Government of **Western Australia**
Department of **Mines and Petroleum**

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2838/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Irishtown Sandstone Pty Ltd**

1.3. Property details

Property: Mining Lease 70/1217

Local Government Area: Shire of Donnybrook-Balingup
Colloquial name: N/A

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.55		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
Beard Vegetation Associations have been mapped at a 1:250,000 scale for the whole of Western Australia and are useful to look at vegetation extent in a regional context. Two Beard Vegetation Associations are located within the application area (GIS Database): 1. Beard Vegetation Association 1017 - Medium open woodland; Jarrah (*Eucalyptus marginata*) & Marri (*Corymbia calophylla*), with low woodland; Banksia; and 2. Beard Vegetation Association 1182 - Medium woodland; *Eucalyptus rudis* & *Melaleuca rhaphiophylla*.	Irishtown Sandstone Pty Ltd has applied to clear up to 0.55 hectares of native vegetation on Mining Lease 70/1217. The proposed clearing will allow the proponent to undertake a minor expansion of the colloquially named 'Government Quarry' to allow extraction of sandstone. In addition, two overburden stockpiles in the 'Northern Quarry' need to be re-located to allow rehabilitation works to be undertaken. The stockpiles are characterised by scattered native vegetation re-growth, hence their inclusion in this clearing permit application.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994); To Degraded: Structure severely disturbed; regeneration to good requires intensive management (Keighery, 1994).	The vegetation condition rating is derived from personal observations made by the assessing officer during an inspection of the operations on 21 September 2009.

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposal is not likely to be at variance to this Principle

The proposed clearing area is located approximately 5 kilometres north of Donnybrook in the Southern Jarrah Forest subregion of the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Southern Jarrah Forest subregion is characterised by Jarrah-Marri forest on laterite gravels and, in the eastern part, by Wandoo-Marri woodlands on clayey soils (CALM, 2002). The subregion is rich in endemic species, and a majority of the floristic richness is associated with rapid changes in communities on the lower slopes and variable soil types.

Bioscience Pty Ltd (2007a) recorded 151 native plant taxa during a botanical survey of the eastern portion of Mining Lease 70/1217 (including the proposed clearing areas). The survey encompassed five separate visits to the site between 30 August and 16 September 2007 to record all species present. Species that could not be identified on site were lodged with the Western Australian Herbarium.

In addition, 39 exotic species were recorded, including three weed species that are listed on the Declared Plant list produced by the Department of Agriculture and Food (DAFWA):

- Cape Tulip (*Homeria sp.*) – Priority 1 and Priority 4 Control Code;

- Arum Lily (*Zantedeschia aethiopica*) - Priority 1 and Priority 4 Control Code; and
- Narrow-leaved Cottonbush (*Gomphocarpus fruticosus*) – Priority 1 and Priority 4 Control Code.

For species with a Control Code of Priority 1, the movement of plants or their seeds is prohibited within the state. This prohibits the movement of contaminated machinery and produce, including livestock and fodder (DAFWA, 2009).

For species with a Control Code of Priority 4, the infested area must be managed in such a way that prevents the spread of seed or plant parts within and from the property, on or in livestock, fodder, grain, vehicles and/or machinery (DAFWA, 2009). Treatment must be undertaken to destroy and prevent seed set of all plants:

- within 100 metres inside of the boundaries of the infested property;
- within 50 metres of roads and highwater mark on waterways; and
- within 50 metres of sheds, stock yards and houses.

Treatment must be done prior to seed set each year. Properties with less than 20 hectares of infestation must treat the entire infestation. Additional areas may be ordered to be treated (DAFWA, 2009).

The proponent's attention is drawn to the provisions of the *Agriculture and Related Resources Protection Act 1976* which require control of Declared Plants.

The assessing officer notes that weed species pose a threat to biodiversity by competing with native species for resources and increasing the fire risk. Should a clearing permit be granted, it is recommended that appropriate conditions be imposed with respect to weed management within the proposed clearing area.

An environmental specialist from Bioscience Pty Ltd (2007b) found clear evidence of Dieback (*Phytophthora cinnamomi*) during a site inspection of Mining Lease 70/1217 on 18 October 2007. A small area (approximately 10 metres x 45 metres) south of Irishtown Road on Crown Reserve 2720 was characterised by dead Jarrah trees and an almost complete absence of dieback susceptible species in the understorey (Bioscience Pty Ltd, 2007b). The assessing officer notes that this area is not within the proposed clearing area. The implementation of standard hygiene protocols can adequately manage the risk of clearing operations spreading dieback throughout the Mining Lease. Should a clearing permit be granted, conditions with respect to the prevention of dieback should be imposed.

Whilst Bioscience Pty Ltd (2007a) recorded 151 native plant taxa during its botanical survey, it is concluded that the three small areas proposed for clearing are likely to support much lower floristic diversity given their re-growth status, size and proximity to existing disturbance.

From a faunal perspective, Mining Lease 70/1217 contains vegetation of sufficient density and diversity to support a range of native fauna species (Bioscience Pty Ltd, 2007b). However, feral cats and foxes have been encouraged by the surrounding agricultural land use and are likely to have impacted faunal diversity to some extent. Given the application areas consist of re-growth vegetation and are located immediately adjacent to existing disturbance it is highly unlikely that faunal diversity of the 0.55 hectares proposed to clear would compare to that of the largely continuous Boyanup State Forest located to the west.

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

Methodology

Bioscience Pty Ltd (2007a).
Bioscience Pty Ltd (2007b).
CALM (2002).
DAFWA (2009).

(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

Bioscience Pty Ltd (2007b) were commissioned by Irishtown Sandstone Pty Ltd to provide advice on land clearing proposed to expand existing sandstone quarrying operations on Mining Lease 70/1217. On 18 October 2007, one suitably qualified person from Bioscience Pty Ltd visited Mining Lease 70/1217 to comment on its significance as habitat for indigenous fauna. No systematic fauna survey was carried out, however the following comments were made as a result of the field visit:

- Bushland on Mining Lease 70/1217 is of sufficient density and floristic diversity to support a range of native fauna species;

- The prospect of Rare or Endangered fauna occurring in the Mining Lease is considered remote given the proximity to cleared farmland (and associated cats and dogs). The presence of foxes is also a contributing factor;

- Rabbit and Kangaroo scats were noted on the Mining Lease but there was no evidence of small marsupials and no evidence of other soil digging mammals. Possum scratchings were noted on larger Jarrah and Marri trees;

- Any animals displaced by clearing activities are likely to find alternative habitat quickly in the large and continuous state forest located immediately to the west.

Bioscience Pty Ltd (2007b) was specifically asked to comment on the significance of the site for the Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*) following anecdotal evidence that the species has been observed in the area. This species is listed as 'Vulnerable' under the *Environment Protection and Biodiversity Conservation* (EPBC) *Act 1999* and Schedule 1 'Fauna that is rare or is likely to become extinct' under the *Wildlife Conservation (Specially Protected Fauna) Notice 2008*.

Forest Red-tailed Black Cockatoos nest in large, dead Eucalyptus trees (their preference is Jarrah, Marri and Karri) which have a vertical opening at least 20 centimetres wide and a depth of 1 – 2 metres. Preferred nesting trees are usually isolated and singular. The species typically breeds between June and October (Bioscience Pty Ltd, 2007b).

No characteristic calling cries of juvenile cockatoos were heard during the October 2007 visit. If present, cockatoos would be expected to be increasingly raucous at this time of the year. A small number of dead Eucalyptus trees occur on Mining Lease 70/1217, although none are isolated and singular (Bioscience Pty Ltd, 2007b). It is likely that Forest Red-tailed Black Cockatoos forage in the area on the basis of anecdotal evidence of mine staff reporting frequent sightings of small flocks.

Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*) is listed as 'Endangered' under the EPBC Act 1999 and Schedule 1 'Fauna that is rare or is likely to become extinct' under the *Wildlife Conservation (Specially Protected Fauna) Notice 2008*. This species is endemic to the south-west of Western Australia, foraging on proteaceous scrubs and heaths, Eucalypt woodlands and forests; and also plantations of pine since the 1930's (Johnstone and Storr, 1998). The species mainly breeds in the semi-arid interior, nesting mainly in Salmon Gum (*Eucalyptus salmonophloia*) and Wandoo (*Eucalyptus wandoo*). The species is also known to nest in Red Morell (*Eucalyptus longicornis*), York Gum (*Eucalyptus loxophleba*), Marri (*Corymbia calophylla*) and Tuart (*Eucalyptus gomphocephala*) (Johnstone and Storr, 1998). On the basis of known distributions and habitat preferences, Carnaby's Black Cockatoo may occur in the proposed clearing area.

Baudin's Black-Cockatoo (*Calyptorhynchus baudinii*) is listed as 'Vulnerable' under the *Environment Protection and Biodiversity Conservation* (EPBC) *Act 1999* and Schedule 1 'Fauna that is rare or is likely to become extinct' under the *Wildlife Conservation (Specially Protected Fauna) Notice 2008*. This species is endemic to the south-west of Western Australia, occurring from near Perth to Albany and inland to about Narrogin (Burbidge, 2004). The species inhabits Jarrah, Marri and Karri forest, woodland and coastal scrub. Nesting occurs in large, deep hollows in Karri, Marri and Wandoo. Baudin's Black Cockatoo Feeds mainly on Marri seeds and flowers, however orchards and Pine plantations also provide a food source (Burbidge, 2004). On the basis of known distributions and habitat preferences, Baudin's Black Cockatoo may occur in the proposed clearing area.

Following an inspection of the proposed clearing areas on 21 September 2009, the assessing officer notes that none of the three small areas earmarked for clearing contain trees of suitable age or size to provide nesting habitat for Black Cockatoo species. A small amount of suitable foraging habitat will be lost should a clearing permit be granted, however this is unlikely to be significant given the proximity of the site to state forest. On this basis, the proposed clearing area is not considered to constitute significant habitat for the Forest Red-tailed Black Cockatoo, Carnaby's Black-Cockatoo or Baudin's Black-Cockatoo.

The assessing officer notes that the extent of the proposed clearing (0.55 hectares) is significantly reduced from that originally proposed to clear (12.24 hectares). A majority of Mining Lease 70/1217 remains vegetated and this will not change should this clearing proposal proceed. Two of the three small areas earmarked for clearing are overburden stockpiles in the Northern Quarry supporting relatively young and scattered native vegetation re-growth. It is highly unlikely that these two particular areas would constitute significant habitat for any fauna species indigenous to Western Australia.

The clearing proposed in the Government Quarry is a small area (approximately 0.185 hectares) on the periphery of the existing quarry pit. A vegetation buffer of approximately 20 metres width will be retained between Irishtown Road and the southern extent of clearing proposed in this area. During a visit to the Mining Lease on 21 September 2009, the assessing officer noted that this area also appears to be re-growth and does not contain any large trees which may provide nesting habitat for indigenous fauna species.

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

Methodology Bioscience Pty Ltd (2007b).
Burbidge (2004).
Johnstone and Storr (1998).

(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 GIS Databases, there are no known records of Declared Rare Flora (DRF) or Priority Flora within the proposed clearing area (GIS Database).

A botanical survey undertaken over the eastern portion of Mining Lease 70/1217 recorded a total of 151 indigenous flora species, none of which are classified as DRF or Priority Flora (Bioscience Pty Ltd, 2007a).

The small areas proposed for clearing are highly unlikely to be necessary for the continued existence of rare flora.

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

Methodology

Bioscience Pty Ltd (2007a).
GIS Database:
- Declared Rare and Priority Flora list.

(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

According to available GIS databases, there are no known Threatened Ecological Communities (TEC's) within the proposed clearing 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.

(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 area applied to clear is within the Interim Biogeographic Regionalisation of Australia (IBRA) Southern Jarrah Forest subregion of the larger Jarrah Forest bioregion (GIS Database). According to Shepherd (2007) there is approximately 54% of the pre-European vegetation remaining in the Jarrah Forest bioregion and approximately 51% in the Southern Jarrah Forest subregion (see table below).

The vegetation of the proposed clearing area is classified as Beard Vegetation Association 1017: Medium open woodland; Jarrah & Marri, with low woodland; Banksia and Beard Vegetation Association 1182: Medium woodland; *Eucalyptus rudis* and *Melaleuca rhaphiophylla* (GIS Database). There is approximately 79.9% and 47.1% of the pre-European vegetation remaining of Beard Vegetation Associations 1017 and 1182 in the Southern Jarrah Forest subregion respectively (Shepherd, 2007). At the state level, Beard Vegetation Association 1182 is considered 'Vulnerable' with an estimated 27.9% of the pre-European vegetation remaining.

One public submission expressed concern that the proposed clearing area may include a vegetation complex that has had large amounts cleared and is poorly conserved in formal conservation estate. Additional information was provided with the submission from a reputable source which confirms that the restricted vegetation complex is known to occur in the local area. The vegetation complex is described as:

'Darling Scarp 2' – Open Forest of Jarrah (*Eucalyptus marginata subsp. marginiata*) and Marri (*Corymbia calophylla*) with a second storey of *Persoonia longifolia* and tall Grass trees (*Xanthorrhoea preissii*).

Whilst Bioscience Pty Ltd (2007a) did not describe vegetation communities during its botanical survey, it is probable that the 'Darling Scarp 2' vegetation complex does occur on Mining Lease 70/1217 as the four indicator species described above were all recorded during the botanical survey (Bioscience Pty Ltd, 2007a).

The assessing officer notes that the extent of proposed clearing is small (0.55 hectares) and includes re-growth native vegetation on overburden stockpiles. The areas proposed for clearing cannot be considered remnants in an area that has been extensively cleared. Any loss of the 'Darling Scarp 2' vegetation complex as a result of this clearing proposal is unlikely to have a significant impact on the overall representation of the community type.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and current %)
IBRA Bioregion – Jarrah Forest	4,506,655	2,440,940	~54	Least concern	13.7 (24.9)
IBRA subregion – Southern Jarrah Forest	2,609,913	1,330,925	~51	Least concern	16.9 (32.4)
Shire of Donnybrook-Balingup	156,029	91,178	~58.4	Least concern	4.9 (8.4)
Beard veg assoc. – State					
1017	17.528	11,478	~65.5	Least concern	0.1 (0.1)
1182	23,437	6,549	~27.9	Vulnerable	0.1 (0.5)
Beard veg assoc. – Subregion					
1017	11,546	9,231	~79.9	Least concern	Information not available
1182	10,866	5,121	~47.1	Depleted	0.7 (0.5)

* Shepherd (2007)
** Department of Natural Resources and Environment (2002)

Options to select from: Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment 2002)

Presumed extinct	Probably no longer present in the bioregion
Endangered*	<10% of pre-European extent remains
Vulnerable*	10-30% of pre-European extent exists
Depleted*	>30% and up to 50% of pre-European extent exists
Least concern	>50% pre-European extent exists and subject to little or no degradation over a majority of this area

* or a combination of depletion, loss of quality, current threats and rarity gives a comparable status

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

Methodology

Bioscience Pty Ltd (2007a).
CALM (2002).
Department of Natural Resources and Environment (2002).
Shepherd (2007).
GIS Databases:
- Interim Biogeographic Regionalisation of Australia.
- Pre-European Vegetation.

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposal is not likely to at variance to this Principle

There are no permanent or ephemeral watercourses or wetlands in the proposed clearing area (GIS Database). The vegetation proposed for clearing is not growing in association with an environment associated with a watercourse or wetland.

Two ephemeral creeklines occur on Mining Lease 70/1217, neither of which will be directly impacted by this clearing proposal (GIS Database).

The two overburden stockpiles in the northern quarry subject to this clearing permit application are located in close proximity to the creekline which runs north to south. Re-growth vegetation on the two stockpiles cannot be considered as a buffer to the creekline.

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

Methodology

GIS Database:
- Hydrography, linear.

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments

Proposal is not likely to be at variance to this Principle

Mining Lease 70/1217 is characterised by a sandy topsoil of an average depth of 300 millimetres across the site (Irishtown Sandstone Pty Ltd, 2009). On average, approximately 1.5 metres of sandy clay exists beneath the topsoil, whilst in deeper areas up to another 1.5 metres of overburden exists beneath the clay layer before the resource is encountered (Irishtown Sandstone Pty Ltd, 2009).

The assessing officer notes that the potential for the proposed clearing to cause appreciable land degradation can be minimised by stockpiling the material most likely to erode (topsoil) for use in rehabilitation. Retention of vegetative material for use in rehabilitation is also recommended. Vegetative material can also be used to stabilise topsoil stockpiles. Should a clearing permit be granted, it is recommended that conditions be imposed requiring topsoil and cleared vegetation to be retained.

Bioscience Pty Ltd (2007b) reports that Mining Lease 70/1217 displays no indication of acid sulphate soils. Acid sulphate soils are typically associated with muddy riparian areas that are flat, low-lying and close to the watertable. Such conditions generally do not exist on Mining Lease 70/1217 (Bioscience Pty Ltd, 2007b).

The salinisation risk associated with the proposed clearing is considered minimal given the small extent of the proposed clearing and the depth to groundwater (well below the quarry floor) (Irishtown Sandstone Pty Ltd, 2009).

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

Methodology

Bioscience Pty Ltd (2007b).
Irishtown Sandstone Pty Ltd (2009).

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments

Proposal is not likely to be at variance to this Principle

The proposed clearing area is not located in a conservation reserve (GIS Database). The Boyanup State Forest is located approximately 325 metres west of the proposed clearing area at its nearest point (GIS Database).

The proposed clearing of 0.55 hectares of native vegetation on the periphery of existing quarries is not likely to impact upon the values of any conservation area.

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

Methodology

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

Two ephemeral creeks originating on Lot 2 (east of Mining Lease 70/1217) converge into a single creek on Mining Lease 70/1217 to form a meandering brook before leaving the area via a series of culverts under Meotii Road (Bioscience Pty Ltd, 2007c). The proposed clearing is not located within the creeklines (GIS Database).

Irishtown Sandstone Pty Ltd (2009) report that surface water on site is directed to retention and infiltration basins. Correct implementation of this strategy will minimise the risk of sediment laden water running off cleared areas into waterways. During the site visit on 21 September 2009, the assessing officer noted that retention and infiltration basins are being used to capture surface water runoff.

The proposed clearing area is not located within a Public Drinking Water Source Area, Reservoir Protection Zone or Wellhead Protection Zone (GIS Database; Irishtown Sandstone Pty Ltd, 2009).

The proposed clearing is located on Crown Reserves 21583 and 2720, established for the purposes of 'Quarry and Water'. However, there is no current or proposed use of the water resource on the site (Irishtown Sandstone Pty Ltd, 2009). The assessing officer notes that there are a number of tenement conditions attached to Mining Lease 70/1217 which relate to the protection of surface and ground water on the site. Those of relevance to this clearing proposal include:

"Any significant waterways (flowing or not), wetland or its fringing vegetation that may exist on site not being disturbed or removed without prior approval from the Department of Water";

" Measures such as effective sediment traps and stormwater retention facilities being implemented to preserve the natural values of the receiving catchments and those of adjacent areas of native vegetation"; and

" Groundwater quality monitoring bores being installed, maintained and utilised for water quality monitoring on and near the mine site and downstream where aquifers are present".

Additional conditions relating to the management of surface and groundwater are outside the scope of this assessment and include appropriate storage of hydrocarbons and mining in accordance with Department of Water guidelines.

It is considered that the scale and nature of the proposed clearing is unlikely to affect the surface water quality of creek systems on site or off site.

Similarly, the small scale of the proposed clearing renders it unlikely to have a significant impact upon groundwater levels or quality. Groundwater monitoring bores are used to detect any change in groundwater levels or quality.

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

Methodology Bioscience Pty Ltd (2007c).
Irishtown Sandstone Pty Ltd (2009).
GIS Database:
- Hydrography, linear.
- Public Drinking Water Source Areas.

(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

Bioscience Pty Ltd (2007c) undertook a drainage study which included examination of the flooding potential in the Mining Lease. Factors taken into consideration during the study included the topography of the catchment, rainfall data, soil types, runoff potential, infiltration rates and groundwater regimes.

The study undertaken by Bioscience Pty Ltd (2007c) concluded that the existing culverts under Meotti Road are of a sufficient size to prevent general flooding in a 1:10 year flood event. The original quarry expansion proposal which involved clearing of up to 12.24 hectares of native vegetation was deemed unlikely to have any significant impact on the existing drainage system (Bioscience Pty Ltd, 2007c).

On this basis, the assessing officer considers that the proposed clearing of 0.55 hectares of native vegetation is unlikely to increase the incidence or intensity of flooding.

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

Methodology Bioscience Pty Ltd (2007c).

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

Comments

On 3 November 2008, the then Department of Industry and Resources referred the proposal to the Environmental Protection Authority (EPA) under Part IV, section 38 of the *Environmental Protection Act 1986*. On 13 July 2009 the EPA set the level of assessment as 'Not Assessed - Public Advice Given & Managed under Part V of the EP Act (Clearing)'. A number of appeals were received against this level of assessment. On 29 October 2009 DMP received written notification from the EPA advising that the Minister for the Environment dismissed all appeals and upheld the level of assessment as 'Not Assessed - Public Advice Given & Managed under Part V of the EP Act (Clearing)'.

Ten submissions were received when the clearing permit application was advertised for public comment on 24 November 2008. Since then, the area applied to clear has been substantially reduced from12.24 hectares to 0.55 hectares.

A number of the concerns raised by the public submissions are addressed under the relevant Clearing Principles. These include the impact of native vegetation clearing on flora, fauna (especially Carnaby's Black Cockatoo), a poorly represented and poorly conserved vegetation community and surface water quality.

Some of the public submissions received discussed matters outside the scope of the Clearing Principles. These included impacts of native vegetation clearing upon Native Title rights and Aboriginal heritage sites. Impacts associated with the sandstone quarrying operation were also raised and included noise, dust, visual amenity and increased traffic.

In accordance with Section 51O of the *Environmental Protection Act 1986*, the CEO shall have regard to the Clearing Principles so far as they are relevant to the matter under consideration. In considering a clearing matter, the CEO shall also have regard to any planning instrument or other matter that the CEO considers relevant.

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

According to available GIS Databases, one Aboriginal Site of Significance (Art - Site ID 5820) on the Department of Indigenous Affairs' Interim Register covers the application area (GIS Database). This site is not confined to the application area and covers approximately 1,000 hectares (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.

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 GIS Database:
- Aboriginal Sites of Significance.
- Native Title Claims.

4. Assessor's comments

Comment

The proposal has been assessed against the Clearing Principles, and the proposed clearing is not likely to be at variance to Principles (a), (b), (c), (d), (e), (f), (g), (h), (i) or (j).

Should a clearing permit be granted, it is recommended that conditions be imposed on the permit for the purposes of retaining topsoil and vegetation, weed management, record keeping and permit reporting.

5. References

Bioscience Pty Ltd (2007a) Botanical Survey of Part Irishtown Locations 2720 and 21583, Donnybrook. October 2007.

Bioscience Pty Ltd (2007b) Site Visit Report: Donnybrook Quarries - Irishtown Sandstone Pty Ltd. October 2007.

Bioscience Pty Ltd (2007c) Drainage Management: Irishtown Sandstone Pty Ltd, Lots 301, 2720, 21583 Donnybrook.

Burbidge, A. (2004) Threatened animals of Western Australia. Department of Conservation and Land Management, Western Australia.

CALM (2002) Jarrah Forest 2 (JF2 - Southern Jarrah Forest subregion) in 'A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002'. Department of Conservation and Land Management, Western Australia.

DAFWA (2009) Declared Plants in Western Australia. Available: http://www.agric.wa.gov.au/PC_93088.html. Accessed: 1 July 2009.

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

Irishtown Sandstone Pty Ltd (2009) Mining Proposal - M70/1217: Irishtown Road, Donnybrook. May 2009.

Johnstone, R.E., & Storr, G.M. (1998) Handbook of Western Australian Birds: Volume 1 – Non-Passerines (Emu to Dollarbird). Western Australian Museum. 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.

Shepherd, D.P. (2007) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

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.
DMP	Department of Mines and Petroleum, 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} :-

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.