

Government of Western Australia Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: Permit type: 6211/1 Purpose Permit

1.2. Proponent details Proponent's name:

1.3. Property details Property: Local Government Authority: Colloquial name:

Mining Lease 46/523 Shire of East Pilbara Warrigal Well

BC Iron Nullagine Pty Ltd

1.4. Application

Clearing Area (ha) No. Trees 162.4 Method of Clearing Mechanical Removal For the purpose of: Mineral Production and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant Decision Date: 18 September 2014

2. Background

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application Vegetation Description Clearing Description

Beard vegetation associations have been mapped for the whole of Western Australia and are useful to look at vegetation in a regional context. One Beard vegetation association has been mapped within the application area (GIS Database):

173: Hummock grasslands, shrub steppe; kanji over soft spinifex and *Triodia wiseana* on basalt.

A survey conducted by Plantecology (2013) identified eight vegetation associations within the application area:

D2a: Corymbia hamersleyana scattered low trees to low woodland over mixed Acacia spp. Scattered shrubs to shrubland over mixed Triodia epactia hummock / *Cenchrus spp. Tussock grassland. D2b: Corymbia hamersleyana scattered low trees over mixed Acacia spp. shrubland over mixed Triodia epactia hummock / Paraneurachne muelleri tussock grassland.

D4a: Eucalyptus camaldulensis woodland over mixed shrubland or mixed *Cynodon dactylon grassland / Typha domingensis sedgeland. D6a: Eucalyptus victrix woodland over Melaleuca spp. high shrubland over mixed Triodia epactia hummock grassland / *Cenchrus spp. tussock grassland / Cyperus vaginatus sedgeland. D9a: Mixed Acacia spp. shrubland over mixed Triodia epactia hummock / *Cenchrus ciliaris tussock grassland / herbland.

H1a: Corymbia hamersleyana scattered low trees over mixed Acacia spp. scattered shrubs to shrubland over Triodia epactia hummock grassland. H8a: Acacia aneura and A. pruinocarpa low woodland over mixed Eremophila shrubland over Triodia pungens hummock grassland. H9a: Mixed Acacia spp. scattered shrubs to shrubland over Triodia epactia hummock grassland. *indicates introduced species. Warrigal Well.

BC Iron Nullagine Pty Ltd (BC Iron) proposes to clear up to 162.4 hectares of native vegetation, within an application area of approximately 435 hectares, for the purpose of mineral production and associated activities. The application area is an expansion of the existing BC Iron operations located approximately 15 kilometres south west of Nullagine in the Shire of East Pilbara. Vegetation Condition Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994);

To:

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

Comment

The vegetation condition was assessed by botanists from Plantecology (2013). The condition was assessed using a scale based on Trudgen (1988) and has been converted to the corresponding Keighery (1994) condition.

3. Assessment of application against Clearing Principles

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

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

The application area occurs within the Chichester subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by plains supporting a shrub steppe of *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands, while *Eucalyptus leucophloia* tree steppes occur on ranges (CALM, 2002).

A total of 280 native plant taxa, from 138 genera and 52 families, were recorded during a survey conducted by Plantecology (2013). No Threatened or Priority Flora were recorded within the application area during the flora survey. Plantecology (2013) identified eight vegetation units within the proposed clearing area none of which are representative of Threatened or Priority Ecological communities.

Fourteen weed species including one declared weed *Calotropis procera* were identified by Plantecology (2013). Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

A Level 1 fauna survey which includes the application area and two other survey areas (Bonnie East and Coongan) was undertaken by Bamford Consulting Ecologists (Bamford) in May 2012. In addition a targeted survey for the Pilbara Leaf-nosed Bat and a desktop assessment of potential available core Northern Quoll habitat was also undertaken. Bamford (2013a) identified 5 fauna habitat types within the application area. The well-developed cliff lines along the mesa edges and riparian zones which are associated with Bonnie Creek are of significance, however, all the habitat types identified are well represented outside of the application area.

The application area is unlikely to have greater biodiversity than other undisturbed areas in the locality.

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

Methodology Bamford (2013a) CALM (2002) Plantecology (2013) GIS Database:

- IBRA WA (Regions - Subregions)

- Threatened and Priority Flora
- Threatened Ecological Sites Buffered

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

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

A Level 1 fauna survey which includes the application area and two other survey areas (Bonnie East and Coongan) was undertaken by Bamford Consulting Ecologists (Bamford, 2013a) in May 2012. In addition, a targeted survey for the Pilbara Leaf-nosed Bat and a desktop assessment of potential available core Northern Quoll habitat was also undertaken. Bamford (2013a) identified five fauna habitat types based on vegetation substrate associations (VSA's) within the application area.

A total of 168 species were recorded during the field surveys, including: four fish, four frog, 39 reptile, 96 bird and 25 mammal species. In general, the faunal assemblage is typical of the northern Pilbara, with many species being widespread (Bamford, 2013a). Bamford (2013a) identifies that the survey areas may support up to 41 species of conservation significance, 10 of which are considered likely to be present. These species are largely associated with (VSA 4) and/or (VSA 5) (Bamford, 2013a). The areas of well-developed cliff lines (VSA 4) have very high conservation significance and provide significant refugia (Bamford, 2013a). The riparian zone (VSA 5) associated with Bonnie Creek includes semi-permanent and permanent pools.

VSA 4 and 5 may be utilised by the Northern Quoll (Schedule 1, Endangered), Pilbara Leaf-nosed Bat (Schedule 1, Vulnerable) and Pilbara Olive Python (Schedule 1, Vulnerable). In the application area in particular, these habitats are linear and this may allow for movement of dependent fauna through the landscape. The proposed extension of mining operations into the warrigal well area will result in the loss of some locally important habitat (Bamford, 2013a).

However, Bamford (2013a) identifies that the application area represents marginal habitat for the Northern Quoll (Bamford, 2013a; Bamford, 2013c). It is likely that the area is colonised on an episodic basis by the Northern Quoll as populations expand during periods (years or decades) of favourable conditions. The proposal was referred to the Federal Department of the Environment on 31 May 2013 (as part of the larger 740 hectare project) and deemed a controlled action due to the presence of the Northern Quoll. Approval was granted on 5th March 2014 subject to strict monitoring and management of the Northern Quoll population.

Bamford (2013b) has confirmed that there are no roosts present in the application area for the Pilbara Leafnosed Bat, however, the species has been recorded and is likely to utilise the area for foraging. Although not recorded, the Pilbara Olive Python is also likely to utilise the application area.

The loss of significant fauna habitat will be minimised through the introduction of appropriate controls during land clearing. The loss of VSAs 4 and 5 that have limited representation throughout the region is considered to be of the greatest concern (Strategen, 2014). Loss of habitat can lead to a localised decline in populations of significant species; however, as there are areas of similar VSAs in the region outside of the surveyed areas that are not targeted for mining, regional populations of these species should not be significantly impacted (Bamford, 2013a).

The principal habitat that will be affected is cliff lines along the edges of mesas, as this will be the area in which mining will take place. Targeted mining is not expected to significantly affect functional cliff lines. This has been demonstrated at the existing mining area where cliff lines along the edge of mesas are retained (Bamford, 2013a).

The land systems, vegetation and habitats of the project area are common and widely represented in the region. The proposed clearing will only result in the loss of 1.9% and 0.7% of the total mapped area for VSA 4 and 5 respectively. In addition, a condition to restrict clearing in VSA 5 to access tracks only will minimise detrimental impacts to the functionality of the fauna corridor.

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

- Methodology Bamford (2013a) Bamford (2013b) Bamford (2013c) Strategen (2014)
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

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

According to available databases there are no known records of Threatened Flora within the application area (GIS Database).

No Threatened Flora species were identified during a survey conducted by Plantecology (2013)

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

- Methodology Plantecology (2013) GIS Database: - Threatened and Priority Flora
- (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** A search of available databases revealed there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database).

No TECs were identified during the survey conducted by Plantecology (2013).

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

Methodology Plantecology (2013) GIS Database: - Threatened Ecological Sites Buffered

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments Proposal is not at variance to this Principle

The clearing application area falls within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion in which approximately 99.6% of the pre-European vegetation remains (Government of Western Australia, 2013; GIS Database).

The vegetation of the clearing application area has been broadly mapped as Beard vegetation association 173 'Hummock grasslands, shrub steppe; kanji over soft spinifex and *Triodia wiseana* on basalt' (Government of Western Australia, 2013; GIS Database). Approximately 99.7% of this Beard vegetation association remains at the state and bioregional level (Government of Western Australia, 2013).

The vegetation under application is not a remnant of vegetation in an area that has been extensively cleared.

	Pre-European Area (ha)*	Current Extent (ha)*	Remaining %*	Conservation Status**	% Pre - European Extent in All DPaW - Managed Land
IBRA Bioregion – Pilbara	17,808,657	17,733,583	~99.6	Least Concern	8.37
Beard Veg Assoc. – State					
173	1,753,104	1,748,261	~99.7	Least Concern	13.62
Beard Veg Assoc. – Bioregion					
173	1,752,521	1,747,678	~99.7	Least Concern	13.62

* Government of WA (2013)

** Department of Natural Resources and Environment (2002)

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

- Methodology Department of Natural Resources and Environment (2002) Government of Western Australia (2013) GIS Database:
 - IBRA WA (Regions Subregions)
 - Pre-European Vegetation

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

Comments Proposal is at variance to this Principle

There are no permanent watercourses or wetlands within the application area, however, the application area does include the ephemeral Bonnie Creek and its tributaries which flow into the Nullagine river (GIS Database; Plantecology, 2013). Plantecology (2013) have mapped a number of drainage line vegetation associations within the clearing permit area and Bamford (2013a) identifies that VSA 5 is a significant riparian zone which is linear and allows for movement of dependent fauna through the landscape and includes several small semi permanent pools. The most significant pool is Bonnie Pool which is not included within the application area.

Worley parsons (2014) have undertaken a riverine health assessment of Bonnie Creek and observed extensive disturbance to the existing creek beds and adjacent vegetation from cattle grazing and invasive grasses. In addition, only 3.4 % of the total proposed clearing area will impact upon the riparian zone of Bonnie Creek which represents only 0.7% of the total mapped VSA. A condition which limits clearing in this zone to access roads and associated roadside infrastructure and a watercourse management condition will minimise the impacts upon riparian vegetation.

Based on the above, the proposed clearing is at variance to this Principle, however, the proposed clearing associated with watercourses is unlikely to have any significant environmental impact.

Methodology Bamford (2013a)

Plantecology (2013) Worley Parsons (2014) 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 may be at variance to this Principle

The application area intersects the Rocklea and Robe Land Systems (GIS Database).

The Robe Land System is characterised by low limonite mesas and buttes supporting soft spinifex (and occasionally hard spinifex) grasslands (Van Vreeswyk et al., 2004). This land system is generally not susceptible to vegetation degradation or erosion (Van Vreeswyk et al., 2004). The Rocklea Land System is characterised by basalt hills, plateaux, lower slopes and minor stony plains supporting hard spinifex (and occasionally soft spinifex) grasslands (Van Vreeswyk et al., 2004). This system has a very low erosion hazard (Van Vreeswyk et al., 2004).

Water quality monitoring, surface water modelling and soil characterisation studies of the proposal area and the existing mining operations have not identified any potential land degradation issues (Strategen, 2014). Based on the available evidence, it is highly unlikely that the proposed clearing area will be subject to potential

issues of waterlogging, water shadowing, acidification or salinisation (Strategen, 2014).

However, in the short term there is a risk of wind and water erosion if any areas are left cleared for long periods of time. Potential impacts from erosion may be minimised by the implementation of a staged clearing condition.

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

Methodology Strategen (2014) Van Vreeswyk et al. (2004) GIS Database: - Rangeland Land System Mapping

(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 is not located within a conservation reserve (GIS Database). The nearest conservation area is the ex-Meentheena pastoral lease, a former leasehold proposed for conservation, which is located approximately 65 kilometres north-east of the application area (GIS Database).

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

Methodology GIS Database: - DPaW 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 may be at variance to this Principle

Worley Parsons was engaged by BC Iron to undertake baseline surface water monitoring at various locations within the proposal area (Worley Parsons, 2014). Baseline surface water monitoring data has been collected over two dry and two wet seasons and the results provide information on water quality, aquatic and riverine health, channel geomorphology and surface groundwater interactions for two wet seasons with above average rainfall (Worley Parsons, 2014).

The clearing of vegetation may increase the level of runoff from disturbed areas and overburden dumps and sedimentation may impact creeklines, pools and riparian vegetation (Worley Parsons, 2014). Stormwater runoff from flood events carries the risk of contributing significant sediment loads to surface water features.

Bonnie Pool is a surface water feature located downstream of the proposal, which may be affected by changes to the surface water regime. In addition, the Nullagine Water Reserve may also be impacted by such changes, however, the disturbance area associated with the proposal within the Bonnie Creek catchment area (162.4 ha) is small in relation to the 682 km2 catchment area. The proposal area accounts for less than 1% of the total area contributing runoff and recharge to the Nullagine Water Reserve. Therefore, the impact on the Nullagine Water Reserve from the proposed expansion is considered minimal (Worley Parsons, 2013).

The catchment area will be marginally reduced by the presence of mine pits, which will capture some rainfall (Worley Parsons, 2012; 2013). While the potential for impact on surface water quality from stormwater runoff is significant, this can be managed by the implementation of existing surface water management practices which require the diversion of all water runoff to sediment basins.

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

Methodology Worley Parsons (2012) Worley Parsons (2013) Worley Parsons (2014)

GIS Database:

- Hydrography, Linear

- Public Drinking Water Source Areas (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 an arid region where the average annual evaporation rate greatly exceeds the average annual rainfall (GIS Database).

Natural flood events do occur in the Pilbara region following cyclonic activity. However, the proposed clearing is not expected to increase the incidence or intensity of such events given the size of the area to be cleared (162.4 hectares) in relation to the Nullagine River catchment area (711,582 hectares) (GIS Database).

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

Methodology GIS Database:

- Evaporation Isopleths
- Hydrographic Catchments Catchments
- Hydrography, Linear
- Rainfall, Mean Annual

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There is one Native Title Claim (WC1999/016) 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 mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

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

It is the proponent's responsibility to liaise with the Department of Parks and Wildlife 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.

The clearing permit application was advertised on 18 August 2014 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

Methodology GIS Database:

- Aboriginal Sites of Significance
- Native Title Claims Registered with the NNTT
- Native Title Claims Determined by the Federal Court
- Native Title Claims Filed at the Federal Court

4. References

- Bamford (2013a) BC Iron Nullagine Project Extension Areas -,Bonnie East, Warrigal North and Coongan: Assessment of Fauna Values, unpublished report prepared for BC Iron by Bamford Consulting Ecologists, Kingsley, WA.
- Bamford (2013b) Pilbara (Orange) Leaf-nosed Bat (Rhinonicteris aurantius) survey of the Warrigal North Deposit, report prepared for Strategen Environmental Consultants, Kingsley, Perth, July 2013.
- Bamford (2013c) BC Iron Nullagine Project Extension Areas (Bonnie East, Warrigal North and Coongan): Northern Quoll Regional Analysis, report prepared for BC Iron, Kingsley, Perth, April 2013.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management, 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.
- Government of Western Australia (2013) 2013 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Plantecology Consulting (2013), Nullagine Iron Ore Joint Venture Project Expansion: Level 2 Flora and Vegetation Survey, report prepared for BC Iron, Perth, May 2013.
- Strategen (2014) Warrigal Well Application for Clearing Permit, Supporting Documentation, prepared for BC Iron Limited by Strategen, July 2014.

Van Vreeswyk A.M.E., Payne A.L., Leighton K.A. and Hennig P. (2004) Technical Bulletin - An Inventory and Condition Survey of the Pilbara Region, Western Australia, No. 92. Department of Agriculture, Perth, Western Australia.

Worley Parsons (2012), Bonnie East and Warrigal 1 & 2 Flood Studies Letter Report, unpublished letter report prepared by Worley Parsons for BC Iron Limited, Perth, June 2012.

Worley Parsons (2013), Bonnie East and Warrigal North Surface Water Assessment, unpublished report prepared for BC Iron Limited, Perth, August 2013.

Worley Parsons (2014), BC Iron Nullagine Iron Ore Project, Bonnie Creek Baseline Monitoring Program 2012–2014, unpublished report prepared by Worley Parsons for BC Iron Limited, Perth, July 2014.

5. Glossary

Acronyms:

ВоМ	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	
	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DotE	Department of the Environment, Australian Government
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
EPA	Environmental Protection Authority, Western Australia
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources - commonly known as the World
	Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T Threatened species:

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened Fauna and Flora are further recognised by the Department according to their level of threat usin IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorynchus latirostris* is specially protected under the *Wildlife Conservation Act 1950* as a threatened species with a ranking of Endangered.

Rankings:

CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild. EN: Endangered - considered to be facing a very high risk of extinction in the wild. VU: Vulnerable - considered to be facing a high risk of extinction in the wild.

X Presumed Extinct species:

Specially protected under the *Wildlife Conservation Act 1950,* listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).

IA Migratory birds protected under an international agreement:

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice. Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.

S Other specially protected fauna:

Specially protected under the *Wildlife Conservation Act 1950,* listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.

P1 Priority One - Poorly-known species:

Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main

Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.

P2 Priority Two - Poorly-known species:

Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.

P3 Priority Three - Poorly-known species:

Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.

P4

Priority Four - Rare, Near Threatened and other species in need of monitoring:

- (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
- (b) Near Threatened. Species that are considered to have been adequately surveyed and that do not gualify for Conservation Dependent, but that are close to gualifying for Vulnerable.
- (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

P5

Priority Five - Conservation Dependent species:

Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (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.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.
- (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.
- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that he been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (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.
- (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.
- (j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.