

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	8146/2
Permit type:	Purpose Permit
Applicant name:	APA Operations Pty Limited
Application received:	9 March 2023
Application area:	96 hectares
Purpose of clearing:	Gas Pipeline and Associated Activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Leases 36/53, 36/62, 36/63, 36/273, 36/367, 36/384, 36/391 Miscellaneous Licences 36/224, 36/227 Petroleum Pipeline Licence 120
Location (LGA area):	Shire of Leonora
Colloquial name:	Agnew Gas Pipeline Project

1.2. Description of clearing activities

APA Operations Pty Ltd proposes to clear up to 96 hectares of native vegetation within a boundary of approximately 514 hectares, for the purpose of a gas pipeline and associated activities. The project is located approximately 10 kilometres south of Leinster, within the Shire of Leonora.

The proposed clearing is for a new lateral gas pipeline approximately 25 kilometres in length, linking the Goldfields Gas Pipeline to the Agnew Gold Mine that is owned and operated Gold Fields Limited. The pipeline project will include a metering station, pressure regulation and heating, and ancillary infrastructure including access roads, truck turning areas, general laydown, and a temporary camp and offices (APA, 2018).

The amendment application will allow for maintenance clearing along the pipeline right of way (APA, 2023).

Clearing permit CPS 8146/1 was granted by the Department of Mines, Industry Regulation and Safety on 20 September 2018 and was valid from 13 October 2018 to 12 October 2023. The permit authorised the clearing of up to 96 hectares of native vegetation within a boundary of approximately 514 hectares, for the purpose of a gas pipeline and associated activities.

On 9 March 2023, the Permit Holder applied to amend CPS 8146/1 to extend the permit duration by five years, to 12 October 2028. The amount of clearing authorised and the permit boundary remains unchanged.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	16 May 2023
Decision area:	96 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51KA(1) of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Mines, Industry Regulation and Safety (DMIRS) on 9 March 2023. DMIRS advertised the application for a public comment for a period of 7 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix B), relevant datasets (Appendix E), supporting information provided by the applicant (Appendix A) including the results of biological surveys, the clearing principles set out in Schedule 5 of the EP Act (Appendix C), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3). The Delegated Officer also took into consideration the purpose of the clearing to maintain access to the gas pipeline right of way.

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;
- the loss of native vegetation within potentially restricted fauna habitat;
- potential land degradation in the form of wind, soil, and/or water erosion; and

- potential impacts to riparian vegetation.

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 conditions currently imposed on clearing permit CPS 8146/1 are considered adequate to manage the impacts of clearing:

- take hygiene steps to minimise the risk of the introduction and spread of weeds; and
- staged clearing condition with requires commencement of construction no later than six months after undertaking clearing to reduce the risk of erosion;
- clearing not authorised within a restricted fauna habitat; and
- a watercourse management condition.

The following standard condition was not imposed on clearing permit CPS 8146/1, however will be imposed on this version:

- avoid, minimise to reduce the impacts and extent of clearing.

The assessment has not changed since the assessment for CPS 8146/1.

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)
- *The Petroleum and Geothermal Energy Resources Act 1967* (WA)
- *The Petroleum Pipelines Act 1969* (WA)

Relevant agreements (treaties) considered during the assessment include:

- Japan-Australia Migratory Bird Agreement
- China-Australia Migratory Bird Agreement
- Republic of Korea-Australia Migratory Bird Agreement

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2014)
- *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, 2016)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The permit holder has planned the proposed clearing to cause as little disturbance as possible, and will mitigate potential impacts as outlined below (APA, 2018):

- Pipeline construction right of way is a temporary, cleared construction zone along the pipeline alignment intended to accommodate equipment, vehicle movements, and temporary storage of trench spoil and topsoil;
- The width of the construction right of way provides enough room for construction works to proceed with low risk of collisions or other incidents;
- The construction right of way will generally be 25 metres wide, but in areas of higher environmental or social value it will be reduced to 20 metres as far as practicable to minimise impacts;
- Access to the clearing area will be from existing roads and tracks, including pastoral and mine access roads and tracks;
- Vegetation will be cleared and pushed into separate piles at the side of the construction right of way and ancillary areas using bulldozers;
- Topsoil will be stripped to a minimum depth of about 100 millimetres (depending on the soil profile) using graders, and pushed into windrows at the side of the cleared areas (adjacent to, but separate from, the stockpiled vegetation), where it will not be disturbed by construction works;
- All cleared areas along the construction right of way, other than a 3 metre wide access track adjacent to the pipeline, will be rehabilitated following completion of pipeline installation;

- The delivery and off-take station footprints will be fenced and remain cleared, with a 10 metre firebreak cleared around the fence line; and
- Rehabilitation will include the return of pre-clearing contours, ripping of compacted surfaces and the respread of topsoil and cleared vegetation.

3.2. Assessment of impacts on environmental values

A review of current environmental information (Section 3.2.1, Appendix B, Appendix C) reveals that the assessment against the clearing principles has not changed significantly from clearing permit decision report CPS 8146/1.

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

Assessment

Two fauna habitat assessments have been conducted over parts of the application area by Astron (2012) in October 2012 and Stantec (2018) in May 2018.

Three broad fauna habitats were identified within parts of the application area by Astron (2012):

- Plain with *Acacia aneura* open woodland over tussock grassland on sandy clay or clay, with some gravelly sandy clay
- Plain with *Acacia aneura* groves over hummock grassland on sandy clay
- Breakaway/hill with open *Acacia aneura* woodland over tussock grassland on loamy sandy clay

Five broad fauna habitats were identified within the western extent of the application area by Stantec (2018):

- *Acacia* over spinifex
- Drainage line
- Open plain
- Rocky/outcropping
- Shrubland

The rocky/outcropping and *Acacia* over spinifex habitat types were considered to have the highest potential significance to fauna (Stantec, 2018). The rocky/outcropping habitat type provides a limited, unique, and complex structure within the local area (Stantec, 2018). The outcropping crevices and pockets may provide shelter to the great desert skink, long-tailed dunnart, brush-tailed mulgara, and other small native fauna (Stantec, 2018).

The *Acacia* over spinifex habitat type is characterised by a lack of disturbance, presence of hummocks and woody debris that may provide suitable habitat for a variety of small fauna species including brush-tailed mulgara (Stantec, 2018). The drainage line habitat is also considered to provide some shelter for a range of fauna, typically following significant rainfall events (Stantec, 2018). The remaining fauna habitat types identified are considered widespread and common throughout the region, and not restricted to the application area (Astron, 2012).

No evidence of conservation significant fauna species were opportunistically identified during either field assessment, however 28 vertebrate fauna species were recorded including introduced species (Astron, 2012; Stantec, 2018). A number of conservation significant fauna species have the potential to utilise the habitats recorded within the application area (Appendix B.4), however they are unlikely to be significantly impacted by the proposed clearing.

The linear nature of the clearing proposal is not likely to have significant local impacts, however, it will act as an invasion pathway for feral species such as cats and foxes.

Conclusion

Based on the above assessment, the proposed clearing will result in a loss of restricted and significant fauna habitats for a number of species. Potential impacts to the rocky/outcropping habitat type as a result of the proposed clearing may be minimised by the continued implementation of a condition excluding a portion of this habitat type from the permitted area.

Conditions

To address the above impacts, the following management measure will continue to be required as a condition on the clearing permit:

- Exclusion area where clearing is not authorised within the rocky/outcropping fauna habitat

3.3. Relevant planning instruments and other matters

The clearing permit amendment application was advertised on 31 March 2023 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (WC2011/007) over the area under application (DPLH, 2023). This claim has been determined by the Federal Court on behalf of the claimant group. Mining tenure and petroleum titles have been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

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 that may be required for the proposed land use include:
CPS 8146/2

- An Environment Plan approved under the *Petroleum Pipelines Act 1969*.

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. Additional information provided by applicant

Information requested from applicant	Applicant response
<p>Information was requested as to why the amendment was applied for. The application form only stated that the amendment was applied for as “there is still allocation left on the permit”.</p> <p>Two priority flora species were recorded during flora surveys of the application area, however no flora management conditions were placed on CPS 8146/2. Information regarding whether individuals of <i>Eremophila pungens</i> or <i>Grevillea inconspicua</i> were cleared for the construction and installation of the gas pipeline.</p>	<p>As the gas pipeline has a design life of 20+ years, the pipeline must be maintained for the total duration. The amendment was applied for to conduct any maintenance clearing as needed between pipeline marker posts.</p> <p>The applicant informed the Department that individuals of <i>Eremophila pungens</i> or <i>Grevillea inconspicua</i> were avoided during clearing for construction and installation of the gas pipeline. They are located outside of the right of way that was cleared for the pipeline, and will also not be impacted by future clearing.</p>

Appendix B. Site characteristics

B.1. Site characteristics

Characteristic	Details
Local context and ecological linkage	<p>The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia (GIS Database). It is located within the Eastern Murchison subregion, of the Murchison bioregion (GIS Database). The predominant surrounding mine sites are gold operations (GIS Database).</p> <p>Over 98% of the vegetation within a 20 kilometre radius remains uncleared (GIS Database). It is unlikely that the application area represents an important ecological linkage, particularly given it is a linear corridor.</p>
Conservation areas	<p>The application area is not located within any conservation areas (GIS Database). The nearest conservation area is Wanjarri Nature Reserve, located approximately 56.9 kilometres north of the application area (GIS Database).</p>
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation associations: 18: Low woodland; mulga (<i>Acacia aneura</i>); 39: Shrublands; mulga scrub; and 109: Hummock grasslands, shrub steppe; <i>Eucalyptus youngiana</i> over hard spinifex (GIS Database).</p> <p>Two biodiversity surveys have been carried out over the application area by Astron (2012) and Stantec (2018). Astron (2012) conducted a flora and vegetation survey over the full extent of the proposed gas pipeline route from 22-25 October 2012. Due to changes to the route Stantec (2018) undertook an additional survey from 8-14 May 2018 to ensure that the entire application area has been surveyed.</p> <p>The following vegetation types were recorded within the application area (Astron, 2012):</p> <p><u>LOW HILLS</u></p> <p>Hi01 <i>Acacia ?sibirica</i> low open woodland over <i>Acacia ?fuscaeneura</i> and <i>Acacia</i> sp. 'resinous margins' tall shrubland over <i>Acacia ?fuscaeneura</i> shrubland over <i>Aristida contorta</i> very open tussock grassland.</p> <p>Hi02 <i>Acacia ?fuscaeneura</i> and <i>Acacia quadrimarginea</i> tall open shrubland over <i>Acacia ?fuscaeneura</i> open shrubland over <i>Aristida contorta</i> open tussock grassland.</p> <p><u>PLAINS</u></p> <p>PI01 <i>Acacia ?fuscaeneura</i> (<i>Acacia caesaneura</i>) scattered low open woodland to scattered low trees over <i>Acacia ?fuscaeneura</i> tall open shrubland over <i>Acacia ?fuscaeneura</i>, <i>Acacia ?sibirica</i>, <i>Acacia ?macraneura</i>, and <i>Eremophila forrestii</i> subsp. <i>?forrestii</i> open shrubland <i>?Eriachne</i> sp. and <i>Aristida contorta</i> very open tussock grassland.</p> <p>PI02 <i>Acacia ?macraneura</i> or <i>Acacia ?sibirica</i> low open woodland to scattered low trees to tall open shrubland to scattered tall trees over <i>Acacia ?macraneura</i>, <i>Acacia ?sibirica</i>, and <i>Acacia tetragonophylla</i> tall open shrubland over <i>Eremophila fraseri</i> subsp. <i>fraseri</i> open shrubland to scattered shrubs over <i>Aristida contorta</i> very open tussock grassland.</p> <p>PI03 <i>Acacia ?fuscaeneura</i> low woodland over <i>Eremophila ?forrestii</i> scattered shrubs over <i>Eremophila latrobei</i> subsp. <i>latrobei</i> scattered shrubs over <i>Acacia ?macraneura</i> and <i>Acacia</i> sp. 'resinous margins' open shrubland over <i>Aristida contorta</i> open tussock grassland.</p> <p>PI04 <i>Acacia ?caesaneura</i> and <i>Acacia</i> sp. 'resinous margins' tall open shrubland over <i>Acacia ?sibirica</i> and <i>Eremophila forrestii</i> subsp. <i>?forrestii</i> open shrubland.</p>

	<p>The following vegetation types were recorded within the application area (Stantec, 2018):</p> <p>AiArEIIesEm <i>Acacia incurvaneura</i> and <i>Acacia ramulosa</i> subsp. <i>linophylla</i> (<i>Acacia caesaneura</i> and <i>Acacia aneura</i>) tall shrubland to open scrub over <i>Eremophila latrobei</i> subsp. <i>latrobei</i> and <i>Eremophila spectabilis</i> low shrubland to open low heath over <i>Eriachne mucronata</i> open grassland.</p> <p>AiAspp.AsEfEeEm <i>Acacia incurvaneura</i> (<i>Acacia craspedocarpa</i> (hybrid) and <i>Acacia caesaneura</i>) tall shrubland over <i>Acacia sibirica</i> open shrubland to shrubland over <i>Eremophila forrestii</i> low shrubland over <i>Eragrostis eriopoda</i> and <i>Eriachne mucronata</i> open tussock grassland.</p> <p>AiEspP.SsMPsEm <i>Acacia incurvaneura</i> tall open shrubland over <i>Eremophila fraseri</i> subsp. <i>?fraseri</i>, <i>Senna</i> sp. Meekatharra, <i>Eremophila latrobei</i> subsp. <i>?latrobei</i>, <i>Ptilotus schwartzii</i> and <i>Eremophila ?margarethae</i> open shrubland over <i>Eriachne mucronata</i> very open tussock grassland.</p> <p>AnEoaPoSIMtSeAcEc <i>Acacia aneura</i> tall shrubland over <i>Eremophila oldfieldii</i> subsp. <i>?angustifolia</i> open shrubland to shrubland over <i>Ptilotus obovatus</i> and <i>Solanum lasiophyllum</i> low shrubland over <i>Maireana triptera</i> and <i>Sclerolaena eriacantha</i> low chenopods over <i>Aristida contorta</i> and <i>Enneapogon caerulescens</i> open tussock grassland.</p> <p>AqAsppC?dEffAc <i>Acacia quadrimarginea</i> open shrubland to tall shrubland over <i>Acacia sibirica</i>, <i>Acacia ayersiana</i> (narrow phyllode variant) and <i>Acacia ramulosa</i> subsp. <i>ramulosa</i> open shrubland over <i>Calytrix ?desolata</i> and <i>Eremophila forrestii</i> subsp. <i>forrestii</i> open low shrubland over <i>Aristida contorta</i> very open tussock grassland.</p> <p>Aspp.EoaDrSsPoAc <i>Acacia quadrimarginea</i>, <i>Acacia aneura</i>, <i>Acacia macraneura</i> and <i>Acacia burkittii</i> tall open shrubland to tall shrubland over <i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i>, <i>Dodonaea rigida</i> and <i>Scaevola spinescens</i> open shrubland over <i>Ptilotus obovatus</i> low open shrubland over <i>Aristida contorta</i> very open tussock grassland.</p> <p>AsppEspPSeEpAc?Ta <i>Acacia quadrimarginea</i>, <i>Acacia caesaneura</i> and <i>Acacia tetragonophylla</i> tall open shrubland over <i>Eremophila fraseri</i> subsp. <i>fraseri</i> open shrubland over <i>Eremophila serrulata</i> and <i>Sida ?ectogama</i> low open shrubland over <i>Enneapogon polyphyllus</i> and <i>Aristida contorta</i> very open to open tussock grassland and <i>?Tragus australianus</i> very open grasses.</p> <p>EffEm <i>Eremophila fraseri</i> subsp. <i>fraseri</i> open shrubland over <i>Eremophila margarethae</i> open low shrubland</p> <p>EkE?AsppTbMp <i>Eucalyptus kingsmillii</i> and <i>Eucalyptus lucasii</i> very open shrub mallee over <i>Acacia caesaneura</i> (<i>Acacia ayersiana</i> (hybrid)) tall shrubland over <i>Acacia ramulosa</i> var. <i>linophylla</i> (<i>Acacia ramulosa</i> var.?) open shrubland.</p>
Vegetation condition	<p>The condition of vegetation within the proposed clearing area was described as (Astron, 2012; Stantec, 2018; Keighery, 1994):</p> <p>Excellent: vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.</p> <p>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.</p> <p>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.</p> <p>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.</p>

	<p>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.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix D.</p>																
Climate and landform	<p>The application area is relatively flat with elevations across the 25 kilometre pipeline route ranging from 490 to 530 metres AHD (APA, 2018; GIS Database).</p> <p>The climate of the Eastern Murchison subregion is arid, with the nearest weather station recording an average rainfall of approximately 248.4 millimetres per year (BoM, 2023; CALM, 2002).</p>																
Soil description and land degradation risk	<p>The soils and landforms within the application area are mapped as (DPIRD, 2023; Pringle et al., 1994; GIS Database):</p> <table border="1"> <thead> <tr> <th>LAND SYSTEM</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>Bevon</td> <td> <p>Landform: irregular low ironstone hills with stony lower slopes supporting mulga shrublands</p> <p>Soils: shallow red earth on greenstone, occasionally calcareous,</p> </td> </tr> <tr> <td>Bullimore</td> <td> <p>Landform: extensive sandplains supporting spinifex hummock grasslands</p> <p>Soils: deep earthy red sand</p> </td> </tr> <tr> <td>Desdemona</td> <td> <p>Landform: extensive plains with deep sandy or loamy soils, supporting mulga and wanderrie grasses</p> <p>Soils: deep earthy red sand or deep red earth</p> </td> </tr> <tr> <td>Jundee</td> <td> <p>Landform: hardpan plains with ironstone gravel mantles, supporting mulga shrublands</p> <p>Soils: shallow red earth or red sand on hardpan with deep red earth, occasionally on hardpan in groves, shallow red earth with a stony mantle</p> </td> </tr> <tr> <td>Nubev</td> <td> <p>Landform: gently undulating stony plains, minor limonitic low rises, and drainage floors, supporting mulga and halophytic shrublands.</p> <p>Soils: shallow red earth or duplex on greenstone, red sand on hardpan</p> </td> </tr> <tr> <td>Tiger</td> <td> <p>Landform: gravelly hardpan plains and sandy banks with mulga shrublands and wanderrie grasses</p> <p>Soils: shallow red earth on hardpan with deep red earth in groves, red sand on hardpan</p> </td> </tr> <tr> <td>Violet</td> <td> <p>Landform: undulating stony and gravelly plains and low rises, supporting mulga shrublands</p> <p>Soils: shallow red earth on greenstone, red sand with ferruginous gravel or deep red earth, red sand or red earth over ferruginous gravel or hardpan, lithosols, deep red earth</p> </td> </tr> </tbody> </table> <p>Most of the above land systems are generally not susceptible to erosion (DPIRD, 2023; Pringle et al., 1994). A number may be prone to wind, water, or soil erosion where vegetation cover is substantially reduced, particularly within drainage lines (DPIRD, 2023; Pringle et al., 1994).</p>	LAND SYSTEM	DESCRIPTION	Bevon	<p>Landform: irregular low ironstone hills with stony lower slopes supporting mulga shrublands</p> <p>Soils: shallow red earth on greenstone, occasionally calcareous,</p>	Bullimore	<p>Landform: extensive sandplains supporting spinifex hummock grasslands</p> <p>Soils: deep earthy red sand</p>	Desdemona	<p>Landform: extensive plains with deep sandy or loamy soils, supporting mulga and wanderrie grasses</p> <p>Soils: deep earthy red sand or deep red earth</p>	Jundee	<p>Landform: hardpan plains with ironstone gravel mantles, supporting mulga shrublands</p> <p>Soils: shallow red earth or red sand on hardpan with deep red earth, occasionally on hardpan in groves, shallow red earth with a stony mantle</p>	Nubev	<p>Landform: gently undulating stony plains, minor limonitic low rises, and drainage floors, supporting mulga and halophytic shrublands.</p> <p>Soils: shallow red earth or duplex on greenstone, red sand on hardpan</p>	Tiger	<p>Landform: gravelly hardpan plains and sandy banks with mulga shrublands and wanderrie grasses</p> <p>Soils: shallow red earth on hardpan with deep red earth in groves, red sand on hardpan</p>	Violet	<p>Landform: undulating stony and gravelly plains and low rises, supporting mulga shrublands</p> <p>Soils: shallow red earth on greenstone, red sand with ferruginous gravel or deep red earth, red sand or red earth over ferruginous gravel or hardpan, lithosols, deep red earth</p>
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Waterbodies	<p>A desktop assessment identified that the area proposed to be cleared intersects several minor non-perennial watercourses (drainage lines) (GIS Database).</p>																
Hydrogeography	<p>The application area is not within any legislated surface water area (GIS Database). The application area is located within the Goldfields Groundwater Area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (GIS Database). The mapped groundwater salinity is 500-1000 total dissolved solids milligrams per litre which is described as marginal water quality (GIS Database).</p>																
Flora	<p>Seven priority flora species have previously been recorded within a 50 kilometre radius of the application area (GIS Database). Two of these species were recorded during the field assessments (Stantec, 2018).</p>																

Ecological communities	There are no known threatened or priority ecological communities located within the application area (GIS Database). The nearest known ecological community is the Lake Miranda west calcrete groundwater assemblage types on Carey palaeodrainage on Yakabindie Station priority 1 ecological community (GIS Database).
Fauna	A desktop assessment found records 18 conservation significant fauna species within a 100 kilometre radius of the application area (Stantec, 2018; GIS Database).

B.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 - Murchison	28,120,586	28,044,823	~99	2,185,987	7.77
Beard vegetation associations - State					
18	19,892,306	19,843,148	~99	1,317,179	6.62
39	6,613,567	6,602,578	~99	795,070	12.02
109	949,306	948,337	~99	107,914	11.37
Beard vegetation associations - Murchison bioregion					
18	12,403,172	12,363,252	~99	614,964	4.96
39	1,148,400	1,138,064	~99	40,834	3.56
109	310,285	309,324	~99	75,848	24.44

Government of Western Australia (2019)

B.3. Flora analysis table

The following flora species have known populations recorded within a 50 kilometre radius of the application area (GIS Database). One species was recorded during the field assessment by Stantec (2018).

Species name	Conservation status	No. of populations	Total individuals	Recorded during surveys	Estimated individuals during survey
<i>Baeckea</i> sp. Sandstone	P3	1	3	no	
<i>Grevillea inconspicua</i>	P4	4	62	yes	82 to 222
<i>Hemigenia exilis</i>	P4	1	7	no	
<i>Thryptomene</i> sp. Leinster	P3	1	5	no	

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

The below flora have records of individuals within a 50 kilometre radius of the application area, however there are no confirmed populations (Western Australian Herbarium, 1998-; GIS Database). One species was recorded during the field assessment by Stantec (2018).

Species name	Conservation status	Total records in Florabase	Recorded during surveys	Estimated individuals during survey
<i>Eremophila pungens</i>	P4	45	yes	152 to 401
<i>Korthalsella leucothrix</i>	P1	14	no	
<i>Verticordia jamiesonii</i>	P3	34	no	

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

B.4. Fauna analysis table

The following conservation significant fauna species have previously been recorded within 100 kilometres of the application area based on a database assessment (GIS Database). One species was removed as it is extinct (GIS Database). A significant number of these records range from the 1950s to the 1990s (GIS Database). The likelihood of occurrence was determined from the Stantec (2018) survey report.

Species	Common name	WA status	EPBC status	Likelihood of occurrence
BIRD				
<i>Actitis hypoleucos</i>	common sandpiper	MI	MI	unlikely
<i>Amytornis striatus striatus</i>	striated grasswren (sandplain)	P4		unlikely
<i>Apus pacificus</i>	fork-tailed swift	MI	MI	possible
<i>Calidris canutus</i>	red knot	EN	EN	unlikely
<i>Falco peregrinus</i>	peregrine falcon	OS		possible
<i>Gelochelidon nilotica</i>	gull-billed tern	MI	MI	unlikely
<i>Leipoa ocellata</i>	malleefowl	VU	VU	unlikely
<i>Polytelis alexandrae</i>	princess parrot	P4	VU	unlikely
<i>Tringa glareola</i>	wood sandpiper	MI	MI	unlikely
<i>Tringa nebularia</i>	common greenshank, greenshank	MI	MI	unlikely
INVERTEBRATE				
<i>Idiosoma clypeatum</i>	northern shield-backed trapdoor spider	P3		possible
<i>Kwonkan moriartii</i>	Moriarty's trapdoor spider	P2		unlikely
MAMMAL				
<i>Dasycercus blythi</i>	brush-tailed mulgara	P4		possible
<i>Leporillus conditor</i>	greater stick-nest rat, wopilkara	CD	VU	unlikely
<i>Macrotis lagotis</i>	bilby, dalgyte, ninu	VU	VU	unlikely
<i>Petrogale lateralis lateralis</i>	black-flanked rock-wallaby, black-footed rock-wallaby	EN	EN	unlikely
<i>Sminthopsis longicaudata</i>	long-tailed dunnart	P4		possible
REPTILE				
<i>Liopholis kintorei</i>	great desert skink	VU	VU	unlikely

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, OS: other specially protected fauna, CD: species of special conservation interest (conservation dependent fauna), MI: Migratory species

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p>Principle (a): "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p>Assessment: The area proposed to be cleared contains priority flora (Stantec, 2018; Appendix B.3), however given the current alignment of the gas pipeline, populations of recorded priority flora have been avoided (APA, 2023; Appendix A). No future clearing will have an impact on these species as they fall outside the right of way of the pipeline (APA, 2023; Appendix A).</p>	<p>Not likely to be at variance</p> <p>as per CPS 8146/1</p>	No
<p>Principle (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."</p> <p>Assessment: The area proposed to be cleared may contain significant habitat for conservation significant fauna (Stantec, 2018).</p>	<p>May be at variance</p> <p>as per CPS 8146/1</p>	<p>Yes</p> <p>Refer to Section 3.2.1, above.</p>
<p>Principle (c): "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p>Assessment:</p> <p>There are no known records of threatened flora within a 50 kilometre radius of the application area (GIS Database). Flora surveys of the application area and surrounds did not record any species of Threatened flora (Astron, 2012; Stantec, 2018).</p>	<p>Not likely to be at variance</p> <p>as per CPS 8146/1</p>	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>The vegetation associations within the application area are common within the region (Astron, 2018; Stantec, 2018; GIS Database), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any threatened flora species.</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> There are no known threatened ecological communities (TECs) located within or in close proximity to the application area (GIS Database). The nearest known TEC is the state listed Depot Springs stygofauna community (VU), located approximately 42 kilometres west of the application area (GIS Database).</p> <p>Flora and vegetation surveys of the application area did not identify any vegetation representative of a TEC (Astron, 2012; Stantec, 2018).</p>	<p>Not likely to be at variance</p> <p>as per CPS 8146/1</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 falls within the Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99% of the pre-European vegetation still exists in the IBRA Murchison Bioregion (Government of Western Australia, 2019).</p> <p>The application area is broadly mapped as Beard vegetation associations 18: Low woodland; mulga (<i>Acacia aneura</i>); 39: Shrublands; mulga scrub; and 109: Hummock grasslands, shrub steppe; <i>Eucalyptus youngiana</i> over hard spinifex (GIS Database).</p> <p>Approximately 99% of the pre-European extent of these vegetation associations remain uncleared at both the state and bioregional level (Government of Western Australia, 2019; Appendix B.2). The application area is not considered to be a significant remnant of native vegetation in an area that has been extensively cleared.</p>	<p>Not at variance</p> <p>as per CPS 8146/1</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> The nearest conservation area is Wanjarri Nature Reserve, located approximately 56.9 kilometres north of the application area (GIS Database). Given the distance to the nearest conservation area, the proposed clearing is not likely to have a significant impact on the environmental values of any conservation areas.</p>	<p>Not likely to be at variance</p> <p>as per CPS 8146/1</p>	<p>No</p>
<p>Environmental value: land and water resources</p>		
<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 permanent watercourses or wetlands within the area proposed to clear (GIS Database). Several minor non-perennial waterlines intersect the application area and throughout the local area (GIS Database). These waterlines are expected to flow during high rainfall periods (APA, 2018).</p> <p>One vegetation type, AsppEsppSeEpAc?Ta, was described as vegetation that could potentially be considered as growing in association with a watercourse (Stantec, 2018). This vegetation type covers approximately 3.26 hectares within the application area of approximately 514 hectares (Stantec, 2018).</p> <p>This vegetation type may provide habitat for native fauna when seasonally flooded (Stantec, 2018). Whilst the proposed clearing will impact riparian vegetation, it is common in the local area and the vegetation is not likely to be significant for native fauna (GIS Database). Several of the minor waterlines have already been impacted by an existing road that runs through the application area (GIS Database). Potential impacts to riparian vegetation may be managed by the continued implementation of a watercourse management condition.</p>	<p>May be at variance</p> <p>as per CPS 8146/1</p>	<p>No</p>

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>Principle (g): <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p>Assessment: The application area lies within the Bevon, Bullimore, Desdemona, Jundee, Tiger and Violet land systems; and to a lesser extent, within the Nubev land system (DPIRD, 2023; Pringle et al., 1994; GIS Database). Most of the above land systems are generally not susceptible to erosion (DPIRD, 2023; Pringle et al., 1994). A number may be prone to wind, water, or soil erosion where vegetation cover is substantially reduced, particularly within drainage lines, however these land systems are limited within the permit boundary (DPIRD, 2023; Pringle et al., 1994).</p> <p>Given the narrow and linear infrastructure of the proposed clearing, along with the majority of land systems mapped within the application area generally not susceptible to erosion, it is unlikely to cause appreciable land degradation. Potential impacts from erosion as a result of the proposed clearing may be minimised by the continued implementation of a staged clearing condition.</p>	<p>Not likely to be at variance</p> <p>as per CPS 8146/1</p>	No
<p>Principle (i): <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>Assessment: There are no Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). There are no permanent watercourses or wetlands within the area proposed to clear, however there are several minor non-perennial watercourses that intersect the application area (GIS Database). These drainage lines are common within the region and are dry for most of the year, only flowing briefly immediately following significant rainfall. Given the narrow and linear infrastructure of the proposed clearing, it is unlikely that the proposed clearing will impact the quality of surface water.</p> <p>The mapped groundwater salinity is 500-1000 total dissolved solids milligrams per litre which is described as marginal water quality (GIS Database). It is unlikely that the proposed clearing will have an impact on the quality of ground water.</p>	<p>Not likely to be at variance</p> <p>as per CPS 8146/1</p>	No
<p>Principle (j): <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>Assessment:</p> <p>There are no permanent watercourses or wetlands within the area proposed to clear, however there are several minor non-perennial watercourses that intersect the application area (GIS Database). These drainage lines are common within the region and are dry for most of the year, only flowing briefly immediately following significant rainfall. Given the narrow and linear infrastructure of the proposed clearing, it is unlikely that the proposed clearing will increase the incidence or intensity of natural flooding events.</p>	<p>Not likely to be at variance</p> <p>as per CPS 8146/1</p>	No

Appendix D. 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.

Condition	Description
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 E. Sources of information

E.1. GIS databases

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

- Contours (DPIRD-073)
- Clearing Regulations – Schedule One Areas (DWER-057)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Environmentally Sensitive Areas (DWER-046)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Pre-European Vegetation Statistics
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery

Restricted GIS Databases used:

- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

E.2. References

- APA (2018) Agnew Gas Pipeline Native Vegetation Clearing Permit NVCP Supporting Document. APA Operations Pty Ltd, July 2018.
- APA (2023) Additional information received to support clearing permit application CPS 8146/2, received 2 May 2023.
- Astron (2012) Agnew Pipeline Vegetation, Flora and Fauna Survey. Prepared by Astron Environmental Services, for Gold Fields Australia Pty Ltd, October 2012.
- Bureau of Meteorology (BoM) (2023) Bureau of Meteorology Website – Climate Data Online, Leinster Aero. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 13 April 2023).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- Department of Environment Regulation (DER) (2014) *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf
- Department of Planning, Lands and Heritage (DPLH) (2023) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 12 April 2023).
- Department of Primary Industries and Regional Development (DPIRD) (2023) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <https://dpiird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f> (Accessed 24 April 2023).
- Department of Water and Environmental Regulation (DWER) (2021) Procedure: Native vegetation clearing permits. Joondalup. Available from: https://www.wa.gov.au/system/files/2021-10/Procedure_Native_vegetation_clearing_permits.pdf

- Environmental Protection Authority (EPA) (2016) Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment. Available from:
http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf
- Environmental Protection Authority (EPA) (2016) Technical Guidance – Terrestrial Fauna Surveys. Available from:
https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Tech%20guidance-%20Terrestrial%20Fauna%20Surveys-Dec-2016.pdf
- Environmental Protection Authority (EPA) (2020) Technical Guidance – Terrestrial Fauna Surveys. Available from:
https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/2020.09.17%20-%20EPA%20Technical%20Guidance%20-%20Vertebrate%20Fauna%20Surveys%20-%20Final.pdf
- Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions.
<https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Pringle, H.J.R., Van Vreeswyk, A.M.E., Gillian, S.A. (1994) An Inventory and Condition Survey of Rangelands in the north-eastern Goldfields, Western Australia. Department of Agriculture, Western Australia.
- Stantec (2018) Flora and Fauna Survey: Agnew Gold Mine Camp, Power Plant, Airport, Wind Farm and Pipeline. Prepared by Stantec Australia Pty Ltd, for Gold Fields Australia Pty Ltd, June 2018.
- Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed 24 April 2023).

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)
DCCEEW	Department of Climate Change, Energy, the Environment and Water, 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 DCCEEW)
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.