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:	10458/1
Permit type:	Purpose Permit
Applicant name:	AGI Development Group Nominees Pty Ltd
Application received:	19 December 2023
Application area:	0.05 hectares
Purpose of clearing:	Construction of a compressor
Method of clearing:	Mechanical Removal
Tenure:	Petroleum Licence L 9
Location (LGA area):	Shire of Ashburton
Colloquial name:	Turbridgi Gas Storage Facility Compressor

1.2. Description of clearing activities

AGI Development Group Nominees Pty Ltd (AGI) proposes to clear up to 0.05 hectares of native vegetation (including five trees) within a boundary of approximately 0.05 hectares, for the purpose of construction a compressor (AGI, 2023). The project is located approximately nine kilometres south-west of Onslow, within the Shire of Ashburton (GIS Database).

The application is to allow for the construction of a compressor for AGI Development Pty Ltd's Tubridgi Gas Storage Project (AGI, 2023).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	29 February 2024
Decision area:	0.05 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) on 19 December 2023. 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 D), supporting information provided by the applicant, including the results of a flora and vegetation survey, the clearing principles set out in Schedule 5 of the EP Act (Appendix B), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3).

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- the potential impacts to conservation signifciant fauna; and
- the potential land degradation in the form of wind erosion.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is not likely to lead to an unacceptable risk to the 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;
- staged clearing to minimise wind erosion;
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity; and

- retaining vegetative material and topsoil, revegetation and rehabilitation.

1.5. Site map

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

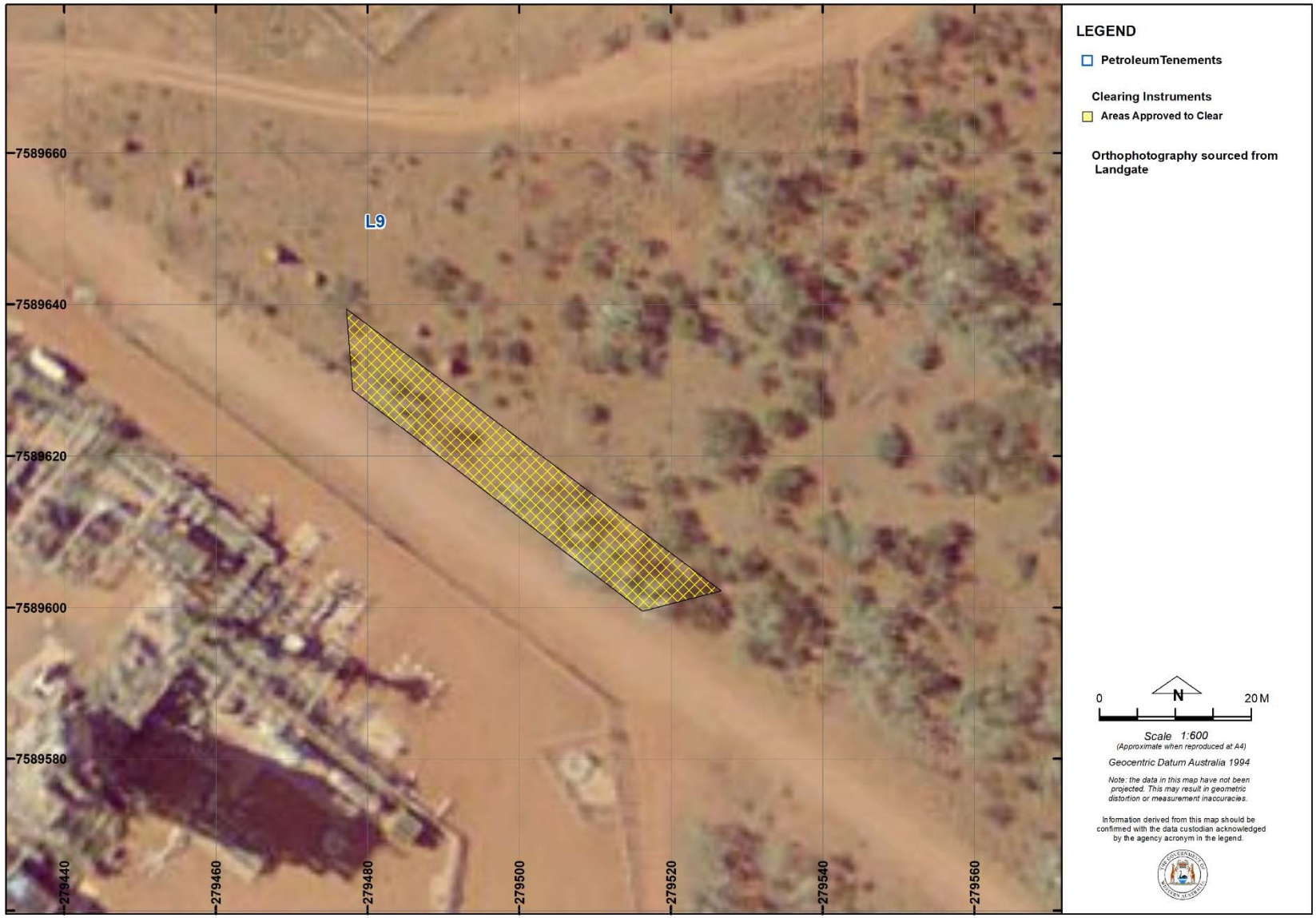

Figure 1. Map of the application area. The yellow area indicates the area within which conditional authorised clearing can occur under the granted clearing permit.

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)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *The Petroleum and Geothermal Energy Resources Act 1967* (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)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

AGI (2023) have outlined they maintain the following internal databases, and avoidance and mitigation measures:

- the location of the compressors were designed to minimise clearing; and
- previously disturbed areas will be used.

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 (flora and 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 (flora) - Clearing Principle (a)

Assessment

The flora survey identified 25 vascular plant taxa representing 20 genera and seven families within the application area (Mattiske, 2023). Three introduced weed species were identified within the proposed area (Mattiske, 2023). No conservation significant flora or fauna species were recorded (Mattiske, 2023).

Nine Priority flora have been recorded within 50 kilometres of the application area, four of these are considered to potentially occur within the application area as suitable habitat is present (GIS Database). The clearing of 0.05 hectares of native vegetation in poor condition is not considered to significantly impact these species as suitable habitat in a better condition is present within the surrounding environment (GIS Database).

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation significant flora can be managed by avoiding and minimising disturbance and by taking steps to minimise the risk of the introduction and spread of weeds.

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; and
- Take hygiene steps to minimise the risk of the introduction and spread of weeds.

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

Assessment

No conservation significant fauna species have been recorded within the application area (Mattiske, 2023). Fifty-three conservation significant fauna species have been recorded within 50 kilometres of the application area (GIS Database). The

application area provides suitable foraging habitat for six conservation significant fauna species, however it is not considered important for these species as suitable habitat and greater condition is available within bioregion and the area is directly adjacent to ongoing petroleum activities (GIS Database). Although no conservation significant fauna species were recorded within the application area (GIS Database), the area may be used as part of a wider home-range for a range of Migratory fauna species, however no conservation significant species are likely to be solely dependent on the habitats present within the application area. The clearing of 0.05 hectares of this vegetation is not considered to significantly impact these fauna species as suitable foraging habitat in better condition is available within the surrounding environment.

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 undertaking slow progressive clearing in one direction to allow fauna to move into adjacent environments.

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

- Undertake slow progressive clearing to allow fauna to move into adjacent environments.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 6 January 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 is no native title claim over the area under application (DPLH, 2024). The petroleum 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, 2024). 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 the *Petroleum and Geothermal Energy Resources Act 1967*

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 part of a patch of native vegetation in the extensive land use zone of Western Australia (GIS Database). The area is located within the Cape Range subregion of the Carnarvon Interim Biogeographic Regionalisation for Australia bioregion (GIS Database). The are proposed to be cleared is located adjacent to the existing Tubridgi Gas Storage Plant and is surrounded by the existing operational facility.
Ecological linkage	The application area does not form part of any formal or informal ecological linkages (GIS Database).
Conservation areas	There are no conservation areas within the application area (GIS Database).
Vegetation description	The vegetation of the application area is broadly mapped as the following Beard vegetation association: • 589: Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex (GIS Database). The application area was surveyed by Mattiske Consulting during September, 2023. The following vegetation association was recorded within the application area (Mattiske, 2023): • IF1: *Eucalyptus victrix* low open woodland over *Acacia synchronicia, Acacia tetragonophylla, Scaevola spinescens* tall sparse shrubland with *Rhynchosia minima, Senna artemisioides* subsp. *oligophylla*, *Eremophila longifolia* mid sparse shrubland over *Triodia epactia* low isolated hummock grasses with *Eriachne helmsii, Chrysopogon fallax, Urochloa occidentalis* var. *occidentalis* low sparse tussock grassland.
Vegetation condition	The vegetation survey (Mattiske, 2023) indicate the vegetation within the proposed clearing area is in Poor (Trudgen, 1991) condition, described as: • Poor: Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds. The full Trudgen (1991) condition rating scale is provided in Appendix C.
Climate and landform	The application area is located in the Cape Range subregion of the Carnarvon bioregion described as sub-tropical to semi-desert (BoM, 2024) with an annual average rainfall of 303.7 millimetres (Onslow Airport) (BoM, 2024).
Soil description and Land degradation	The soils within the application area are mapped as: • Onslow Land System (201On): Undulating sandplains, dunes and level clay plains supporting soft spinifex grasslands and minor tussock grasslands. The Onslow Land Systems may experience wind erosion following clearing (Payne et al., 1998). The flora surveys of the application area undertaken by Mattiske have identified two soil types: • Flats with red/brown sands over clays and occasional cracking clays; and • Red to brown sandy clay (Mattiske, 2013; 2023)
Waterbodies	The desktop assessment and aerial imagery indicated that there are no surface water features within the application area (GIS Database).
Hydrogeography	The application area is not mapped within a proclaimed public drinking water area (GIS Database). The area is mapped within the Pilbara Groundwater Area, proclaimed under the *Rights in Water Irrigation (RIWI) Act 1914* (GIS Database).
Flora	No conservation significant flora have been recorded within the application area and no conservation species were recorded during the flora survey (Mattiske, 2023; GIS Database). Nine Priority flora have been recorded within 50 kilometres of the application area (GIS Database). Three introduced weed species were identified within the proposed area (Mattiske, 2023).
Ecological communities	There are no mapped Threatened or Priority Ecological Communities (TEC/PEC) within a 50 kilometre radius of the application area (GIS Database).
Fauna	No conservation significant fauna have been recorded within the application area (Mattiske, 2024). Fifty-three conservation significant fauna have been recorded within 50 kilometres of the application area (GIS Database).

A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent Remaining %	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA Managed Lands
IBRA Bioregion Carnarvon	8,382,890.35	8,360,801.46	99.74	1,020,434.08	12.17
Beard vegetation associations - State					
Veg Assoc No. 589	807,698.58	802,713.40	99.38	15,304.39	1.89
Beard vegetation associations - Bioregion					
Veg Assoc No. 589	78,100.80	77,834.93	99.66	0.00	0.00

Government of Western Australia (2019)

A.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix D.1), and biological survey information (Mattiske, 2023; Western Australian Herbarium, 1998-), impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)
Abutilon sp. Onslow (F. Smith s.n. 10/9/61)	3	Y	~ 33	14
Abutilon sp. Pritzelianum (S. van Leeuwen 5095)	3	Y	~ 30	51
Carpobrotus sp. Thevenard Island (M. White 050)	3	N	~ 38	14
Corchorus congener	3	N	~ 42	28
Corynotheca flexuosissima	3	N	~ 29	17
Eleocharis papillosa	3	Y	~ 13	14
Eremophila forrestii subsp. *viridis*	3	Y	~ 19	6
Stackhousia clementii	3	N	~ 28	22
Triumfetta echinata	3	N	~ 23	7

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

A.1. Fauna analysis table

Species name	Common Name	Conservation status	Distance of closest record to application area (km)	Suitable habitat features? [Y/N]
Actitis hypoleucos	common sandpiper	MI	~ 6	N
Anous stolidus	common noddy	MI	~ 32	N
Apus pacificus	fork-tailed swift	MI	~ 15	N
Ardenna pacifica	wedge-tailed shearwater	MI	~ 13	N
Arenaria interpres	ruddy turnstone	MI	~ 16	N
Calidris acuminata	sharp-tailed sandpiper	MI	~ 6	N
Calidris alba	sanderling	MI	~ 16	N
Calidris canutus	red knot	EN	~ 11	N
Calidris ferruginea	curlew sandpiper	CR	~ 8	N
Calidris melanotos	pectoral sandpiper	MI	~ 25	N

Species name	Common Name	Conservation status	Distance of closest record to application area (km)	Suitable habitat features? [Y/N]
Calidris ruficollis	red-necked stint	MI	~ 6	N
Calidris subminuta	long-toed stint	MI	~ 45	N
Calidris tenuirostris	great knot	CR	~ 8	N
Charadrius leschenaultii	greater sand plover, large sand plover	VU	~ 16	N
Charadrius mongolus	lesser sand plover	EN	~ 16	N
Charadrius veredus	oriental plover	MI	~ 6	N
Chlidonias leucopterus	white-winged black tern	MI	~ 17	N
Dasyurus hallucatus	northern quoll	EN	~ 14	N
Elanus scriptus	letter-winged kite	P4	~ 32	N
Falco peregrinus	peregrine falcon	OS	~ 9	Y
Gelochelidon nilotica	gull-billed tern	MI	~ 6	Y
Glareola maldivarum	oriental pratincole	MI	~ 16	N
Hirundo rustica	barn swallow	MI	~ 30	N
Hydroprogne caspia	caspian tern	MI	~ 6	N
Leggadina lakedownensis	northern short-tailed mouse, Lakeland Downs mouse, kerakenga	P4	~ 15	Y
Lerista planiventralis maryani	Maryan's keeled slider (Ashburton)	P1	~ 31	Y
Liasis olivaceus barroni	Pilbara olive python	VU	~ 9	N
Limosa lapponica	bar-tailed godwit	MI	~ 6	N
Limosa lapponica menzbieri	bar-tailed godwit (northern Siberian)	CR	~ 11	N
Limosa limosa	black-tailed godwit	MI	~ 6	N
Numenius madagascariensis	eastern curlew	CR	~ 20	N
Numenius minutus	little curlew	MI	~ 28	Y
Numenius phaeopus	whimbrel	MI	~ 16	N
Oceanites oceanicus	Wilson's storm-petrel	MI	~ 31	N
Onychoprion anaethetus	bridled tern	MI	~ 22	N
Pandion haliaetus	osprey	MI	~ 6	Y
Perameles bougainville	Shark Bay bandicoot, western barred bandicoot, little marl	VU	~ 10	N
Pezoporus occidentalis	night parrot	CR	~ 31	N
Plegadis falcinellus	glossy ibis	MI	~ 9	N
Pluvialis fulva	Pacific golden plover	MI	~ 22	N
Pluvialis squatarola	grey plover	MI	~ 20	N
Pseudomys chapmani	western pebble-mound mouse, ngadji	P4	~ 23	N
Sterna dougallii	roseate tern	MI	~ 16	N
Sterna hirundo	common tern	MI	~ 16	N
Sternula albifrons	little tern	MI	~ 16	N
Sternula nereis nereis	fairy tern	VU	~ 13	N
Sula leucogaster	brown booby	MI	~ 39	N
Thalasseus bergii	crested tern	MI	~ 9	N
Tringa brevipes	grey-tailed tattler	MI & P4	~ 16	N
Tringa glareola	wood sandpiper	MI	~ 16	N
Tringa nebularia	common greenshank	MI	~ 6	N
Tringa stagnatilis	marsh sandpiper	MI	~ 20	N

Species name	Common Name	Conservation status	Distance of closest record to application area (km)	Suitable habitat features? [Y/N]
Xenus cinereus	Terek sandpiper	MI	~ 39	N

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, OS: other specially protected

Appendix B. 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 flora identified 25 vascular plant taxa representing 20 genera and seven families within the application area (Mattiske, 2023). No conservation significant flora or fauna species were recorded (Mattiske, 2023). The application area consists of one vegetation association (Mattiske, 2023).	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
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 is not likely to contain foraging habitat for several conservation significant fauna species (GIS Database).	Not likely to be at variance	Yes Refer to Section 3.2.2, above.
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: There are no known records of Threatened flora within a 50 kilometre radius of the application area (GIS Database). The flora survey of the application area did not record any species of Threatened flora (Mattiske, 2023).	Not likely to be at variance	No
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 a 50 kilometre radius of the application area (GIS Database). The flora and vegetation survey of the application area did not identify any TECs (Mattiske, 2023).	Not likely to be 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 falls within the Carnarvon Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99% of the pre-European vegetation still exists in the IBRA Carnarvon Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation association 589 (GIS Database). This vegetation association has not been extensively cleared as over 99 percent of the pre-European extent of this vegetation association remain uncleared at a state and bioregional level (Government of Western Australia, 2019).	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:	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
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 (GIS Database).		
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: There are no permanent watercourses or wetlands within the area proposed to be cleared (GIS Database).	Not likely to be 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 application area is mapped within the Onslow Land System, which may experience erosional surfaces following removal of vegetation (Payne et al., 1998; GIS Database). Land degradation may be managed by implementing a staged clearing condition.	May 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 is unlikely to impact surface or ground water quality (GIS Database).	Not likely to be 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: The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding (GIS Database).	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

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

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.

Condition	Description
Completely degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Sources of information

D.1. GIS databases

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

- Aboriginal Heritage Places (DPLH-001)
- 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)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- Interim Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape 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)

D.2. References

AGI (2023) Application for Clearing permit CPS 10458/1, AGI Development Group Nominees Pty Ltd, received 19 December 2023.

Bureau of Meteorology (BoM) (2024) Bureau of Meteorology Website – Climate Data Online, Onslow Airport (005017). Bureau of Meteorology. https://reg.bom.gov.au/climate/data/ (Accessed 2 February 2024).

Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.

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) (2024) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS (Accessed 2 February 2024).

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Department of Water and Environmental Regulation (DWER) (2021) Procedure: Native vegetation clearing permits. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.pdf

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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

Mattiske (2013) Flora and Vegetation of the CS2 - Tubridgi - Wheatstone Gas Pipeline Project Area. Report prepared for DBP, April 2013.

Mattiske (2023) Vegetation Mapping at Turbridgi Gas Facility. Report prepared for Australian Gas Infrastructure Group, December 2023.

Payne, A.L., Mitchell, A.A. and Holman, W.F. (1988) An Inventory and Condition Survey of Rangelands in the Ashburton River Catchment, Western Australia. Department of Agriculture, Western Australia.

Trudgen, M.E. (1991) Vegetation condition scale in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed 19 February 2024).

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 (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.