



1. Application details

1.1. Permit application details

Permit application No.: 2690/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Wesfarmers Premier Coal Limited**

1.3. Property details

Property: *Collie Coal (Western Collieries) Agreement Act 1979, Mining Lease 262SA (AM 70/262)*
Local Government Area: Shire of Collie
Colloquial name: Water Treatment Plant Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.7		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
<p>The area applied to clear has been broadly mapped at a scale of 1:250,000 as: Beard Vegetation Association 3: Medium woodland; Marri & Wandoo (GIS Database).</p> <p>Terrigena (2008) undertook a flora and vegetation survey of the proposed clearing area on 12th June 2008. One vegetation unit was described:</p> <p>Woodland of <i>Corymbia calophylla</i> and <i>Eucalyptus marginata</i> over <i>Allocasuarina fraseriana</i> and <i>Persoonia longifolia</i> over <i>Hakea lissocarpa</i>, <i>Macrozamia riedlei</i> and <i>Tetraria capillaris</i>.</p>	<p>Wesfarmers Premier Coal Limited have applied for an Area Permit to clear 1.7 hectares of native vegetation on Mining Lease 262SA (AM 70/262), located approximately 12 kilometres south - south east of the Collie town site (Terrigena, 2008). The clearing permit application has been submitted on behalf of Verve Energy who proposes to construct a water treatment plant that will treat Premier Coal mine dewater prior to pumping to the Muja and Collie power stations.</p> <p>Vegetation clearing will be undertaken via mechanical means with salvageable timber to be harvested and sold by the Forest Products Commission.</p>	<p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)</p> <p>to</p> <p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)</p>	<p>The vegetation condition rating is based on findings of a flora and vegetation survey of the proposed clearing area which was carried out by Terrigena (2008).</p> <p>A majority of the proposed clearing area was in a 'degraded' to 'good' condition, with partial clearing and weeds being the main sources of degradation. A small portion of the proposed clearing area was rated as being in 'excellent' condition (Terrigena, 2008).</p>

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 12 kilometres south-south east of Collie in the Southern Jarrah Forest subregion of the Jarrah Forest Interim Biogeographic Regionalisation for 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.

Terrigena (2008) recorded at least 50 taxa during a flora and vegetation survey of the proposed clearing area in June 2008. Of the taxa which were alive and mature enough to identify to genus level, 45 were native taxa and five were introduced taxa. Twenty three families and 41 genera were represented (Terrigena, 2008). To put these totals into a comparable perspective, Terrigena (2008) compared the results of this survey with a

floristic survey of the Northern Darling Scarp undertaken by Markey (1997). This is the nearest comparable floristic survey given the similar vegetation and soil types. Markey (1997), cited in Terrigena (2008), recorded an average species richness of 45.5 to 75.7 species per 100 square metre quadrat, after visiting each quadrat twice. Considering the much larger size of the proposed clearing area (17,000 square metres) and notwithstanding the fact that the site was only visited once, Terrigena (2008) consider the species diversity of the proposed clearing area to be moderately low and reflective of the degraded nature of the site.

Qualified *Phytophthora cinnamomi* interpreters visited Shotts Forest Block Pit 3 (which includes the proposed clearing area) to interpret whether vegetation was infested from disease caused by *Phytophthora cinnamomi*. The proposed clearing area was largely classified as 'Uninterpretable (Unprotectable)' which means that susceptible plants are absent or too few to enable the interpretation of *P. cinnamomi* presence or absence, and current *P. cinnamomi* symptoms nearby may spread into this area autonomously (DEC, 2008a). A small portion of the proposed clearing area was classified as 'Uninfested (Protectable)', meaning that the area has been determined by a qualified interpreter to be free of plant disease symptoms which indicate the presence of *P. cinnamomi* (DEC, 2008a). Should a clearing permit be granted, it is recommended that hygiene conditions be imposed to minimise the risk of spreading potentially infested material into uninfested areas.

Five introduced flora species were recorded in the proposed clearing area by Terrigena (2008). These included Smooth Catsear (*Hypochoeris glabra*), Ursinia (*Ursinia anthemoides*), Blowfly grass (*Briza maxima*), *Pentaschistis airoides* and Poaceae spp. (grasses). More introduced flora species may have been recorded if the survey was undertaken at a time when annual species were present (Terrigena, 2008). The presence of introduced flora species within the proposed clearing area diminishes the biodiversity value of the site.

From a faunal perspective, the proposed clearing area is small and is unlikely to constitute significant habitat for any indigenous fauna species. The site potentially provides limited nesting, roosting and/or denning habitat for indigenous fauna species (Harewood, 2008). Should a clearing permit be granted, it is recommended that conditions be imposed to ensure potential nesting hollows are identified prior to clearing, with any fauna present to be relocated to suitable adjoining habitat.

The proposed clearing area is located in the Collie State Forest, managed by the Department of Environment and Conservation (DEC) (GIS Database). This State Forest is managed for multiple purposes, including conservation. The *Collie Coal (Western Collieries) Agreement Act 1979* (WA) permits Wesfarmers entry into State Forest for the purposes of exploration, clearing of timber and undergrowth and mining. DEC (2008b) has advised that the proposed clearing does not appear to impact directly on critical DEC assets or ecological functions (such as ecological corridors).

Given the small size of the proposed clearing area and its fragmentation from adjoining patches of native vegetation, the site is unlikely to be significant from a biodiversity perspective. The level of existing disturbance and the lack of conservation significant flora taxa or communities would also suggest that the proposed clearing area is not likely to support a high level of biological diversity.

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

Methodology CALM (2002).
DEC (2008a).
DEC (2008b).
Harewood (2008).
Terrigena (2008).
GIS Database:
- Interim Biogeographic Regionalisation for Australia (Subregions).

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

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

Harewood (2008) undertook a level 1 vertebrate fauna assessment of the proposed clearing area in July 2008. The assessment involved numerous desktop database searches to produce an inventory of species potentially occurring in the proposed clearing area. The following databases were searched:

- Western Australian Museum's faunabase;
- DEC's Threatened Fauna database;
- Department of the Environment, Water, Heritage and Arts (DEWHA) Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* database; and
- Birds Australia's 'Birddata' database.

Published and unpublished literature was also reviewed, detailing fauna of the general area. Aerial photographs of the proposed clearing area were studied to allow the value of the site as a wildlife corridor to be assessed.

Following desktop studies, a field reconnaissance survey was undertaken on 15 July 2008. This involved visiting the proposed clearing area, opportunistically recording fauna species observed, searching under logs, rocks and leaf litter for fauna or evidence of fauna and broadly describing the main habitat types of the area.

The presence and location of any habitat trees was also recorded, and a brief assessment was done from the ground to determine their potential to provide habitat for a range of indigenous fauna species (largely based on the size of the hollow and its orientation to the ground).

As a result of desktop research and reconnaissance, Harewood (2008) concluded that the proposed clearing area was too small by itself to be considered significant local or regional habitat for indigenous vertebrate fauna. The area was not determined to be significant as a wildlife corridor as it does not form a linkage between areas of remnant bushland (this can be seen via aerial photography). A number of species (including a range of conservation significant fauna) may potentially visit the proposed clearing area, although the area is likely to form only a small part of a much larger home range for most of these species. A number of transient species may pass through the area from more suitable habitat nearby, but it is unlikely that any species would seek long term refuge in the area.

Historical disturbances (logging, minor gravel extraction, frequent fires and partial clearing for fire breaks and access tracks) were noted in the proposed clearing area by Harewood (2008), and these are likely to have reduced the habitat values of the area significantly. Most trees in the area are small (regrowth) and do not contain hollows of any size. Fallen hollow logs were very rare or absent from most of the site (Harewood, 2008).

Potential impacts to fauna as a result of vegetation clearing include:

- loss of habitat for foraging and shelter (and limited nesting habitat);
- displacement of fauna into surrounding vegetation;
- direct mortality of fauna during the clearing operations (sedentary and young fauna are particularly susceptible); and
- secondary disturbance such as noise and lighting from machinery and other equipment.

The most important fauna value of the site is likely to be its potential to provide limited nesting, roosting and/or denning habitat for indigenous fauna species. Harewood (2008) recorded five habitat trees within the proposed clearing area during a reconnaissance survey. Harewood (2008) defines a habitat tree as 'generally any tree which is alive or dead that contains one or more visible hollows (cavities within the trunk or branches) suitable for the occupation of hollow-dependent fauna as nesting, roosting and/or denning sites'. The five habitat trees were located in the northern section of the proposed clearing area, which was rated as 'excellent' condition during a flora and vegetation survey by Terrigena (2008).

Whilst deemed unsuitable to provide nesting habitat for Cockatoo species (hollows too small) the five habitat trees do provide hollows suitable for use by Phascogales, including the Southern Brush-tailed Phascogale (*Phascogale tapoatafa tapoatafa*) which is listed as Schedule 1 'Fauna that is rare or likely to become extinct', *Wildlife Conservation (Specially Protected Fauna) Notice 2008*. Threatening processes for the Southern Brush-tailed Phascogale include a reduction in trees with suitable hollows, fox and cat predation and possibly altered fire regimes (Harewood, 2008).

To minimise the impact of the proposed vegetation clearing on Phascogales and any other fauna potentially nesting in habitat trees, Harewood (2008) has made the following recommendations:

- habitat trees be checked for the presence of fauna prior to clearing (or at least felled in such a manner that reduces the chances of fauna that may be inside hollows from being injured or killed); and
- If possible, clearing should be conducted outside of the known Phascogale breeding season (early July - December) to minimise the risk of disturbing breeding animals.

Should a clearing permit be granted, recommendations made by Harewood (2008) must be considered and appropriate conditions should be imposed to minimise the impact of the proposed vegetation clearing on Phascogales and any other fauna species that may potentially be nesting in tree hollows.

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

Methodology Harewood (2008).

(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**

Terrigena (2008) undertook a level 1 flora and vegetation survey of the proposed clearing area on 12th June 2008. Prior to undertaking the field survey, a Rare and Priority Flora Database search request was submitted to DEC. A 10 kilometre radius from the centre of the proposed clearing area (432453.3 mE, 6303533.6 mN GDA94) was searched (Terrigena, 2008).

Results of the database search showed that one Declared Rare Flora (DRF) and 15 Priority Flora taxa had previously been recorded within a 10 kilometre radius of the centre of the proposed clearing area. DEC records showed that one additional DRF taxa and eight Priority Flora taxa had previously been recorded in the wider region. A total of 25 conservation significant flora taxa were therefore listed as potentially occurring in the proposed clearing area:

1. *Grevillea rara* (R)
2. *Jacksonia velveta* (R)
3. *Hemigenia rigida* (P1)
4. *Sphaerolobium benetectum* (P1)
5. *Leucopogon sp. Collie* (P2)
6. *Millotia tenuifolia* (P2)
7. *Synaphea petiolaris subsp. simplex* (P2)
8. *Acacia semitrullata* (P3)
9. *Adenanthos cygnorum subsp. chamaephyton* (P3)
10. *Aotus cordifolia* (P3)
11. *Calytrix pulchella* (P3)
12. *Eryngium ferox ms* (P3)
13. *Grevillea prominens* (P3)
14. *Meeboldina thysanantha ms* (P3)
15. *Rhodanthe pyrethrum* (P3)
16. *Stylidium rhipidium* (P3)
17. *Synaphea hians* (P3)
18. *Tetrateca parvifolia* (P3)
19. *Acacia cuneifolia* (P4)
20. *Eucalyptus rudis subsp. cratyantha* (P4)
21. *Grevillea ripicola* (P4)
22. *Lasiopetalum cardiophyllum* (P4)
23. *Pultenaea skinneri* (P4)
24. *Stylidium plantagineum* (P4)
25. *Tyrbastes glaucescens* (P4)

None of the above listed conservation significant flora taxa were recorded by Terrigena (2008) during the flora and vegetation survey of the proposed clearing area. Given that the survey was carried out in early winter, a majority of the annual species which would normally occur in the area were not present at the time the survey was carried out (Terrigena, 2008). A comprehensive flora species list for the proposed clearing area could therefore not be produced from Terrigena's June 2008 survey. Notwithstanding, only four of the Priority Flora taxa listed above are annual species. Of these, only *Millotia tenuifolia* occurs in habitat similar to that encountered during the flora and vegetation survey of the proposed clearing area. Neither of the DRF species listed above are annuals (Terrigena, 2008).

Two species of interest were identified during the flora and vegetation survey of the proposed clearing area:

1. *Acacia trigonophylla*; and
2. *Marianthus tenuis*.

Acacia trigonophylla has not previously been collected from the Collie area and is generally known from the Avon Wheatbelt and Mallee bioregions, although there have been previous isolated collections from the Jarrah Forest bioregion (Terrigena, 2008). *Acacia trigonophylla* is not listed on the Declared Rare or Priority Flora list. Specimens of *Acacia trigonophylla* collected during the survey will be lodged as voucher specimens with the Western Australian Herbarium for confirmatory identification and future reference (Terrigena, 2008).

Marianthus tenuis has three distinct populations as well as isolated collections ranging from Perth to the Capes and the Esperance Plains (Terrigena, 2008). Each of the three main populations has its own taxonomic features and it is possible that a future revision of this species may separate this species into three distinct taxa (Terrigena, 2008). The specimen collected from the proposed clearing area was similar to voucher specimens collected from the Whicher Range (located near Busselton), none of which have been collected from the Collie area previously. The conservation value of the different populations of this taxa is yet to be identified (Terrigena, 2008). Notwithstanding, *Marianthus tenuis* does have a wide distribution range, currently has no conservation status and was only represented by a single individual in the proposed clearing area. A voucher specimen has been lodged with the Western Australian Herbarium for confirmatory identification and future reference (Terrigena, 2008).

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

Methodology Terrigena (2008).

(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) or Priority Ecological Communities (PEC's) within the proposed clearing area (GIS Database). Terrigena (2008) undertook a flora and vegetation survey of

the proposed clearing area in June 2008 and did not record any TEC's or PEC's.

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

Methodology Terrigena (2008).
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 at variance to this Principle

The area applied to clear is within the Interim Biogeographic Regionalisation for Australia (IBRA) Jarrah Forest bioregion (GIS Database). According to Shepherd et al (2001) there is approximately 53.8% of the pre-European vegetation remaining in the Jarrah Forest bioregion. At the subregional level, there is approximately 50.2% of the pre-European vegetation remaining in the Southern Jarrah Forest subregion.

The vegetation of the application area is classified as Beard Vegetation Association 3 - Medium woodland; Marri & Wandoo (GIS Database). There is approximately 61.6% of the pre-European vegetation remaining of Beard Vegetation Association 3 in the Southern Jarrah Forest subregion (Shepherd et al, 2001). Approximately 30.2% of the current extent of Beard Vegetation Association 3 is represented in conservation reserves within the Southern Jarrah Forest subregion (see table below). A biodiversity audit of the Southern Jarrah Forest subregion lists Beard Vegetation Association 3 as a low priority for reservation (CALM, 2002). The area proposed to clear does not represent a significant remnant of vegetation in the local or regional area. The proposed clearing will not reduce the extent of Beard Vegetation Association 3 below current recognised threshold levels, below which species loss increases significantly.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and current %)
IBRA Bioregion – Jarrah Forest	4,506,675	2,426,080	~53.8	Least concern	14.0 (25.5)
IBRA subregion – Southern Jarrah Forest	2,607,875***	1,308,941***	~50.2	Least concern	16.8 (32.8)
Shire of Collie	172,072***	161,845***	~94.1	Least concern	
Beard veg assoc. – State					
3	2,661,515	1,863,983	~70.0	Least concern	18.4 (26.2)
Beard veg assoc. – Subregion					
3	1,482,495	913,332	~61.6	Least concern	18.7 (30.2)

* Shepherd et al. (2001) updated 2005

** Department of Natural Resources and Environment (2002)

*** Area within the Intensive Landuse Zone

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

Methodology CALM (2002).
Department of Natural Resources and Environment (2002).
Shepherd et al (2001).
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 at variance to this Principle

According to available GIS databases, there are no permanent or ephemeral watercourses or wetlands in the proposed clearing area (GIS Database). Similarly, interpretation of aerial photography would suggest that the vegetation proposed to clear is not growing in, or in association with, a watercourse or wetland. Terrigena (2008) undertook a flora and vegetation survey of the proposed clearing area in June 2008 and did not note any vegetation types associated with watercourses or wetlands. A fauna assessment undertaken by Harewood (2008) did not record any habitats associated with drainage features.

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

Methodology Harewood (2008).
Terrigena (2008).
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**

The proposed clearing area is located in the Collie Basin within the Southern Darling Plateau (Terrigena, 2008). The Department of Agriculture and Food (2008), cited in Terrigena (2008) describe the soils of the Collie Basin as belonging to the Dwellingup Sandy Divides Phase. Soils consist of duplex sandy gravels, loamy gravels and pale deep sands. Topographic contours indicate that the proposed clearing area is relatively flat (GIS Database).

According to the Bureau of Meteorology (2008) the average annual rainfall of Collie is 939.6 millimetres, with the wettest months being from May until September (peak months of June and July average 180 millimetres of rainfall each). Vegetation clearing during the winter months when heavy rainfall events are experienced could potentially pose a water erosion risk. However, should a clearing permit be granted, it is expected that the vegetation clearing would take place during November or December. Average annual rainfall in these months is markedly lower (31.7 and 15.9 millimetres respectively) and it is therefore expected that the potential for water erosion would be minimised.

Advice received by the Department of Water (DoW) indicates that the proposed clearing is not likely to pose a salinity risk given its small size and the fact that it is adjacent to mine dewatering operations which are likely to mitigate any potential salinity impacts (DoW, 2008).

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

Methodology Bureau of Meteorology (2008).
DoW (2008).
Terrigena (2008).
GIS Database:
- Topographic Contours, Statewide.

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

Comments **Proposal is not likely to be at variance to this Principle**

The proposed clearing area is located in the Collie State Forest (GIS Database). This state forest is managed for multiple purposes, including conservation. The *Collie Coal (Western Collieries) Agreement Act 1979 (WA)* permits Wesfarmers entry into State Forest for the purposes of exploration, clearing of timber and undergrowth and mining.

Wesfarmers Premier Coal Limited will harvest salvageable timber which will be sold by the Forest Products Commission. Remnant timber will be pushed into manageable heaps using a bulldozer and scrap timber will be burnt.

The proposed clearing area is in a degraded state and is adjacent to powerline easements and an electrical sub-station. Weed invasion, previous logging, frequent fires, access tracks and fire breaks are types of disturbances observed in the area by Harewood (2008). A limited number of habitat trees were observed which are likely to represent the most important conservation value of the area. DEC (2008b) has advised that the proposed clearing does not appear to impact directly on critical DEC assets or ecological functions (such as ecological corridors).

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

Methodology DEC (2008b).
Harewood (2008).
GIS Database:
- CALM Managed Lands and Waters.

(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 permanent or ephemeral watercourses or wetlands in the proposed clearing area (GIS Database). Surface water quality is therefore unlikely to be impacted by the proposed vegetation clearing.

The proposed clearing area is located in the Wellington Dam Catchment, a Public Drinking Water Source Area

(PDWSA) gazetted under the *Country Areas Water Supply (CAWS) Act 1947* (GIS Database). The proposed clearing area is located in 'Zone A', the highest salinity risk part of the CAWS Act Wellington Dam Catchment Area (DoW, 2008). The proposed clearing will allow for the establishment of a Verve Energy water treatment plant, to be co-located with the proposed Department of Water desalination plant. The proposal falls within the "essential government works" category. The Water and Rivers Commission's (1996) *Policy and Guidelines: Granting of Licences to Clear Indigenous Vegetation in Catchments Subject to Clearing Control Legislation* states that for 'essential government works' minimum essential clearing will be approved on the condition that an equivalent area within Zone A (unless otherwise specified) is reforested and an Agreement to Reserve may be requested. DoW (2008) continues to operate in accordance with this Policy and Guidelines.

The proposed clearing area is small (1.7 hectares) and is adjacent to mine dewatering operations that are likely to mitigate any potential salinity impacts (DoW, 2008). Notwithstanding these mitigating circumstances, the DoW has no objection to the proposed clearing provided that an equivalent vegetation offset is established in Zone A of the Wellington Dam Catchment and maintained in perpetuity (DoW, 2008).

Verve Energy currently hold offset credits as a result of Blue Gum plantations previously established on Coolangatta Farm (located in Zone A, Wellington Dam Catchment), to offset native vegetation clearing associated with power line construction for the Muja Power Station in the 1980's. DoW (2008) has advised that these credits may be used as an offset for this clearing proposal and is supportive of a clearing permit being granted, particularly considering the relatively small area involved. Whilst an Agreement to Reserve Coolangatta Farm is not yet in place, the risk of the offset area being cleared is low because the vegetation is also acting as a noise buffer (a statutory requirement) for Verve Energy's power station (DoW, 2008). Verve Energy are supportive of establishing an Agreement to Reserve for Coolangatta Farm (DoW, 2008) and it is expected that liaison between Verve Energy and DoW will ensure that this is put in place in the near future.

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

Methodology DoW (2008).
Water and Rivers Commission (1996).

(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 proposed clearing area is located in the Southern Jarrah Forest subregion (GIS Database) which is characterised by a warm Mediterranean climate (CALM, 2002). The average annual rainfall of the proposed clearing area is approximately 939.6 millimetres, whilst average annual evaporation is approximately 1,400 millimetres (Bureau of Meteorology, 2008; GIS Database).

There are no permanent or ephemeral watercourses or wetlands in the proposed clearing area (GIS Database). Topographic contours indicate that rainfall over the proposed clearing area would run-off as sheet flow to the west as the land slopes gently towards a man made pit lake (GIS Database). In natural circumstances, the proposed clearing area would not appear to be prone to flooding. The proposed clearing of 1.7 hectares of native vegetation is not expected to increase the incidence or intensity of such events given the small size of the area to be cleared (1.7 hectares) in relation to the size of the Wellington Dam catchment (282, 909 hectares)(GIS Database).

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

Methodology Bureau of Meteorology (2008).
CALM (2002).
GIS Database:
- Evaporation Isopleths.
- Hydrographic Catchments - Catchments.
- Hydrography, linear.
- Interim Biogeographic Regionalisation for Australia (Subregions).
- Topographic Contours, Statewide.

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

Comments

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 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*.

According to available databases, the buffer zone of one Aboriginal Site of Significance on the interim register (maintained by the Department of Indigenous Affairs) intersects the proposed clearing area (GIS Database). A traditional custodian visited the proposed clearing area on 26 June 2008 and advised that the proposed clearing area has no Nyungar significance and that there are no registered Aboriginal Sites of Significance within the vicinity of the proposed clearing area. 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. Approval must be given under Section 18 of the *Aboriginal Heritage Act 1972* to disturb an Aboriginal Site of Significance.

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.

Verve Energy currently hold offset credits as a result of Blue Gum plantations previously established on Coolangatta Farm (located in Zone A, Wellington Dam Catchment), to offset native vegetation clearing associated with power line construction for the Muja Power Station in the 1980's. DoW (2008) has advised that these credits may be used as an offset for this clearing proposal and is supportive of a clearing permit being granted, particularly considering the relatively small area involved. Whilst an Agreement to Reserve Coolangatta Farm is not yet in place, the risk of the offset area being cleared is low because the vegetation is also acting as a noise buffer (a statutory requirement) for Verve Energy's power station (DoW, 2008). Verve Energy are supportive of establishing an Agreement to Reserve for Coolangatta Farm (DoW, 2008) and it is expected that liaison with DoW will ensure that this is put in place in the near future.

Methodology DoW (2008).
GIS Databases:
- Aboriginal Sites of Significance.
- Native Title Claims.

4. Assessor's comments

Comment

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

Should the permit be granted, it is recommended that conditions be imposed for the purposes of fauna management, hygiene control, record keeping and permit reporting.

5. References

- Bureau of Meteorology (2008) Climate statistics for Australian locations: Summary statistics: Collie. Available: http://www.bom.gov.au/climate/averages/tables/cw_009628.shtml. Accessed 01/10/2008.
- 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.
- DEC (2008a) Letter to Wesfarmers Premier Coal. *Phytophthora cinnamomi* interpretation of Shotts Forest Block Pit 3. DEC, Forest Management Branch, Bunbury. 10 June 2008.
- DEC (2008b) Biodiversity advice for land clearing application. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR), received 14 October 2008. Environmental Management Branch, Department of Environment and Conservation, Western Australia.
- 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.
- DoW (2008) *Country Areas Water Supply Act 1947*: Land and Clearing Management advice to the assessing officer, DoIR, received 25 September 2008.
- Harewood, G (2008) Fauna Assessment (Level 1). Water Treatment Plant Site: Premier Coal - Stockdale. July 2008. Version 1.
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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*} :-

- 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.