Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3024/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Bestbet Pty Ltd**

1.3. Property details

Property: Exploration Licence 70/2088
Local Government Area: Shire Of Toodyay
Colloquial name: Bindoon Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.52		Mechanical Removal	Mineral Exploration

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 scale of 1: 250,000 for the whole of Western Australia. Two Beard Vegetation Associations are located within the application areas (Shepherd et al., 2001): **Beard Vegetation Association 4:** medium woodland; marri and wandoo; **Beard Vegetation Association 968:** medium woodland; jarrah, marri and wandoo. A flora and vegetation survey of the application areas was undertaken by Mattiske Consulting in spring 2008. The survey identified the following three vegetation complexes within the application areas (Havel 1975a and 1975b as cited in Mattiske Consulting, 2009): **Vegetation Complex 1:** Woodland to Open Woodland of *Eucalyptus marginata* subsp. *thalassica* - *Corymbia calophylla* with scattered understorey, including *Banksia dallanneyi*, *Hibbertia hypercoides*, *Hakea lissocarpha* and *Xanthorrhoea gracilis* on mid slopes. This site-vegetation type occurs on the mid to upper slopes, usually with sandier soils, although the soils can range from grey leached surface sands to sandy gravels. This site-vegetation type occurs in other conservation areas, both within the eastern and northern parts of the Jarrah forest and as such is not restricted (Heddle et al 1980b; Department of Conservation and Environment 1980, Department of Conservation and Land Management 1987 as cited in Mattiske Consulting, 2009). This vegetation type is well represented in the conservation estates in the north and eastern parts of the forest areas (Mattiske Consulting, 2009).	Bestbet (2009) has applied to clear up to 0.52 hectares of native vegetation within an area of approximately 74 hectares. The proposed clearing is located approximately 20 kilometres north-west of Toodyay (GIS Database). The purpose of the proposed clearing is for mineral exploration (Bestbet, 2009). Vegetation clearing will be undertaken via mechanical means using a small, rubber tyred loader (Bestbet, 2009). Disturbed vegetation will be stockpiled for use in rehabilitation and blocking access tracks (Bestbet, 2009).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994). To Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).	The vegetation condition rating was based on the flora and vegetation survey of the proposed clearing area which was conducted by Mattiske Consulting in spring 2008. The application areas are all adjacent to existing roads (Bestbet, 2009). The vegetation condition was reported as having been affected by fire and weeds. Most of the proposed clearing areas had been recently burnt, which in some areas was relatively intense (Mattiske Consulting, 2009). In addition, due to the location of the application areas near existing tracks, there were some annual weeds present in the sites (Mattiske Consulting, 2009).

Vegetation Complex 2:

Woodland of *Eucalyptus wandoo* - *Eucalyptus marginata* subsp. *thalassica* with scattered understorey, including *Synaphea gracillima*, *Banksia dallanneyi* var. *dallanneyi* and annual species on lower slopes.

This site-vegetation type occurs on the lower seasonally moister clay-loam. This site-vegetation type occurs in other conservation areas, both within the eastern and northern parts of the Jarrah forest and as such is not restricted (Heddle et al 1980b; Department of Conservation and Environment 1980, Department of Conservation and Land Management 1987 as cited in Mattiske Consulting, 2009). This site-vegetation type is well represented in the conservation estates in the north and eastern parts of the forest areas (Mattiske Consulting, 2009).

Vegetation Complex 3:

Open Woodland of *Eucalyptus wandoo* with low shrub understorey layer, including *Bossiaea ornata*, *Hibbertia hypercoides*, *Banksia dallanneyi* var. *dallanneyi*, *Hakea lissocarpha* and *Xanthorrhoea gracilis* on mid to upper slopes.

This site-vegetation type occurs on mid and upper slopes of undulating hills with clay-loams on shallow soils. This site-vegetation type occurs in other conservation areas, both within the eastern, western escarpment and northern parts of the Jarrah forest and as such is not restricted (Heddle et al 1980b; Department of Conservation and Environment 1980, Department of Conservation and Land Management 1987 as cited in Mattiske Consulting, 2009). This site-vegetation type occurred on the main small hill within the survey area. This site-vegetation type is well represented in the conservation estates in the north and eastern parts of the forest areas.

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 areas are located within the Northern Jarrah Forest Interim Biogeographic Regionalisation for Australia (IBRA) subregion (GIS Database). The Northern Jarrah Forest subregion comprises of duricrusted plateau of Yilgarn Craton (CALM, 2002). At a broad scale vegetation is described across the subregion as Jarrah-Marri forest in the west with Bullich and Blackbutt in the valleys grading to Wandoo and Marri woodlands in the east with Powder bark on breakaways (CALM, 2002). There are extensive but localised sand sheets with Banksia low woodlands and heath is found on granite rocks and as a common understorey of forest and woodlands in the north and east (CALM, 2002). CALM (2002) reports that the majority of diversity in the communities occurs on the lower slopes or near granite soils where there are rapid changes in site conditions. CALM (2002) reports that the Northern Jarrah Forest region has moderate species richness with 400 to 600 species per kilometre.

The application areas occur on the lateritic capped Archaean granite and metamorphic rocks of the Darling Plateau (Mattiske Consulting, 2009). The following two landforms and soil units are represented in the survey area (Churchward and McArthur 1980 as cited in Mattiske Consulting, 2009):

Yalanbee 5: Gently undulating landscape dominated by fine gravels, some duricrust on ridges;

Coolakin: Valleys on the eastern part of the plateau; sandy and gravely duplex soils on the slopes; narrow valley floors; some rock outcrop.

Mattiske Consulting conducted a flora and vegetation survey of the application areas in spring 2008. This survey identified a total of 102 vascular plant taxa from 33 families and 64 genera (Mattiske Consulting, 2009). The most common families within the surveyed areas were *Proteaceae*, *Papilionaceae*, *Asteraceae*, *Dilleniaceae* and *Cyperaceae* (Mattiske Consulting, 2009). This vegetation structure and diversity appears

typical of the region when compared to the vegetation descriptions provided by CALM (2002).

Mattiske Consulting (2009) reported six weed species as occurring within the application areas: Silver Hairgrass (*Aira caryophyllea*), Scarlet Pimpernel (*Anagallis arvensis*), Cape Weed (*Arctotheca calendula*), Smooth Catsear (*Hypochaeris glabra*), Fireweed (*Senecio diaschides*) and South African Marigold (*Ursinia anthemoides*). The presence of these introduced weed species lowers the biodiversity value of the proposed clearing areas. Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Should a clearing permit be granted, it is recommended that a condition be imposed for the purposes of weed management.

A search of Department of Environment and Conservation (DEC) databases was conducted by the assessing officer for fauna species that have the potential to occur within 40 kilometres of the application areas. The search indicated that 602 fauna species have the potential to occur within the search area (DEC, 2009a). This indicates a high level of faunal diversity within the region, with the search highlighting in particular a high level of mammal, reptile and bird diversity (DEC, 2009a). This could be partly due to the location of the application areas within the Julimar State Forest, however, the small scale of clearing (0.52 hectares), spread out over three separate application areas, is unlikely to have a significant impact upon fauna or flora diversity.

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

Methodology

CALM (2002)
DEC (2009a)
Mattiske Consulting (2009)
GIS Database
- Interim Biogeographic Regionalisation for Australia

(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

The assessing officer has conducted a search of Department of Environment and Conservation (DEC) databases for fauna of conservation significance that may occur within a 40 kilometre radius of the application areas. This search identified 33 conservation significant fauna that have the potential to occur within 40 kilometres of the application areas, including five invertebrate species (DEC, 2009a). The DEC (2009e) has provided advice that states that the proposal will impact on a translocation area for the following conservation significant fauna:

- Woylie (*Bettongia pencillata* subsp. *ogilbyi*) – Schedule 1 (Fauna that is rare or likely to become extinct), *Wildlife Conservation* (*Specially Protected Fauna*) *Notice 2008* and Threatened, *Environment Protection and Biodiversity Conservation* (*EPBC*) *Act 1999*;
- Chuditch (*Dasyurus geoffroii*) – Schedule 1 (Fauna that is rare or likely to become extinct), *Wildlife Conservation* (*Specially Protected Fauna*) *Notice 2008* and Vulnerable, *EPBC Act 1999*;
- Quenda (*Isodon obesulus* subsp. *fusciventer*) – Priority 5 on the DEC Threatened and Priority Fauna list.

Woylies may be found throughout jarrah forest in the south-west of Western Australia (DEC, 2009b). They can also be found in areas of South Australia and New South Wales (DEC, 2009b). Woylies are nocturnal and forage primarily for underground fungi and also feed on seeds, tubers and bulbs (DEC, 2009b).

The Chuditch may be found in jarrah forest and mixed karri/marri/jarrah forest in the south-west of Western Australia (DEC, 2009c). This species also occurs in very low numbers in the Midwest, Wheatbelt and South Coast region of Western Australia (DEC, 2009c). The Chuditch occupy a wide range of habitats from woodlands, dry sclerophyll forests, riparian vegetation, beaches and deserts (DEC, 2009c).

The Quenda is widely distributed near the south-west coast of Western Australia and has a patchy distribution through the jarrah and karri forest and on the Swan Coastal Plain, and inland to Hyden (DEC, 2009d). The species preferred habitat consists of dense scrubby, often swampy, vegetation with dense cover up to one metre high (DEC, 2009d). The Quenda often feeds in adjacent forest and woodland that is burnt on a regular basis and in areas of pasture and cropland lying close to dense cover (DEC, 2009d).

DEC has provided fauna advice in regards to this proposal. DEC (2009e) state that the proposal will impact on a translocation area for the specially protected fauna species discussed above. The Department reports that the effect of the proposal on these species should be minimal and short-term, however, there is the potential for works to impact upon fauna monitoring which is scheduled to occur in late June (DEC, 2009e). DEC (2009e) recommend that no exploration work should be scheduled to occur in the months of June or July to accommodate Departmental activity. In addition, DEC (2009e) recommend that all disturbance to potential fauna habitat (on-ground hollow logs) should be avoided between August and December as these are used by the Chuditch for burrows during their breeding season.

The habitat types found within the application areas also occur within the eastern and northern parts of the Jarrah forest and as such are not restricted (Mattiske Consulting, 2009). The 0.52 hectares of native vegetation

to be impacted upon is therefore not likely to represent significant habitat for any fauna species.

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

Methodology DEC (2009a)
DEC (2009b)
DEC (2009c)
DEC (2009d)
DEC (2009e)
Mattiske Consulting (2009)

(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**
Mattiske Consulting conducted a flora and vegetation survey of the application areas in spring 2008. The survey consisted of collecting data from a 25 metre radius around each proposed drill site for understorey species and tree species (Mattiske Consulting, 2009). In addition, the assessing officer has conducted a search of Department of Environment and Conservation (DEC) databases for Declared Rare Flora (DRF) or Priority flora that may occur within a 40 kilometre radius of the application areas.

The search of DEC (2009a) databases for DRF and Priority flora found 27 DRF and 131 Priority flora species that could potentially occur within a 40 kilometre radius of the application areas, however, Mattiske Consulting (2009) did not find any DRF or Priority flora during the field survey of the application areas. Therefore, the proposed clearing of 0.52 hectares of native vegetation is unlikely to have a significant impact upon any DRF or Priority flora.

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

Methodology DEC (2009a)
Mattiske Consulting (2009)

(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 Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) within the application areas (GIS Database). The closest PEC is located approximately 10 kilometres north-west of the application areas (GIS Database). At such distance from the application areas, these ecosystems are unlikely to be affected by the proposed clearing.

Mattiske Consulting (2009) reported that no TECs or PECs were identified during the flora and vegetation survey of the application areas.

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

Methodology Mattiske Consulting (2009)
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 application areas fall within the Jarrah Forest IBRA Bioregion (GIS Database). Shepherd et al. (2001) report that approximately 53.8% of the pre-European vegetation still exists within this Bioregion, of which approximately 25.5% is located within conservation reserves (see table). In addition, there is approximately 58.8% of vegetation remaining within the Northern Jarrah Forest IBRA subregion, of which 16.9% remains in conservation estate. There is approximately 50.8% of vegetation remaining within the Shire of Toodyay (Shepherd et al., 2001).

The vegetation within the application areas is recorded as the following two Beard Vegetation Associations (Shepherd et al., 2001):

Beard Vegetation Association 4: medium woodland; marri and wandoo;

Beard Vegetation Association 968: medium woodland; jarrah, marri and wandoo.

According to Shepherd et al. (2001) approximately 23.4% of vegetation association 4 and approximately 50.3% of vegetation association 968 remains within the Bioregion. In addition, approximately 29.1% of vegetation

association 4 and 76.9% of vegetation association 968 remains within the Subregion (see table below). Vegetation association 4 is listed as vulnerable as it has below 30% of the pre-European vegetation remaining, however, both vegetation association 4 and 968 are well represented in conservation estate. The removal of 0.52 hectares of native vegetation is therefore not likely to significantly impact on the extent of these vegetation types either on a regional or sub-regional level.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and post clearing %)
IBRA Bioregion – Jarrah Forest	4,506,675	2,426,080	~53.8	Least Concern	14 (25.5)
IBRA Subregion – Northern Jarrah Forest	1,898,799	1,117,139	~58.8	Depleted	10 (16.9)
Local Government – Toodyay	173,440	88,052	~50.8	Least Concern	n/a
Beard veg assoc. – State					
4	1,054,317	245,362	~23.3	Vulnerable	4.4 (18.2)
968	296,889	97,181	~32.7	Depleted	11.1 (33.5)
Beard veg assoc. – Bioregion					
4	1,022,850	238,876	~23.4	Vulnerable	4.4 (18.3)
968	140,827	70,809	~50.3	Least Concern	9.7 (19.3)
Beard veg assoc. - subregion					
4	614,307	179,013	~29.1	Vulnerable	6.5 (21.8)
968	72,002	55,361	~76.9	Least Concern	14.9 (19.3)

* Shepherd et al. (2001) updated 2005
** 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

Department of Natural Resources and Environment (2002)
Shepherd et al. (2001)
GIS Database
- Interim Biogeographic Regionalisation for Australia

(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 at variance to this Principle

The application areas are located within a region that has a dry Mediterranean climate. The region has an average annual winter rainfall of approximately 600 to 700 millimetres and is generally dry for 5 to 6 months of the year (Mattiske Consulting, 2009).

The application areas are located within a *Rights in Water Irrigation* (*RIWI*) *Act*, *1914* Surface Water Management Area and the *Waterways Conservation Act*, *1976* Avon River Management Area (GIS Database). The proponent is required to obtain a Bed and Banks permit in order to disturb any watercourse. According to available databases, there are no permanent watercourses or wetlands within the application areas, however there is one minor, ephemeral drainage line within one of the application areas (GIS Database). Based on the climate of the region this drainage line is expected to be dry for the majority of the year.

The removal of 0.52 hectares over three separate application areas is unlikely to have a significant impact upon any watercourse or wetland. Bestbet (2009) report that the proposed area of clearing does not occur within areas of riparian vegetation, wetlands, watercourses, surface water or groundwater. Bestbet (2009) state that all sites proposed to be cleared are at least 50 metres from either a seasonal or perennial watercourse.

Based on the above, the proposed clearing is at variance to this Principle, however, the clearing associated with watercourses is likely to be minimal and is therefore unlikely to have a significant impact upon any riparian vegetation, watercourse or wetland.

Methodology
Bestbet (2009)
Mattiske Consulting (2009)
GIS Database
- Hydrography, linear
- Waterways Conservation Act, Waterway Management Area

(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

Mattiske Consulting (2009) report the soils of the application areas as being dominated by sandy-gravel soils to clay loams. Churchward and McArthur (1980) as cited in Mattiske Consulting (2009) undertook a study of the landforms and soils of the Darling System. Mattiske Consulting (2009) reports the following landforms and soil units as being represented in the application areas:

Yalanbee – Gently undulating landscape dominated by fine gravels, some duricrust on ridges;

Coolakin – Valleys on the eastern part of the plateau; sandy and gravely duplex soils on the slopes; narrow valley floors; some rock outcrop.

Bestbet (2009) report that all but one proposed drill site (site 8) is on flat to very slightly undulating land. This should minimise any erosion caused by surface water run-off (Bestbet, 2009). In addition, Bestbet (2009) report that site 8 is unlikely to be utilised in the drilling program. It is unlikely that the clearing of 0.52 hectares of native vegetation will cause any significant land degradation, given the small scale of clearing and minor relief associated with the areas proposed to be cleared.

The application areas occur within a Dieback Risk Zone in the Julimar State Forest (Bestbet, 2009). Appropriate measures need to be taken to prevent the spread of dieback disease (*Phytophthora* sp.). Bestbet (2009) commit to taking the following measures to control dieback disease:

- Wash down all vehicles, machinery, equipment and tools, prior to entering and leaving the State Forest;
- Wash down all vehicles, machinery, equipment and tools prior to entering or leaving each drill site;
- Carry out the proposed clearing and drilling during 'dry soil conditions'.

It is noted that the tenement conditions for Exploration Licence 70/2088 require the tenement holder to provide a management plan to prevent the spread of dieback disease (*Phytophthera* sp.). This plan is required to be submitted to the Director, Environment Division, Department of Mines and Petroleum (DMP) for assessment and approval before any exploration activities commence. All exploration activities shall then comply with the commitments made in the management plan.

Based on the above, the proposed clearing is not likely to be at variance to this Principle. It is recommended that should a clearing permit be granted, conditions be imposed for the purpose of dieback control and weed management.

Methodology
Bestbet (2009)
Mattiske Consulting (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 may be at variance to this Principle

The application areas are located within the Julimar State Forest (GIS Database). The northernmost area of this forest is an extensive area of mixed jarrah, wandoo and powderbark wandoo with extensive areas of understorey and ground vegetation (DEWHA, 2009). The forest is especially rich in bird and reptile species, some of which are at the northern end of their range (DEWHA, 2009). The forest is an important refuge for small song birds which move north in winter as southern forest areas become too cold and wet (DEWHA, 2009).

The Julimar State Forest is located within a Dieback Risk Zone, however, Bestbet (2009) has a number of

procedures and protocols in place to minimise the risk of the potential spread of dieback disease (*Phytophthora* sp.). In addition the Julimar State Forest is a translocation area for the specially protected fauna species Chuditch (*Dasyurus geoffroii*) and Woylie (*Bettongia penicillata ogilbyi*) and the Priority species Quenda (*Isodon obesulus fusciventer*) (DEC, 2009e). The Department of Environment and Conservation (DEC) (2009e), reports that the proposed clearing is likely to have a minimal and short-term affect upon these species. DEC (2009e) recommends that no exploration work occur in June or July to accommodate Departmental fauna monitoring activities.

The proposed clearing of 0.52 hectares of native vegetation within three separate application areas, equalling approximately 74 hectares, is not likely to have a significant impact upon the environmental values of any conservation area.

Based on the above, the proposed clearing may be at variance to this Principle, however, the small-scale of clearing is not likely to have a significant impact upon the environmental values of any conservation area. It is recommended that should a clearing permit be granted, conditions be imposed for the purpose of dieback control and rehabilitation.

Methodology
Bestbet (2009)
DEC (2009e)
DEWHA (2009)
GIS Database
- CALM Managed Land 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

The application areas are located within a region that has a dry Mediterranean climate. The region has an average annual winter rainfall of approximately 600 to 700 millimetres and is generally dry for 5 to 6 months of the year (Mattiske Consulting, 2009).

One of the application areas has a minor, ephemeral drainage line running through it (GIS Database). Based on the climate of the region, this creek is expected to be dry for the majority of the year. In addition, all except one of the drill-sites is located on flat to very slightly undulating land which would minimise any erosion caused by surface water runoff (Bestbet, 2009). Therefore, the proposed clearing is unlikely to have a significant impact upon surface water quality in the area.

The proposed clearing is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). Bestbet (2009) report that significant aquifers are unlikely to be present in the underlying geological formations. Therefore, it is unlikely that the proposed clearing of 0.52 hectares of native vegetation will result in any significant impacts to groundwater levels or quality.

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

Methodology
Bestbet (2009)
Mattiske Consulting (2009)
GIS Database
- Hydrography, linear
- Public Drinking Water Source Area (PDWSAs)

(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 areas are located in a region of Mediterranean climate that has primarily winter rainfall and is dry for 5 to 6 months of the year (Mattiske Consulting, 2009). Bestbet (2009) report that no clearing will occur within or in association with an environment associated with riparian vegetation, wetlands, watercourses, surface water or groundwater. According to Bestbet (2009) all sites proposed to be cleared are at least 50 metres from either a seasonal or perennial watercourse.

The proposed clearing is unlikely to increase the incidence or intensity of flooding given the size of the area to be cleared (0.52 hectares) in comparison to the Swan Avon-Main Avon catchment area (approximately 236,312 hectares) (GIS Database).

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

Methodology
Bestbet (2009)
Mattiske Consulting (2009)
GIS Database
- Hydrographic Catchments - Catchment

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

Comments

There is one Native Title Claim (WC97/071) over the area under application (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the 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*.

There are no known Aboriginal Sites of Significance within the application areas (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no 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.

There were no public submissions received during the public comments period.

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 is at variance to Principle (f), may be at variance to Principle (h) and is not likely to be at variance to Principles (a), (b), (c), (d), (e), (g), (i) and (j).

Should a permit be granted it is recommended that conditions be imposed for the purposes of weed and dieback management, rehabilitation, record keeping and permit reporting.

5. References

DEC (2009e) Advice to Assessing Officer. Department of Environment and Conservation. 15 April 2009.

Bestbet (2009) Clearing Permit Application Supporting Documentation, February 2009.

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

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DEC (2009b) Woylie Conservation Research Project. Department of Environment and Conservation. Available online from: http://www.dec.wa.gov.au/programs/saving-our-species/woylie-conservation-research-project/about-the-woylie.html. Accessed 29 April 2009.

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Mattiske Consulting (2009) Flora and Vegetation on Proposed Bestbet Drilling Sites ? Julimar. Mattiske Consulting Pty Ltd, Western Australia.

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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.
DMP	Department of Mines and Petroleum, 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.