Department of Energy, Mines, Industry Regulation and Safety

GOVERNMENT OF WESTERN AUSTRALIA

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	9099/1
Permit type:	Purpose Permit
Applicant name:	APA Operations Pty Ltd
Application received:	6 October 2022
Application area:	4 hectares
Purpose of clearing:	Pipeline Construction, Operation, Commissioning and Associated Activities
Method of clearing:	Mechanical Removal
Tenure:	Pipeline Licence 137
Location (LGA area):	City of Kalgoorlie-Boulder
Colloquial name:	Binduli Gas Pipeline

1.2. Description of clearing activities

APA Operations Pty Ltd proposes to clear up to four hectares of native vegetation within a boundary of approximately four hectares, for the purpose of pipeline construction, operation, commissioning and associated activities (APA, 2022a). The project is located approximately six kilometres south-west of Kalgoorlie, within the City of Kalgoorlie-Boulder (GIS Database).

The application is to allow for the lateral gas pipeline for the supply of natural gas to the Lynas Kaloorlie West facility rare earth processing plant from the Goldfields Gas Pipeline (APA, 2022b).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	27 February 2025
Decision area:	4 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) 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 E), supporting information provided by the applicant including the results of a flora and vegetation survey (Botanica Consulting, 2021), 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 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; and
- the loss of native vegetation that is suitable habitat for Arid Bronze Azure Butterfly (*Ogyris subterrestris petrina*) and Inland Hairstreak Butterfly (*Jalmenus aridus*).

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 is unlikely to lead have long-term adverse impacts on environmental values and 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 to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- retain vegetative material and topsoil, revegetation and rehabilitation; and
- undertake slow, progressive one-directional clearing to allow fauna to move into adjacent habitat.

1.5. Site map

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

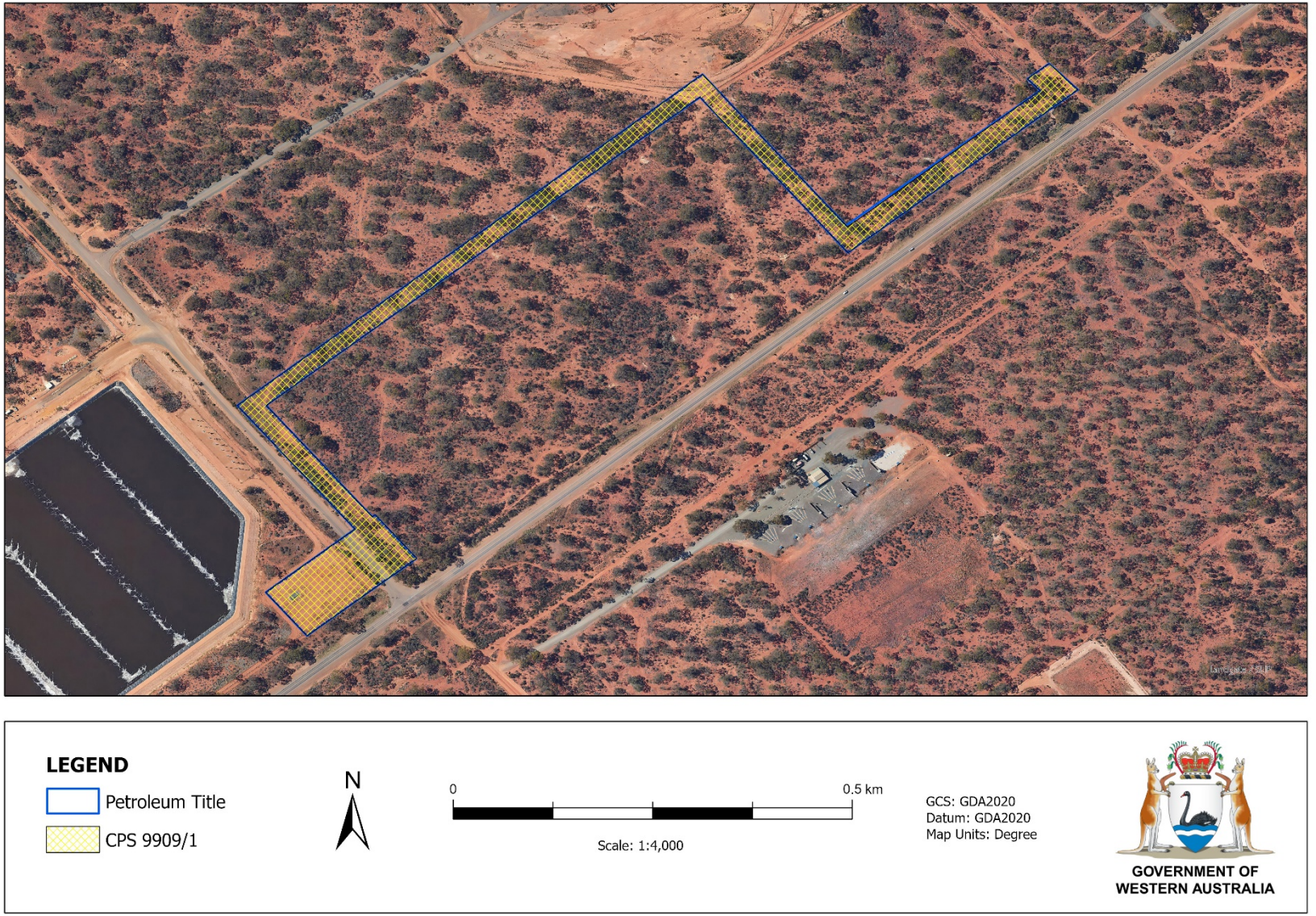

Figure 1. Map of the application area. The yellow area indicates the area within which conditional authorised clearing can occur under the granted clearing permit

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

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, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

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.

Evidence was submitted by the applicant, demonstrating that avoidance and mitigation measures such as those listed below will be undertaken:

- rehabilitation of the construction areas will be undertaken at completion of the pipeline construction, to minimise exposed areas and the long-term loss of vegetation cover;
- ongoing maintenance clearing of the pipeline footprint for operational safety reasons will be managed to minimise soil disturbance; and
- all cleared areas along the CROW, other than a 4 metre wide access track adjacent to the pipeline, will be rehabilitated following completion of pipeline installation (APA, 2022a; 2022b).

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

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource 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.

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

Assessment

Botanica Consulting undertook a reconnaissance flora/ vegetation survey and basic fauna survey in October/November 2021. Two fauna habitats were recorded within the application area:

- *Eucalypt* woodland on clay-loam plain (*Eucalyptus* open woodland over *Acacia* and *Eremophila* shrubland over mixed low shrubland) (65%); and
- *Ecalyptus* mallee woodland on clay-loam plain (*Eucalyptus* open mallee woodland over *Acacia* and *Eremophila* shrubland over mixed low shrubland) (27.5%) (Botanica Consulting, 2021).

Twelve conservation significant fauna species have been recorded within 20 kilometres of the application area, however no observations of conservation significant fauna were recorded during the basic fauna survey and targeted fauna survey (Botanica Consulting, 2021; 2025). Six Migratory/Priority bird species have been recorded within the local area (GIS Database). These species are considered unlikely to occur within the application area due to lack of suitable habitat.

Two invertebrate species have records within ten kilometres of the application area.

Records of the Critically Endangered fauna species *Ogyris subterrestris petrina* (Arid Bronze Azure Butterfly (ABAB)) were identified within ten kilometres of the application area (GIS Database). The butterfly is dependent on a specific species of ant

called *Camponotus terebrans* (pale form) (DBCA, 2020). The preferred habitat for the pale *Camponotus terebrans* is known to be the root systems of smooth-barked Eucalypt species, including *E. salmonophloia, E. salubris* and *E. oleosa*, occurring on sandy soils (DBCA, 2020). Approximately 27.5% of the application area is covered by vegetation unit CLP-EW1 - Eucalyptus Woodland (*Eucalyptus salmonophloia* and *E. griffithsii* open woodland over *Eremophila scoparia* and *Acacia hemiteles* shrubland over *Ptilotus obovatus, Atriplex vesicaria* and *Maireana triptera* low sparse shrubland) (Botanica Consulting, 2021), therefore the application area is considered suitable habitat for *Camponotus terebrans* (Botanica Consulting, 2021). Botanica Consulting undertook a targeted field survey to determine the presence of the ABAB (*Ogyris subterrestris petrina*) within the application area on 12 December 2024 (Botanica Consulting, 2025). No evidence of the host ant *Camponotus* sp. nr. *terebrans* were found at any of the sampled trees, and given the relatively small area of clearing, the proposed disturbance if unlikely to impact on this species.

The inland hairstreak butterfly, *Jalmenus aridus*, was originally first recorded at Douglas Lake, however the species has not been recorded from this location since 1997 (GIS Database). Little is known about its biology or ecology, however based on historical records, the larvae is thought to feed on the leaves and flowers of young shrubs of *Senna artemisioides subsp. coriacea* and mature trees of *Acacia tetragonophylla*, and are attended by the froglet ant (*Froggattella kirbii*) (Eastwood et al., 2023). As suitable habitat is present across multiple bioregions and the proposed clearing is for a narrow linear infrastructure disturbing a relatively small area of up to four hectares which will be rehabilitated, the proposed clearing is not considered to impact this species.

The Malleefowl is found in semi-arid to arid shrublands and low woodlands, especially those dominated by mallee and/or acacias (Commonwealth of Australia, 2008). This species requires a sandy substrate with an abundance of leaf litter for breeding which is not abundant within the application area (Commonwealth of Australia, 2008). No sightings or secondary evidence of Malleefowl were observed during the survey (Botanica Consulting, 2021). Malleefowl are known to occur in the region and may utilise the area for foraging, but it is not likely to represent significant habitat for this species.

Carnaby's black cockatoo is a large cockatoo that is endemic to, and widespread in the south-west of Western Australia (Commonwealth of Australia, 2008). This species occurs in native eucalypt woodlands (e.g. those that contain salmon gum and wandoo, and in shrubland or kwongan heathland dominated by hakea, dryandra, banksia and grevillea species) (Commonwealth of Australia, 2008). The species has been recorded within five kilometres of the application area in the Kalgoorlie town centre, however this record is 250 kilometres outside of the current modelled distribution for this species (GIS Database). No sightings or evidence of this species was recorded during the survey and this record is outside its distribution, therefore it is unlikely that this species inhabits the application area.

The Bilby (*Macrotis lagotis*) has three historical records and Numbat (*Myrmecobius fasciatus*) has one historical record within ten kilometres of the application area (GIS Database). As the application area is located outside of the current known distribution for both species and no evidence of this species was recorded during the fauna survey, it is considered unlikely that these species inhabit the application area.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation significant fauna can be managed by be managed to be environmentally acceptable.

Conditions

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

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- retain vegetative material and topsoil, revegetation and rehabilitation; and
- slow directional clearing in one direction to allow fauna to move into adjacent vegetation ahead of the clearing activities.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 26 November 2024 by the Department of Energy, Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There are no native title claims over the area under application (DPLH, 2025). However, the 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, 2025). 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:

- An Environment Plan approved under *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. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is located six kilometres south-west of Kalgoorlie (GIS Database). It is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia (GIS Database). The application area is surrounded by historical mining operations (GIS Database).
Ecological linkage	According to available databases, the application area does not contain any known or mapped ecological linkages (GIS Database).
Conservation areas	There are no conservation areas located within the application area (GIS Database). The Kurrawang Nature Reserve (R35453) is located approximately five kilometres north-east of the application area and the Kalgoorlie Arboretum (R23840) is located approximately five kilometres south-west of the application area (GIS Database).
Vegetation description	The vegetation of the application area is broadly mapped as the following Beard vegetation association: • 9: Medium woordland; coral hum (*Eucalyptus torquata*) and goldfields blackbutt (*Eucalyptus lesouefii*) (GIS Database). A flora and vegetation survey was conducted over the application area by Botanica Consulting during November, 2021. The following two vegetation associations were recorded within the application area (Botanica Consulting, 2021): • **CLP-EW1:** Eucalyptus Woodland. *Eucalyptus salmonophloia* and *E. griffithsii* open woodland over *Eremophila scoparia* and *Acacia hemiteles* shrubland over *Ptilotus obovatus*, *Atriplex vesicaria* and *Maireana triptera* low sparse shrubland (27.5%); and • **CLP-MW1:** Eucalyptus Mallee Woodland. *Eucalyptus griffithsii*, *E. yilgarnensis* and *E. oleosa* open mallee woodland over *Acacia hemiteles* and Eremophila scoparia open shrubland over *Ptilotus obovatus*, *Scaevola spinescens* and *Maireana triptera* low sparse shrubland (65%).
Vegetation condition	The vegetation survey conducted by Botanica Consulting indicate the vegetation within the proposed clearing area is in 'good' to 'completely degraded' (Keighery, 1994) condition, described as • Good: Obvious signs of damage caused by human activity since European settlement, such as historical clearing, changed fire regimes and low levels of grazing by feral animals; and • Completely Degraded: Existing clearing (access roads) (Botanica Consulting, 2021). The full Keighery (1994) condition rating scale is provided in Appendix D.
Climate and landform	The region characterised as semi-arid with a mean annual rainfall of 264.6 millilitres (BOM, 2025). The application area is located within the Kalgoorlie Province which consists of undulating plains (with some sandplains, hills and salt lakes) on the granite rocks and greenstone of the Yilgarn Craton (APA, 2022a).
Soil description	The soils of the application area are broadly mapped as the following soil type: • 265k9: Mx43 atlas system. Gently undulating valley plains and pediments; some outcrop of basic rock (DPIRD, 2025).
Land degradation risk	As the application area and surrounding regions has not been extensively cleared and due to the small amount of proposed clearing (four hectares), the proposed clearing is not considered likely to lead to land degradation issues (APA, 2022).
Waterbodies	The desktop assessment and aerial imagery indicated that no watercourses transect the area proposed to be cleared (GIS Database).
Hydrogeography	The application area is located within the proclaimed Goldfields groundwater area under the *Rights in Water and Irrigation Act 1914* (GIS Database). The mapped groundwater salinity is approximately 14,000 to 35,000 milligrams per litre total dissolved solids which is described as hypersaline (GIS Database).
Flora	The desktop assessment has identified 14 conservation significant flora species that have been recorded within 20 kilometres of the application area (GIS Database). The flora and vegetation survey conducted over the application area by Botanica Consulting during November, 2021 identified a total 39 vascular flora taxa within the survey area. No conservation significant flora were recorded within the application area (Botanica Consulting 2021; GIS Database). A total of two introduced flora species (*Centaurea melitensis* and *Carrichtera annua*) were recorded within the application area, neither of these were listed as a Weed of National Significance or a Declared Pest in Western Australia (Botanica Consulting, 2021).
Ecological communities	The application area is not located within a Priority Ecological Community or Threatened Ecological Community (Botanica Consulting, 2021; GIS Database). The Priority Ecological Community (Priority

Characteristic	Details
	3), Emu Land System, is located approximately 50 kilometres north-east of the application area (GIS Database).
Fauna	Botanica Consulting identified two broad scale terrestrial fauna habitats within the application area: • *Eucalypt* woodland on clay-loam plain (*Eucalyptus* open woodland over *Acacia* and *Eremophila* shrubland over mixed low shrubland) (65%); and • *Ecalyptus* mallee woodland on clay-loam plain (*Eucalyptus* open mallee woodland over *Acacia* and *Eremophila* shrubland over mixed low shrubland) (27.5%) (Botanica Consulting, 2021). There are no records of conservation significant fauna within the application area and no evidence of significant fauna species were observed during the field surveys (Botanical Consulting, 2021; 2025).

A.2. Vegetation extent

Appendix B.	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 - Coolgardie	12,912,204.35	12,648,491.39	97.96	2,114,349.37	16.37
Beard vegetation associations - State					
Veg Assoc No. 9	240,509.33	235,161.94	97.78	18,984.28	7.89
Beard vegetation associations - Bioregion					
Veg Assoc No. 9	240,441.99	235,100.97	97.78	18,984.28	7.90

Government of Western Australia (2019)

B.1. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and biological survey information (Botanica Consulting, 2021), impacts to the following conservation significant flora required further consideration (Western Australian Herbarium, 1998-).

Species name	Conservation status	Distance of closest record to application area (km)	Number of known records derived from Florabase (total)
Alyxia tetanifolia	P3	<5	14
Cyathostemon verrucosus	P3	<10	22
Elachanthus pusillus	P2	<10	7
Eremophila praecox	P2	<5	50
Eucalyptus jutsonii subsp*. jutsonii*	P4	<15	35
Eucalyptus x brachyphylla	P4	<10	24
Frankenia glomerata	P4	<10	69
Goodenia salina	P2	<15	14
Isolepis australiensis	P3	<15	10
Lepidium fasciculatum	P3	<10	13
Melaleuca coccinea	P3	<10	35
Notisia intonsa	P3	<15	29
Ptilotus procumbens	P1	<10	5
Xanthoparmelia dayiana	P3	<15	5

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

B.2. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and biological survey information (Botanica Consulting, 2021; 2025), impacts to the following conservation significant fauna required further consideration.

Species name	Common Name	Conservation status	Distance of closest record to application area (km)
Calidris acuminata	Sharp-tailed sandpiper	MI	<5
Calidris alba	Sanderling	MI	<15
Jalmenus aridus	inland hairstreak, desert blue butterfly	P1	<10
Leipoa ocellata	malleefowl	VU	<10
Macrotis lagotis	Bilby, dalgyte, ninu	VU	<10
Myrmecobius fasciatus	Numbat, walpurti	EN	<10
Ogyris subterrestris petrina	arid bronze azure butterfly	CR	<10
Plegadis falcinellus	Glossy ibis	MI	<5
Tringa brevipes	Grey-tailed tattler	P4	<10
Tringa glareola	Wood sandpiper	MI	<5
Tringa nebularia	Common greenshank, greenshank	MI	<15
Zanda latirostris	Carnaby's cockatoo	EN	<5

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

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The application area is located within the Great Western Woodlands (GIS Database). The Great Western Woodlands covers almost 16 million hectares and is considered to be of global biological and conservation importance as one of the largest and healthiest temperate woodlands (Botanica Consulting, 2021). A total of 39 vascular flora taxa were recorded during the flora survey (Botanica Consulting, 2021). The area proposed to be cleared does not contain any known significant flora, fauna, habitats, assemblages of plants (Botanica Consulting, 2021; GIS Database). Vegetation within the survey areas is considered to be of low biodiversity and is well represented outside the application area (APA, 2022).	Not likely to be at variance	No
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."* Assessment: The area proposed to be cleared may contain foraging habitat for a number of conservation significant fauna, however, due to the small scale of the clearing and the presence of similar habitat in the surrounding areas, it is not likely significant habitat for fauna (Botanica Consulting, 2021; GIS Database).	Not likely to be at variance	Yes
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: No conservation significant flora have been previously been recorded within the application area and no significant flora or habitat were identified during the survey (Botanica Consulting 2021; GIS Database).	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (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."* Assessment: There are no known Threatened Ecological Communities (TECs) located within the application area (GIS Database).	Not at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (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."* Assessment: The application area is located within the Coolgardie Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). The extent of the mapped vegetation type is consistent with the national objectives and targets for biodiversity conservation in Australia (Government of Western Australia, 2019). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not at variance	No
Principle (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."* Assessment: There are no conservation areas located within the application area (GIS Database). The Kurrawang Nature Reserve (R35453) is located approximately five kilometres north-east of the application area and the Kalgoorlie Arboretum (R23840) is located approximately five kilometres south-west of the application area (GIS Database). Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.	Not at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are not susceptible to wind / water erosion (GIS Database). Noting the location of the application area and the surrounding area has not been extensively cleared and the small scale of the clearing, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No
Principle (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."* Assessment: Given no water courses / wetlands / Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing unlikely to impact surface or ground water quality.	Not at variance	No
Principle (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."* Assessment: Given no water courses / wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging and the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.	Not at variance	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.
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):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Bush Forever (Regional Scheme) (DPLH-022)
- Cadastre (LGATE-218)
- Contours (DPIRD-073)
- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations - Schedule One Areas (DWER-057)
- DBCA - Lands of Interest (DBCA-012)
- DBCA - Legislated Lands and Waters (DBCA-011)
- DBCA Fire History (DBCA-060)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Esri World Imagery
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- 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 and Priority Flora (TPFL)
- Threatened and Priority Flora (WAHerb)
- Threatened and Priority Fauna

- Threatened and Priority Ecological Communities
- Threatened and Priority Ecological Communities (Buffers)

E.2.References

APA (2022a) Binduli Gas Pipeline. Native Vegetation Clearing Permit Supporting Document. APA Operations Pty Ltd, September 2022.

APA (2022b) Clearing permit application form, CPS 9909/1, received 6 October 2022.

BoM (2025) Bureau of Meteorology Website – Climate Data Online, Marble Bar. Bureau of Meteorology.

Botanica Consulting (2021) Binduli Project. Flora, Vegetation and Fauna Assessment of Kalgoorlie West Proposed Pipeline, December 2021.

Botanica Consultancy (2025) Kalgoorlie Power Project: Targeted ABAB Host Ant Survey. Memo prepared for APA by Botanica Consulting Pty Ltd, February 2025.

Commonwealth of Australia (2008) Species Profile and Threats Database. Department of Climate Change, Energy, the Environment and Water, Australia. https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl (Accessed 22 November 2024).

Department of Biodiversity, Conservation and Attractions (DBCA) (2020) Guideline for the survey of arid bronze azure butterfly (ABAB) in Western Australia. Available from: Threatened and priority fauna resources | Department of Biodiversity, Conservation and Attractions

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4. Glossary

Acronyms:

BC Act	*Biodiversity Conservation Act 2016,* 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
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DEMIRS)
DMP	Department of Mines and Petroleum, Western Australia (now DEMIRS)
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	*Environmental Protection Act 1986*, Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	*Rights in Water and Irrigation Act 1914*, Western Australia
TEC	Threatened Ecological Community

Definitions:

{DBCA (2023) 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 the species of fauna that are listed as critically endangered, endangered or vulnerable threatened species.

Threatened flora is the species of flora that are listed as critically endangered, endangered or vulnerable threatened species.

The assessment of the conservation status of threatened species is in accordance with the BC Act listing criteria and the requirements of Ministerial Guideline Number 1 and Ministerial Guideline Number 2 that adopts the use of the International Union for Conservation of Nature (IUCN) Red List of Threatened Species Categories and Criteria, and is based on the national distribution of the species.

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.

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.

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.

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).

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.

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).

Migratory species include birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) or 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.

CD **Species of special conservation interest (conservation dependent fauna)**

Species of special conservation need that are 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).

Currently only fauna are listed as species of special conservation interest.

OS **Other specially protected species**

Species 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).

Currently only fauna are listed as species otherwise in need of special protection.

P **Priority species:**

Priority is not a listing category under the BC Act. The Priority Flora and Fauna lists are maintained by the department and are published on the department's website.

All fauna and flora are protected in WA following the provisions in Part 10 of the BC Act. The protection applies even when a species is not listed as threatened or specially protected, and regardless of land tenure (State managed land (Crown land), private land, or Commonwealth land).

Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey 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 prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened.

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

Assessment of priority status 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 – known from few locations, none on conservation lands**

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, for example, 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 for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

P2 **Priority Two - Poorly-known species – known from few locations, some on conservation lands**

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, for example, 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 for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

P3 **Priority Three - Poorly-known species – known from several locations**
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. These species need 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 a conservation dependent specially protected species.
(c) Species that have been removed from the list of threatened species or lists of conservation dependent or other specially protected species, during the past five years for reasons other than taxonomy.
(d) Other species in need of monitoring.

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.