, from approximately Geraldton to Esperance (Bancroft et al., 2007).

Bamford Consulting Ecologists conducted fauna surveys of the current clearing permit application areas in 2007 - 2008. The western application area was surveyed on 5 November 2007 (Bancroft & Bamford, 2007). The eastern application area, (the "loop") was surveyed on 24-25 January 2008 (Cherriman & Bamford, 2008). The survey areas were traversed on foot, to identify fauna habitats, including potential nesting trees for Black-Cockatoos (Bancroft & Bamford, 2007). Fauna sightings were recorded, and habitat considered suitable for the five abovementioned fauna species of conservation significance was particularly targeted, looking for evidence of these species.

No conservation significant species were observed during the surveys. Evidence of Quenda activity (diggings) was observed within the western application area. No evidence of Black-Cockatoo feeding or nesting was found during the survey, however eleven potential nesting trees (i.e. those exceeding 600 mm diameter at breast height (DBH)) were recorded within the areas traversed (Bancroft & Bamford, 2007; Cherriman & Bamford, 2008). From the observations made, Bancroft and Bamford (2007) estimated the density of potential nesting trees within the whole application area as between one and two suitable nesting trees per hectare.

A previous survey by Bamford Consulting Ecologists of an adjacent area (Bancroft et al., 2007) made the following 10 fauna management recommendations. Bancroft & Bamford (2007) advise that these

recommendation are also relevant to the current area proposed to clear:
1) Limit loss of habitat by restricting the clearing and keeping the area of infrastructure to a minimum. Also, prevent degradation of vegetation surrounding study areas by increasing the awareness of personnel and restricting access to areas of significant vegetation;
2) Where possible, conduct clearing operations outside the breeding season for Black-Cockatoos;
3) Consider the implementation and monitoring of nesting boxes for Black-Cockatoos;
4) Limiting speed limits for areas of high wildlife activity;
5) Road killed fauna should be reported to site environmental personnel. Any fauna suspected of being of conservation significance should be reported to the relevant conservation authority (e.g. DEC office at Collie);
6) Manage the spread of Dieback (*Phytophthora cinnamomi*);
7) Consider the use of felled or cleared vegetation as habitat enhancement in rehabilitation sites;
8) Feral fauna, particularly cats and foxes, should not be encouraged. Feral animal control strategies should be implemented where necessary;
9) To adopt the precautionary principle, lighting should be directed away from natural habitats so that light-spill is minimised; and
10) Consider providing signage to indicate important fauna or habitats (Bancroft et al., 2007).

Griffin Coal (2007) has stated that they are committed to undertaking these recommendations.

Based on the above, the proposed clearing is at variance to this Principle. The assessing officer recommends Conditions be placed on any permit granted, to offset the loss of fauna habitat.

**Methodology** Bancroft & Bamford (2007).
Bancroft et al. (2007).
Cherriman & Bamford (2008).
Griffin Coal (2007).

**(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**
A search of DEC databases conducted by Bennett Environmental Consulting Pty Ltd, revealed a total of six Declared Rare Flora species and 29 Priority Flora species, with the potential to occur within the application area, based on known distributions (Bennett, 2008).

A flora survey of the Ewington mine area, which included the clearing application area, recorded four Priority Flora species: *Synaphea petiolaris* subsp. *simplex* (P2); *Aotus cordifolia* (P3); *Pultenaea skinneri* (P4); and *Stylidium plantagineum* (P4). No Declared Rare flora were recorded during the survey (Bennett, 2008).

Of the abovementioned species, only *Stylidium plantagineum* (P4), was recorded within the application area, at two sites, populations totalling approximately five plants. Further populations were recorded in other parts of the survey area with an estimated total of approximately 370 plants in 13 separate populations (Bennett, 2008). This species has also been recorded in surrounding areas during previous surveys (Bennett, 2007). This species is known from the Collie, Harvey and Nannup areas, and from the Stirling Range National Park, and it is thought that it may be more widespread than currently known, as it only flowers after fire (Bennett, 2007).

DEC has advised that the removal of a small number of plants of *S. plantagineum* is unlikely to constitute a significant impact on the taxon, given Bennett (2007; 2008) comments that the plants were not just restricted to the proposed clearing area. The proponent has previously consulted with the DEC for advice regarding the possible translocation of *S. plantagineum* plants which will be impacted by the proposed clearing (DEC, 2007).

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

**Methodology** Bennett (2007).
Bennett (2008).
DEC (2007).
GIS Database:
- Declared Rare and Priority Flora List - CALM 01/07/05.

**(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 Threatened Ecological Communities (TEC's) in the vicinity of the proposed clearing area (GIS Database). The nearest known TEC is located approximately 43 kilometres west of the application area (GIS Database).

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

**Methodology** GIS Database:
- Threatened Ecological Communities - CALM.

**(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 application area is located within the Jarrah Forest IBRA bioregion, and the Southern Jarrah Forest IBRA sub-region (GIS Database).

Shepherd et al. (2001) report that approximately 53.8% of the pre-European vegetation still exists in the Jarrah Forest Bioregion. The vegetation of the application area is broadly mapped as Beard Vegetation Association 3: Medium forest; jarrah-marri (GIS Database, Shepherd et al., 2001). The table below outlines the pre-European and current extent of vegetation within these regions.

| | Pre-European area (ha)* | Current extent (ha)* | Remaining %* | Conservation Status** | % of Pre-European area in IUCN Class I-IV Reserves (and current %) |
|---|---|---|---|---|---|
| IBRA Bioregion - Jarrah Forest | 4,506,675 | 2,426,080 | 53.8 | Least concern | 14 (25.5) |
| IBRA Subregion - Southern Jarrah Forest | 2,607,875 | 1,308,940 | 50.2 | Least concern | 16.8 (32.8) |
| Local Government Area - Collie | 172,072 | 161,845 | 94.1 | Least concern | N/A |
| Beard vegetation association - State | | | | | |
| 3 | 2,661,197 | 1,863,967 | 70.0 | Least concern | 18.5 (26.2) |
| Beard vegetation association - Jarrah Forest Bioregion | | | | | |
| 3 | 2,390,535 | 1,661,219 | 69.5 | Least concern | 16.3 (23.3) |
| Beard vegetation association - Southern Jarrah Forest subregion | | | | | |
| 3 | 1,482,495 | 913,332 | 61.6 | Least concern | 18.7 (30.2) |

* Shepherd et al. (2001)
** Department of Natural Resources and Environment (2002)

Locally, the surrounding areas have been cleared for mining and associated infrastructure. However, on a regional level, the proposed clearing area is not considered to be a significant remnant of native vegetation within an extensively cleared area.

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

**Methodology** Department of Natural Resources and Environment (2002).
Shepherd et al. (2001).
GIS Database:
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00.
- Interim Biogeographic Regionalisation of Australia (subregions) - EA.
- 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 watercourses or wetlands within the areas applied to clear (GIS Database). The nearest watercourse is a minor, perennial watercourse, approximately 200 metres west of the proposed clearing areas (GIS Database).

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

**Methodology** GIS Database:
- Hydrography, Linear - DOE 01/02/04.

- Lakes, 1M - GA 01/06/00.
- Rivers 250K - GA.
- Collie 50cm Orthomosaic - DLI04-1

**(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 Ewington area (where this proposal is located) is characterised by low relief laterite ridge and hill landscapes (Griffin Coal, 2004). The proposed clearing is located on marine and continental sedimentary rock (sand and sandstone), over extensive and deep aquifers (GIS Database). The geology of the area is recognised as sandy, alluvium forming terraces to Nakina Formation locally laterized (GIS Database, Geological Survey Western Australia, 1982). This type of sub-soil is prone to erosion if vegetative cover is removed.

The groundwater within the application area is fresh, at less than 500 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). Given the small size of the proposed clearing, salinisation is not likely to occur.

The majority of the application area is relatively flat, reducing the risk of the proposed clearing resulting in significant erosion. The proponent will implement erosion control measures as required to minimise erosion (Griffin Coal, 2004).

Other management measures utilised to prevent land degradation include:
- rationalisation of access through the closure of redundant tracks;
- restriction of access through fencing;
- rehabilitation of disturbed areas;
- employee education; and
- weed and feral animal control (Griffin Coal, 2004).

Based on the above, the proposed clearing may be at variance to this Principle. The assessing officer recommends that Conditions be placed on any permit granted, to minimise potential land degradation.

**Methodology**

Geological Survey Western Australia (1982).
Griffin Coal (2004).
GIS Database:
- Geology, 250K - DOIR 21/12/01.
- Geology, Statewide - DMPR 01/12/99.

**(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 application area is located within the Collie State Forest (GIS Database), which is managed for multiple purposes, including conservation. The *Collie Coal (Griffin) Agreement Act 1979* permits Griffin Coal entry into State Forest for the purposes of exploration, clearing of timber and undergrowth and mining. A condition of this Act is that Griffin Coal will give prior notice to the Conservator of Forests (now the Forest Products Commission (FPC)) that clearing is to take place. Griffin Coal (2007) has provided a letter from the FPC which indicates that FPC are currently and will continue to be involved in the salvage of saleable timber resources within areas of State Forest covered by the Ewington Mining lease and clearing permits.

The Ewington mining area (within which this application area is located) is also located within a 150ha Comprehensive, Adequate and Representative (CAR) Informal Reserve which was established following the signing of the Regional Forest Agreement (RFA) by the Commonwealth of Australia and the State of Western Australia on 4 May 1999 (EPA, 2003; GIS Database). Development of the Ewington minesite within the CAR Informal Reserve was approved by the EPA in March 2003 (EPA, 2003).

Based on the above, the proposed clearing may be at variance to this Principle. The assessing officer recommends that Conditions be placed on any permit granted, to control the introduction and/or spread of dieback and weeds.

**Methodology**

Griffin Coal (2007).
GIS Database:
- CALM Managed Lands and Waters - CALM 1/07/05.

**(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 watercourses or wetlands within the areas applied to clear (GIS Database). The nearest watercourse is a minor, perennial watercourse, approximately 200 metres (at its nearest point) west of the western boundary of the application area (GIS Database). The area between the application area and the watercourse is heavily vegetated, and hence the proposed clearing is unlikely to result in increased sedimentation of this or any other watercourse.

The groundwater within the application area is fresh, at less than 500 milligrams per litre of TDS (GIS Database). DoW (2007) has advised that the relatively small area of the proposed clearing is unlikely to have any significant impact on groundwater levels or quality.

The proposed clearing area is located within the Wellington Dam Catchment Area (Public Drinking Water Source Area) (GIS Database). The Department of Water (DoW, 2007) has advised that clearing permits are generally granted in Zone D, as long as more than 10% of the land in question remains uncleared. Due to the extent of the state forest, the DoW has no objection to the grant of the clearing permit (DoW, 2007).

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

**Methodology**

DoW (2007).
GIS Database:
- Salinity Mapping LM 25m - DOLA 00
- Public Drinking Water Source Areas (PDWSAs) - DOW

**(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 application area is within the Wellington Dam Collie River Catchment area, which covers an area of approximately 282,910 hectares (GIS Database). The relatively small area of the proposed clearing (14.98 hectares) compared to the size of the catchment area, is unlikely to cause or exacerbate the incidence or intensity of flooding.

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

**Methodology**

GIS Database:
- Hydrographic Catchments - Catchments - DOW.

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

**Comments**

One public submission was received for this clearing permit application, raising concerns regarding potential impacts of the proposed clearing on Aboriginal Heritage sites. There are no recorded Aboriginal Sites of Significance within the areas proposed to be cleared (GIS Database). A number of heritage surveys have been conducted over the coal mining leases held by Griffin Coal, including the current area proposed to be cleared (Griffin Coal, 2007). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

There is one native title claim over the area under application (WC98-058) (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the tenements have 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*.

The application area is located within the Wellington Dam Catchment Area, a Public Drinking Water Source Area (PDWSA) (GIS Database), and falls within Zone D under the *Country Areas Water Supply Act 1947* (DoW, 2007). The Department of Water (DoW, 2007) has advised that clearing permits are generally granted in Zone D, as long as more than 10% of the land in question remains uncleared. Due to the extent of the state forest, the DoW has no objection to the grant of the clearing permit (DoW, 2007).

It is the proponent's responsibility to liaise with the Department of Environment and Conservation and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit or any other licences or approvals are required for the proposed works.

**Methodology**

DoW (2007).
Griffin Coal (2007).

GIS Database:
- Aboriginal Sites of Significance - DIA
- Native Title Claims - DLI

## 4. Assessor's comments

| Purpose | Method | Applied area (ha)/ trees | Comment |
|---|---|---|---|
| Mineral Production | Mechanical Removal | 14.98 | The proposal has been assessed against the Clearing Principles, and is considered to be at variance to Principle (b), may be at variance to Principles (g) and (h), and not likely to be at variance to Principles (a), (c), (d), (e), (f), (i) and (j).<br><br>Should the permit be granted, it is recommended that Conditions be imposed on the permit for the purposes of:<br>- offsetting the impact on fauna habitat;<br>- dieback management;<br>- weed management;<br>- erosion control;<br>- record keeping; and<br>- permit reporting. |

## 5. References


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## 6. Glossary

### Acronyms:

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

### 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} :-**

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| **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] :-**

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| **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.