



Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	8101/3
Permit type:	Purpose permit
Applicant name:	B & J Catalano Pty Ltd
Application received:	22 December 2021
Application area:	13.91 hectares
Purpose of clearing:	Gravel extraction
Method of clearing:	Mechanical removal
Tenure:	Mining Lease 70/773
Location (LGA area/s):	City of Kalamunda
Colloquial name:	Pickering Brook project

1.2. Description of clearing activities

B & J Catalano Pty Ltd proposes to clear up to 13.91 hectares of native vegetation within a boundary of approximately 13.92 hectares, for the purpose of gravel extraction. The project is located approximately 12 kilometres southeast of Kalamunda, within the City of Kalamunda.

The application is to allow for continued gravel extraction at their Pickering Brook quarry.

Clearing permit CPS 8101/1 was granted by the Department of Mines, Industry Regulation and Safety on 19 September 2019 and was valid from 12 October 2019 to 11 October 2024. The permit authorised the clearing of up to 2.9 hectares of native vegetation within a boundary of approximately 2.9 hectares, for the purpose of gravel extraction.

CPS 8101/2 was granted on 19 October 2020, amending the permit to increase the amount of clearing authorised and increase the size of the permit boundary to approximately 12.91 hectares.

On 22 December 2021, the Permit Holder applied to amend CPS 8101/2 to increase the amount of clearing and the permit boundary by one hectare.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	27 June 2023
Decision area:	13.91 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Mines, Industry Regulation and Safety (DMIRS) on 22 December 2021. DMIRS advertised the application for a public comment for a period of 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix F), supporting information provided by the applicant, including the results of a flora and vegetation survey (Appendix DE), the clearing principles set out in Schedule 5 of the EP Act (B), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3).

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- direct impacts to fauna during clearing activities;
- the loss of native vegetation that is suitable foraging habitat for black cockatoo species;
- potential land degradation in the form of wind erosion.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise and to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- commence construction no later than three months after undertaking clearing to reduce the risk of erosion;
- staged clearing to minimise wind erosion;
- undertake fauna inspections prior to clearing to ensure that Chuditch and Brush-tailed Phascogale are not directly impacted during clearing activities.

The Delegated Officer determined that the proposed amendment to include an additional area of clearing is not likely to lead to an unacceptable risk to environmental values.

1.5. Site map

A site map of proposed clearing is provided in Figure 1 below.

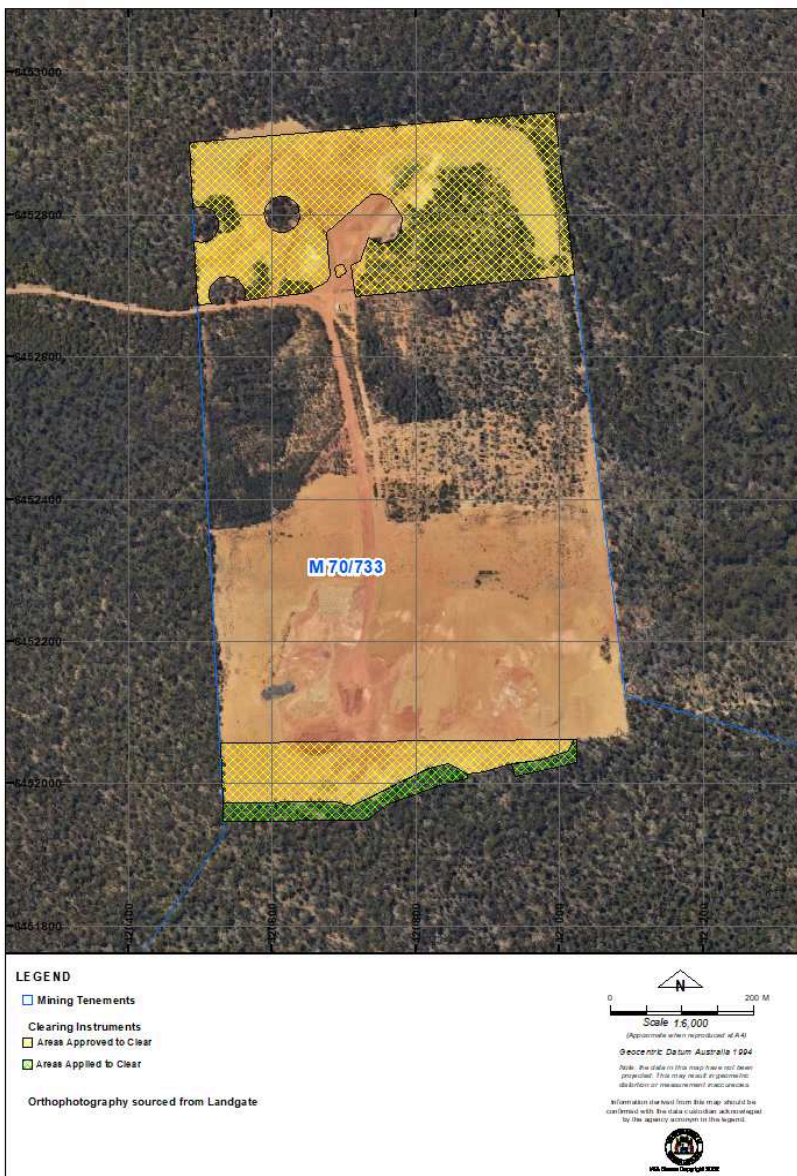


Figure 1. Map of the application area. The yellow area indicates the areas approved under CPS 8101/2 and the green areas are additional areas applied under CPS 8101/3.

2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016 (WA) (BC Act)*
- *Conservation and Land Management Act 1984 (WA) (CALM Act)*
- *Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)*
- *Mining Act 1978 (WA)*

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy (2011)*

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation (DER, December 2013)*
- *Procedure: Native vegetation clearing permits (DWER, October 2021)*
- *Technical guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)*
- *Technical guidance – Terrestrial Fauna Surveys for Environmental Impact Assessment (EPA, 2020)*

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that areas of clearing have been minimised as much as practicable. Prior to the submission, the additional area proposed to be included in the permit was reduced from a 2.6 hectare area to one hectare (see Appendix E). The area was reduced to avoid the clearing of any habitat trees which have potentially suitable hollows for black cockatoo species. The additional area also allowed for a 25 metre buffer to these particular habitat trees.

The applicant will undertake progressive rehabilitation of cleared areas at the Pickering Brook quarry to limit the amount of areas that remain uncleared at any one time. The most recent area of rehabilitation at the quarry was a 10.7 hectare area outside of the application area which was seeded in winter 2021 and 2022. This area was previously cleared under clearing permit 4359/1 which expired on 31 August 2016. The last annual report for CPS 8101/2 reported that there was 3.61 hectares of vegetation remaining to be cleared (Lundstrom Environmental Consultants, 2023). With the additional area included in this amendment, there will be 4.61 hectares of vegetation still to be cleared. Whilst this revegetation is not directly considered an offset, the application of the offsets metric was employed to demonstrate that the impact to the clearing of the remaining 4.61 hectares of black cockatoo foraging habitat is adequately mitigated by the current rehabilitation program (see Appendix D).

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

The assessment against the clearing principles identified that the impacts of the proposed clearing present a risk to biological values (fauna). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

A review of current environmental information (Appendix A) reveals that the assessment against the clearing principles has changed from the clearing permit decision report CPS 8101/2. Given the increase in clearing of significant fauna habitat, principle (b) is now at variance and given the potential for wind erosion in the area, principle (g) may be at variance to the principle rather than not likely to be at variance and principle (h) is at variance rather than not likely to be at variance given the increased impacts within a conservation area.

3.2.1. Biological values (fauna) - Clearing Principle (b)

Assessment

There has been two broad fauna habitats identified within the application area; Jarrah / Marri forest and revegetation areas (Western Wildlife, 2011). The additional areas are comprised of Jarrah / Marri forest. The application area is located within the Jarrahdale State Forest which is part of an extensive tract of uncleared vegetation (GIS Database). There are several species of conservation significant fauna which have been identified as potentially occurring within the application area (Western Wildlife, 2011; 2020; GIS Database). The majority of these species are likely to utilise the area as a smaller part of a larger range. The expansion of the existing quarry is likely to have some impact on fauna habitat. For the majority of fauna species the impact is unlikely to be significant in a regional context, as the application area is relatively small and it is within a large expanse of similar native vegetation (Western Wildlife, 2021; GIS Database).

The application area occurs within the known ranges of three Threatened species of Black Cockatoo: Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*) (Vulnerable); Carnaby's Cockatoo (*Zanda latirostris*) (Endangered); and Baudin's Cockatoo (*Zanda baudinii*) (Endangered) (DSEWPAC, 2012; Western Wildlife, 2021; GIS Database). There are three key components of Black Cockatoo habitat: foraging habitat; roosting habitat; and breeding habitat. There are records of roosting within 2 kilometres of the permit boundary however, survey of the area did not find any evidence of roosting and did not identify any typical roosting habitat (Western Wildlife, 2021; GIS Database). Black Cockatoo breeding has been recorded in nearby forest to the north, south, east, and west of the application area, with the nearest known breeding site located approximately four kilometres from the amendment application area (GIS Database). For a breeding site to be viable, there must be sufficient foraging habitat available within 6 to 12 kilometres of a nesting site (DSEWPAC, 2012). Suitable Black Cockatoo foraging species occur within the application area and adjacent areas, and all three Black Cockatoo species may forage in the area (Western Wildlife, 2021). Foraging evidence of Carnaby's Cockatoo and Forest Red-tailed Black Cockatoos (chewed Marri and Sheoak nuts) was recorded within the additional areas, and 12 Forest Red-tailed Black Cockatoos were observed foraging on the eastern boundary of the application area during a previous habitat tree survey (Western Wildlife, 2020; 2021). Black Cockatoo breeding could occur within the application area if suitable nesting hollows were available.

Black Cockatoos nest in large hollows in mature eucalypt trees including Marri (*Corymbia calophylla*) and Jarrah (*Eucalyptus marginata*) (DSEWPAC, 2012). Research has indicated that it takes between 100 and 200 years for a tree to grow to a size where it could develop a hollow large enough to be suitable for breeding of Black Cockatoos (DEC, 2008; DPaW, 2013; DSEWPAC, 2012). The populations of all three Threatened species of Black Cockatoo are declining due to habitat destruction (DSEWPAC, 2012), and nest hollow shortage is considered a significant threat to breeding success and the long-term survival of Black Cockatoo populations (DEC, 2008, DPaW, 2013). Given the long history of timber harvesting throughout the northern jarrah forest, any mature trees containing hollows that may support Black Cockatoo breeding are considered significant, and clearing of these trees should be avoided (DBCA, 2020).

Western Wildlife (2021) conducted a targeted black cockatoo habitat tree survey over an approximate 11.7 hectare area south of the existing quarry which includes the additional areas. Habitat trees were defined as trees with a diameter at breast height (DBH) of greater than 50 centimetres as these trees have a greater potential to have or develop hollows in the long term (Western Wildlife, 2021). The survey recorded a total of 305 habitat trees. None of the trees were occupied by breeding cockatoos, however, there were three trees with suitable hollows that showed possible signs of use by black cockatoos (Western Wildlife, 2021). In addition there were 42 trees which contain hollows that are potentially suitable for black cockatoos and 116 trees which contained hollows suitable for fauna but not potentially suitable for cockatoos (Western Wildlife, 2021). The remaining 144 trees did not contain any visible hollows (Western Wildlife, 2021). The proposed quarry extension was designed to exclude any trees with a hollow potentially suitable for black cockatoos with a 25 metre buffer. The avoidance of these trees was supported by DBCA (2022). Within the additional areas there are three habitat trees which contain hollows suitable for fauna but not suitable for black cockatoos and nine habitat trees with no visible hollows.

Based on the current evidence, the application area is not likely to contain breeding habitat for Black Cockatoos. The area contains foraging habitat and the applicant has already commenced revegetation of cleared areas outside of the application to minimise the period of reduced food availability. The cleared areas will also be rehabilitated following mining so the loss of foraging habitat will be a temporary, not permanent loss. Given the application areas location within the Jarrahdale State Forest, it is anticipated that there will be sufficient foraging habitat to support local populations of Black Cockatoos whilst the revegetation is reaching sufficient maturity to provide seed.

The Brush-tailed Phascogale have been previously recorded in the local area and are considered likely to occur within the application area (Western Wildlife, 2021; GIS Database). They are known to utilise tree hollows and stumps as nest sites and individual phascogales may use up to 40 different sites within a year (Western Wildlife, 2021). The application area will only be utilised as a part of a much larger home range (20-40 hectares for females and 100 hectares for males) and is not likely to be significant for this species at a local or regional level given the expansive tract of vegetation within the State Forest.

The Chuditch has been recorded within the application area but is known to occur in the local area (GIS Database). They are a highly mobile species with a core home range (area contained by den locations) in Jarrah forest of around 90 hectares. Chuditch are known to den in hollow logs and can utilise up to 180 different den sites within their core range (Western Wildlife, 2021). The application area would only form a small part of their larger range and is not likely to represent significant habitat for Chuditch.

Whilst the clearing is not likely to have a significant impact on the long term viability of local populations of Chuditch and Brush-tailed Phascogales, management measures are required to ensure that impacts to habitat and individuals are limited. Potential impacts to these species may be minimised by the implementation of a fauna management condition requiring areas are inspected for any potential dens or hollows containing individuals.

Conclusion

Based on the above assessment, the proposed clearing will result in the clearing of vegetation significant for conservation significant fauna species, namely Black Cockatoos, Chuditch, and Brush-tailed Phascogales.

The impacts on fauna habitat are being mitigated by undertaking clearing in a progressive manner to limit the amount of area cleared at one time and undertaking progressive rehabilitation to reduce the time that habitat is not available.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- Undertake slow, directional clearing to allow any fauna to disperse ahead of the clearing activity should they occur at the time of clearing.
- A fauna management condition requiring the areas are searched prior to clearing for the presence of Chuditch and Brush-tailed Phascogale.

3.3. Relevant planning instruments and other matters

The clearing permit amendment application was advertised on 25 January 2022 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

The permit area is within the South West Native Title Settlement area (DPLH, 2023). This settlement resolves Native Title rights and interests over an area of approximately 200,000 square kilometres within the south west of Western Australia. 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 (DPLH, 2023). 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.

Other relevant authorisations required for the proposed land use include:

- A Mining Proposal / Mine Closure Plan approved under the *Mining Act 1978*.

It is noted that the proposed clearing may impact on Black Cockatoos, which are a protected matter under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). The proponent may be required to refer the project to the (Federal) Department of Agriculture, Water and the Environment for environmental impact assessment under the EPBC Act. The proponent is advised to contact the Department of Agriculture, Water and the Environment for further information regarding notification and referral responsibilities under the EPBC Act.

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

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of an expansive tract of native vegetation in the intensive land use zone of Western Australia. It is adjacent to the existing quarry and surrounded by native forest.</p> <p>Aerial imagery indicates the local area (10 kilometre radius from the centre of the area proposed to be cleared) retains approximately 90 per cent of the original native vegetation cover (GIS Database).</p>
Ecological linkage	The application area does not form part of an ecological linkage (GIS Database).
Conservation areas	The application area is located within the Jarrahdale State Forrest (GIS Database)
Vegetation description	<p>The clearing permit application area is broadly mapped as the following Beard vegetation association: 3: Medium forest; jarrah-marri (GIS Database).</p> <p>A flora and vegetation survey conducted over the original permit area and surrounding areas identified the following vegetation association within the original permit area: Open <i>Eucalyptus marginata</i> / <i>Corymbia calophylla</i> woodland (Ecologia, 1997).</p> <p>The Permit Holder amended the original permit to include an additional area, approximately 600 metres north of the original permit area. The majority of the area included in CPS 8101/2 consisted of revegetation following previous gravel extraction activities, with small pockets of uncleared remnant vegetation located mainly around the edges of the amendment application area.</p> <p>A flora and vegetation reconnaissance survey conducted by Lundstrom Environmental Consultants (Lundstrom, 2020) described the vegetation within the northern area as follows:</p> <p>The previously cleared and revegetated sections: <i>Eucalyptus marginata</i> - <i>Corymbia calophylla</i> woodlands. These revegetated areas include <i>Acacia pulchella</i>, <i>Allocasuarina fraseriana</i>, <i>Bossiaea aquifolium</i>, <i>Daviesia decurrens</i>, <i>Corymbia calophylla</i>, <i>Gompholobium scabrum</i>, <i>Kennedia coccinea</i> and <i>Phyllanthus calycinus</i>;</p> <p>The remnant vegetation sections: Open <i>Corymbia calophylla</i>, <i>Eucalyptus marginata</i> over moderately dense mixed shrubs. <i>Corymbia calophylla</i> dominates in the tall tree stratum with <i>Allocasuarina fraseriana</i> and <i>Banksia grandis</i> common subdominant species. Beneath this stratum, a relatively species poor shrub layer occurs. Moderately dense stands of <i>Persoonia longifolia</i>, <i>P. elliptica</i>, <i>Bossiaea aquifolium</i>, <i>Macrozamia riedlei</i> and <i>Xanthorrhoea preissii</i> predominate over smaller shrubs such as <i>Scaevola calliptera</i>, <i>Phyllanthus calycinus</i> and <i>Hibbertia commutata</i> (Lundstrom, 2020).</p> <p>The current amendment application includes two areas immediately adjacent to the south of the original permit area. A flora and vegetation reconnaissance survey conducted by Ecoedge (2022) described the vegetation within the amendment area as:</p> <p>Vegetation sub-unit A1: <i>Eucalyptus marginata</i>, <i>Allocasuarina fraseriana</i> medium open forest over <i>Banksia grandis</i>, <i>Persoonia longifolia</i> low very open woodland over <i>Xanthorrhoea preissii</i> tall open shrubland over <i>Adenanthos barbiger</i>, <i>Bossiaea aquifolium</i>, <i>Hibbertia amplexicaulis</i>, <i>H. commutata</i>, <i>Macrozamia riedlei</i>, <i>Philothea spicata</i>, <i>Phyllanthus calycinus</i>, <i>Xanthorrhoea gracilis</i> low/mid open shrubland with <i>Kennedia coccinea</i>, <i>K. prostrata</i> climbers over <i>Burchardia congesta</i>, <i>Lomandra caespitosa</i>, <i>L. sonderi</i>, <i>Opercularia echinocephala</i>, <i>Platysace filiformis</i> very open forbland on dark grey- brown sandy gravel.</p>
Vegetation condition	<p>The vegetation survey indicate the vegetation within the proposed clearing area is in excellent to degraded (Keighery, 1994) condition.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix C.</p>
Climate and landform	The application area is mapped within elevations of 310-330 metres AHD. The annual average rainfall (Bickley) is 1086.7 millimetres (BoM, 2022).

Characteristic	Details
Soil description	The soils of the application area are mapped as soil type JZ1 (GIS Database). This soil type is characterised by lateritic gravels and block laterite, and chief soils are ironstone gravels with sandy and earthy matrices (Northcote et al., 1960-68).
Land degradation risk	The application area has been mapped as being in an area with a high potential for wind erosion (DPIRD, 2023). The application area does not have a high risk of flooding, water erosion, waterlogging or phosphorus export (DPIRD, 2023).
Waterbodies	There are no watercourses or wetlands within the application area (GIS Database).
Hydrogeography	The application area is located within the Canning River Catchment Area Public Drinking Water Source Area (PDWSA) (GIS Database). The mapped groundwater salinity is 500-1,000 milligrams per litre total dissolved solids which is described as marginal (GIS Database).
Flora	There are records of 9 conservation significant flora within 5 kilometres, the closest of which are approximately 830 metres from the application area.
Ecological communities	There are no records of any Threatened or Priority Ecological Communities in the local area (GIS Database).
Fauna	There are records of 19 fauna of conservation significance within the local area (10 kilometre radius) and a known black cockatoo roost site less than 2 kilometres away.

A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent Remaining %	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA Managed Lands
IBRA Bioregion - Jarrah Forest	4,506,660	2,399,838	~53	1,673,614	~37
IBRA Subregion - Northern Jarrah Forest	1,898,781	1,108,380	~58	769,587	~41
Local Government - City of Kalamunda	32,395	22,359	~72	20,090	~62
Beard vegetation associations - State					
3	2,661,405	1,803,437	~68	1,469,766	~58
Beard vegetation associations - Bioregion					
3	2,390,592	1,604,102	~67	1,299,264	~54
Beard vegetation associations - subregion					
3	908,100	723,446	~80	607,944	~67

Government of Western Australia (2019)

A.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1.), and biological survey information, impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]
<i>Acacia anomala</i>	Threatened	Y	Y	Y	<5	Y

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]
<i>Acacia horridula</i>	Priority 3	Y	Y	Y	<9	Y
<i>Amanita fibrillopes</i>	Priority 3	Y	Y	Y	<6	N
<i>Andersonia</i> sp. <i>Blepharifolia</i>	Priority 2	Y	Y	Y	<8	Y
<i>Conospermum undulatum</i>	Threatened	Y	Y	Y	<9	Y
<i>Drosera oreopodion</i>	Priority 1	Y	Y	Y	<9	Y
<i>Eriochilus glareosus</i>	Priority 1	Y	Y	Y	<10	N
<i>Grevillea pimeleoides</i>	Priority 4	Y	Y	Y	<10	Y
<i>Paracaleana ferricola</i>	Priority 2	Y	Y	Y	<9	Y
<i>Pimelea rara</i>	Priority 4	Y	Y	Y	<5	Y
<i>Stylidium striatum</i>	Priority 4	Y	Y	Y	<5	Y
<i>Thysanotus anceps</i>	Priority 3	Y	Y	Y	<3	Y
<i>Thysanotus glaucus</i>	Priority 4	Y	Y	Y	<3	Y

A.4. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]
<i>Acanthopis antarcticus</i> (Southern Death Adder)	Priority 3	N	Y	<5	N
<i>Apus pacificus</i> (Fork-tailed Swift)	MI	Y	Y	<9	N
<i>Bettongia penicillata ogilbyi</i> (Woylie)	CR	Y	Y	<10	N
<i>Calyptorhynchus banksii naso</i> (Forest Red-tailed Black Cockatoo)	VU	Y	Y	0	Y
<i>Ctenotus delli</i>	Priority 4	Y	Y	<10	N
<i>Dasyurus geoffroii</i> (Chuditch)	VU	Y	Y	<2	N
<i>Falco peregrinus</i> (Peregrine Falcon)	OS	Y	Y	<9	N
<i>Isodon fusciventer</i> (Quenda)	Priority 4	Y	Y	<2	N
<i>Notamacropus irma</i> (Western Brush Wallaby)	Priority 4	Y	Y	<7	N
<i>Phascogale tapoatafa wambenger</i> (South-western Brush-tailed Phascogale)	CD	Y	Y	<4	N
<i>Platycercus icterotis xanthogenys</i> (Western Rosella (inland))	Priority 4	Y	Y	<8	N
<i>Zanda baudinii</i> (Baudin's Cockatoo)	EN	Y	Y	0	Y
<i>Zanda latirostris</i> (Carnaby's Cockatoo)	EN	Y	Y	0	Y

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u></p> <p>There are no known records of Threatened or Priority Ecological Communities, Threatened flora or Priority flora within the application area (Ecoedge, 2022; Lundstrom, 2020; GIS Database). The area proposed to be cleared contains locally significant fauna and fauna habitats.</p>	May be at variance (as per CPS 8101/2)	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>There are two main fauna habitats within the application area; Jarrah/Marri Forest and Revegetation area (Western Wildlife, 2011). The area proposed to be cleared contains foraging habitat for Forest Red-tailed Black-Cockatoo, Carnaby's Cockatoo and Baudin's Black-Cockatoo.</p>	<p>At variance</p> <p>(changed from CPS 8101/2)</p>	<p>Yes</p> <p><i>Refer to Section 3.2.1, above.</i></p>
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>There are no known records of Threatened flora within the application area (GIS Database). There is potential habitat for the Threatened flora species <i>Acacia anomala</i> and <i>Conospermum undulatum</i> however, neither has been recorded during flora surveys conducted over the application area and surrounding areas (Ecoedge, 2022).</p> <p>The application area occurs within an extensive area of State Forest, and the vegetation association found within the application area is widespread in the surrounding forest areas and well represented in the bioregion (GIS Database). The vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened (rare) flora.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8101/2)</p>	<p>No</p>
<p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>There are no known Threatened Ecological Communities (TECs) located within or in close proximity to the application area (GIS Database).</p> <p>A flora and vegetation survey of the application area did not identify any TECs (Ecoedge, 2022; Lundstrom, 2020).</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8101/2)</p>	<p>No</p>
<p>Environmental value: significant remnant vegetation and conservation areas</p>		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The application area is located within the Northern Jarrah Forest sub-region of the Jarrah Forest Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 53% and 55% of the pre-European vegetation still exists in this IBRA Bioregion and Subregion, respectively (Government of Western Australia, 2019).</p> <p>The application area is broadly mapped as Beard vegetation association 3: Medium forest; jarrah-marri (GIS Database) (GIS Database). Approximately 67% of the pre-European extent of Beard vegetation association 3 remains uncleared at both the State and Bioregional level (Government of Western Australia, 2019).</p> <p>The application area occurs within the Jarrahdale State Forest, a large expanse of native forest (GIS Database). Therefore, the application area does not represent a significant remnant of native vegetation in an area that has been extensively cleared.</p>	<p>Not at variance</p> <p>(as per CPS 8101/2)</p>	<p>No</p>
<p><u>Principle (h):</u> <i>“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></p> <p><u>Assessment:</u></p> <p>The application area is located within the Jarrahdale State Forest, which is managed by the Department of Biodiversity, Conservation and Attraction (DBCA) for purposes including conservation, and covers a total area of several thousand hectares on the Darling Ranges (GIS Database). Advice was sought from DBCA, in relation to this clearing application. Given the proposed avoidance and mitigation measures</p>	<p>At variance</p> <p>(changed from CPS 8101/2)</p>	<p>No</p>

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>proposed for this application, DBCA did not think that the proposed clearing would pose a significant risk to the conservation significant values of the Jarrahdale State Forest (DBCA, 2022).</p> <p>The small area of the proposed clearing for the expansion of an existing gravel quarry is unlikely to have any significant impact on the environmental values of the Jarrahdale State Forest or any nearby conservation area.</p>		
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>There are no watercourses or wetlands within the area proposed to be cleared (GIS Database). No vegetation growing in association with a watercourse or wetland was identified during the flora and vegetation survey (Ecoedge, 2022; Lundstrom, 2020).</p>	<p>Not at variance</p> <p>(as per CPS 8101/2)</p>	<p>No</p>
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The proposed clearing is for the expansion of an existing gravel quarry. The clearing will be carried out in stages and progressively rehabilitated (WA Limestone, 2020).</p> <p>The soils of the application area are mapped as soil type JZ1 (GIS Database). This soil type is characterised by lateritic gravels and block laterite, and chief soils are ironstone gravels with sandy and earthy matrices (Northcote et al., 1960-68). The application area is located on gravelly soils on a hillside, and removal of vegetation may result in wind erosion or water erosion from runoff during rain events. In particular, the area has been identified as having a high risk of wind erosion (DPIRD, 2023). However, the application area is immediately adjacent to an existing gravel pit, and the small area of additional clearing (1 hectare) to expand the gravel pit operations, is unlikely to cause appreciable land degradation.</p> <p>Potential land degradation may be minimised by the implementation of a staged clearing condition.</p>	<p>May be at variance</p> <p>(changed from CPS 8101/2)</p>	<p>No</p>
<p><u>Principle (i):</u> <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.”</i></p> <p><u>Assessment:</u></p> <p>The application area is located within the Canning River Catchment Area Public Drinking Water Source Area (PDWSA) (GIS Database). Advice was sought from the Department of Water and Environmental Regulation, in relation to this clearing application. No concerns were raised by DWER in relation to the proposed clearing within the PDWSA (DWER, 2022).</p> <p>There are no permanent watercourses or wetlands within the application areas (GIS Database). The proposed clearing is unlikely to result in significant changes to surface water flows.</p> <p>The small area of the proposed additional clearing is unlikely to cause deterioration in the quality of underground water.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8101/2)</p>	<p>No</p>
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>There are no water courses or waterbodies within or in close proximity to the application area (GIS Database). The application area is on gravelly soils on a hillside, and water from rain events is likely to quickly infiltrate or runoff, with flooding considered unlikely.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8101/2)</p>	<p>No</p>

Appendix C. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

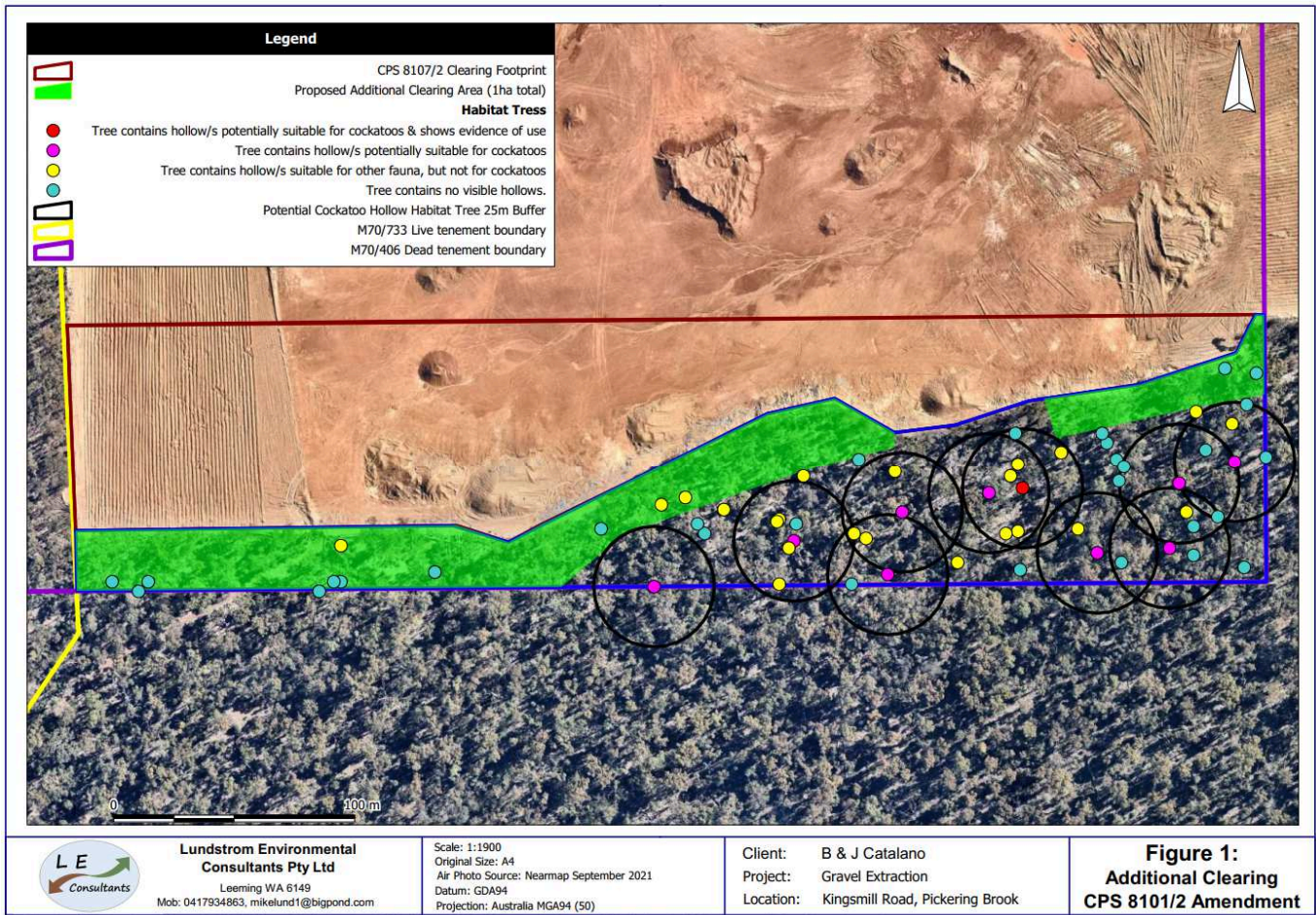
Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Offset metric calculation

Environmental value to be offset		
Calculation	Score (Area)	Rationale
Conservation significance		
Description	Carnaby's Cockatoo Foraging Habitat	The application area will clear 4.61 ha of significant foraging habitat for black cockatoos.
Type of environmental value	Species (flora/fauna)	All three species of threatened black cockatoo species (Carnaby's Cockatoo, Baudin's Cockatoo, Forest Red-tailed Black Cockatoo) have the potential utilise the application area as foraging habitat.
Conservation significance of environmental value	Rare/threatened species - endangered	Carnaby's Cockatoo and Baudin's Cockatoo are listed as Endangered and Forest Red-tailed Cockatoo is listed as Vulnerable.
Landscape-level value impacted	yes/no	No
Significant impact		
Description	Clearing of 4.61 ha of excellent quality foraging habitat	
Significant impact (hectares) / Type of feature	4.61	
Quality (scale) / Number	9.00	The area of foraging habitat is mostly in an excellent condition and contains suitable species for black cockatoo feeding. Evidence of foraging has been observed in the local area and there are known breeding sites within 12 km
Rehabilitation credit		
Description	Rehabilitation of cleared areas.	The cleared areas will be rehabilitated following mining.
Proposed rehabilitation (area in hectares)	4.61	
Current quality of rehabilitation site / Start number (of type of feature)	0.00	The entire area will be cleared and cleared areas will have no value following mining.
Future quality WITHOUT rehabilitation (scale) / Future number WITHOUT rehabilitation	1.00	It is assumed that there will be some natural recruitment of native vegetation without any revegetation being undertaken.
Future quality WITH rehabilitation (scale) / Future number WITH rehabilitation	5.00	It is expected that the revegetation would achieve this quality as a minimum.
Time until ecological benefit (years)	20.00	Taking into account the time for mining to occur, it is expected that the foraging values of revegetation would be present after 20 years.
Confidence in rehabilitation result (%)	0.9	Rehabilitation has been successfully undertaken at the site.
Offset		
Description	Revegetation of a previously cleared area.	
Proposed offset (area in hectares)	10.70	This value represents more than 100% of the significant residual impact.
Current quality of offset site / Start number (of type of feature)	0.00	The entire area was cleared and have no value following mining.
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	1.00	It is assumed that there will be some natural recruitment of native vegetation without any revegetation being undertaken.
Future quality WITH offset (scale) / Future number WITH offset	5.00	It is expected that the revegetation would achieve this quality as a minimum.
Time until ecological benefit (years)	15.00	It is expected that the foraging values of revegetation would be present after 15 years.
Confidence in offset result (%)	0.9	Rehabilitation has been previously successfully undertaken at the site.
Duration of offset implementation (maximum 20 years)	20.00	The revegetation site is located within State Forest and would be protected in perpetuity and therefore the maximum value of 20 years has been selected.
Time until offset site secured (years)	0.00	The site is already located within State Forest.
Risk of future loss WITHOUT offset (%)	10.0%	Given the land is located within State Forest it is expected that there is a low risk of future clearing.
Risk of future loss WITH offset (%)	10.0%	Given the land is located within State Forest it is expected that there is a low risk of future clearing.
Offset ratio (Conservation area only)	N/A	

Appendix E. Biological survey information excerpts



Appendix F. Sources of information

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Bush Forever (Regional Scheme) (DPLH-022)
- Cadastre (LGATE-218)
- Contours (DPIRD-073)
- Clearing Regulations – Schedule One Areas (DWER-057)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- Interim Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)

- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery

Restricted GIS Databases used:

- Black Cockatoo WTBC Breeding
- Black Cockatoo FRTBC Breeding
- Black Cockatoo BC Roosts
- Black Cockatoo BC Feeding SCP
- Black Cockatoo Feeding JF
- Black Cockatoo Feeding Areas Buffered
- Black Cockatoo Baudins Distribution
- Black Cockatoo Forest Red Tail Distribution
- Black Cockatoo Carnabys Distribution
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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- Ecologia (1997) Boral Resources Quarry M70/733 Botanical Assessment. Report prepared for Boral Resources, by Ecologia Environmental Consultants, January 1997.
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4. Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DAWE	Department of Agriculture, Water and the Environment, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DoEE	Department of the Environment and Energy (now DAWE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-

T **Threatened species:**

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

Threatened fauna is that subset of ‘Specially Protected Fauna’ listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

Threatened flora is that subset of ‘Rare Flora’ listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR **Critically endangered species**

Threatened species considered to be “*facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

EN Endangered species

Threatened species considered to be “*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

VU Vulnerable species

Threatened species considered to be “*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

Extinct Species:

EX Extinct species

Species where “*there is no reasonable doubt that the last member of the species has died*”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

EW Extinct in the wild species

Species that “*is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species:

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

CD Species of special conservation interest (conservation dependent fauna)

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

OS Other specially protected species

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

P Priority species:

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 Priority One - Poorly-known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

P2 Priority Two - Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3 Priority Three - Poorly-known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations 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 locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

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 are close to qualifying for vulnerable but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

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.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened 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 has 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 the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.