GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	7422/4
Duration of Permit:	From 11 March 2017 to 31 March 2025
Permit Holder:	Northern Star (Bronzewing) Pty Ltd

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I - CLEARING AUTHORISED

1. Land on which clearing is to be done
Mining Lease 53/1099
Miscellaneous Licence 53/203
Miscellaneous Licence 53/204
Miscellaneous Licence 53/206

2. Clearing authorised (purpose)
The Permit Holder is authorised to clear native vegetation for the purpose of mineral production and associated activties.

3. Area of Clearing
The Permit Holder must not clear more than 600 hectares of native vegetation within the area shaded yellow in Figure 1 of Schedule 1.

4. Type of Clearing Authorised
The Permit Holder shall not clear native vegetation unless the purpose for which the clearing is authorised is enacted within three months of the authorised clearing being undertaken.

PART II - MANAGEMENT CONDITIONS

5. Avoid, minimise and reduce the impacts and extent of clearing
In determining the amount of native vegetation to be cleared under this Permit, the Permit Holder must apply the following principles, set out in descending order of preference:

(a) avoid the clearing of native vegetation;
(b) minimise the amount of native vegetation to be cleared; and
(c) reduce the impact of clearing on any environmental value.

6. Weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
(b) ensure that no known *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

PART III - RECORD KEEPING AND REPORTING

7. Records to be kept

The Permit Holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; (b) the date that the area was cleared; (c) the size of the area cleared (in hectares); (d) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with Condition 5; and (e) actions taken to minimise the risk of the introduction and spread of weeds in accordance with Condition 6.

8. Reporting

(a) The Permit Holder shall provide a report to the *CEO* by 31 July each year for the life of this Permit, demonstrating adherence to all conditions of this Permit, and setting out the records required under Condition 7 of this Permit in relation to clearing carried out between 1 July and 30 June of the previous financial year.

(b) If no clearing authorised under this Permit was undertaken between 1 July and 30 June of the previous financial year, a written report confirming that no clearing under this permit has been carried out, must be provided to the *CEO* by 31 July of each year.

(c) Prior to 31 March 2025, the Permit Holder must provide to the *CEO* a written report of records required under Condition 7 of this Permit where these records have not already been provided under Condition 8(a) or 8(b) of this Permit.

DEFINITIONS

In this Permit, the terms in Table 2 have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	the Chief Executive Officer of the Department responsible for administering the clearing provisions contained within the *Environmental Protection Act 1986* or an Officer with delegated authority under Section 20 of the *Environmental Protection Act 1986;*
clearing	has the meaning given under section 3(1) of the EP Act.
condition/s	a condition to which this clearing permit is subject under section 51H of the EP Act.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	*Environmental Protection Act 1986* (WA)
fill	means material used to increase the ground level, or to fill a depression.
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
weed/s	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

Travis Inman
General Manager Mine Closure and Environmental Services
Resource and Environmental Compliance Division
28 April 2022

Officer with delegated authority under Section 20
of the *Environmental Protection Act 1986*

SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).

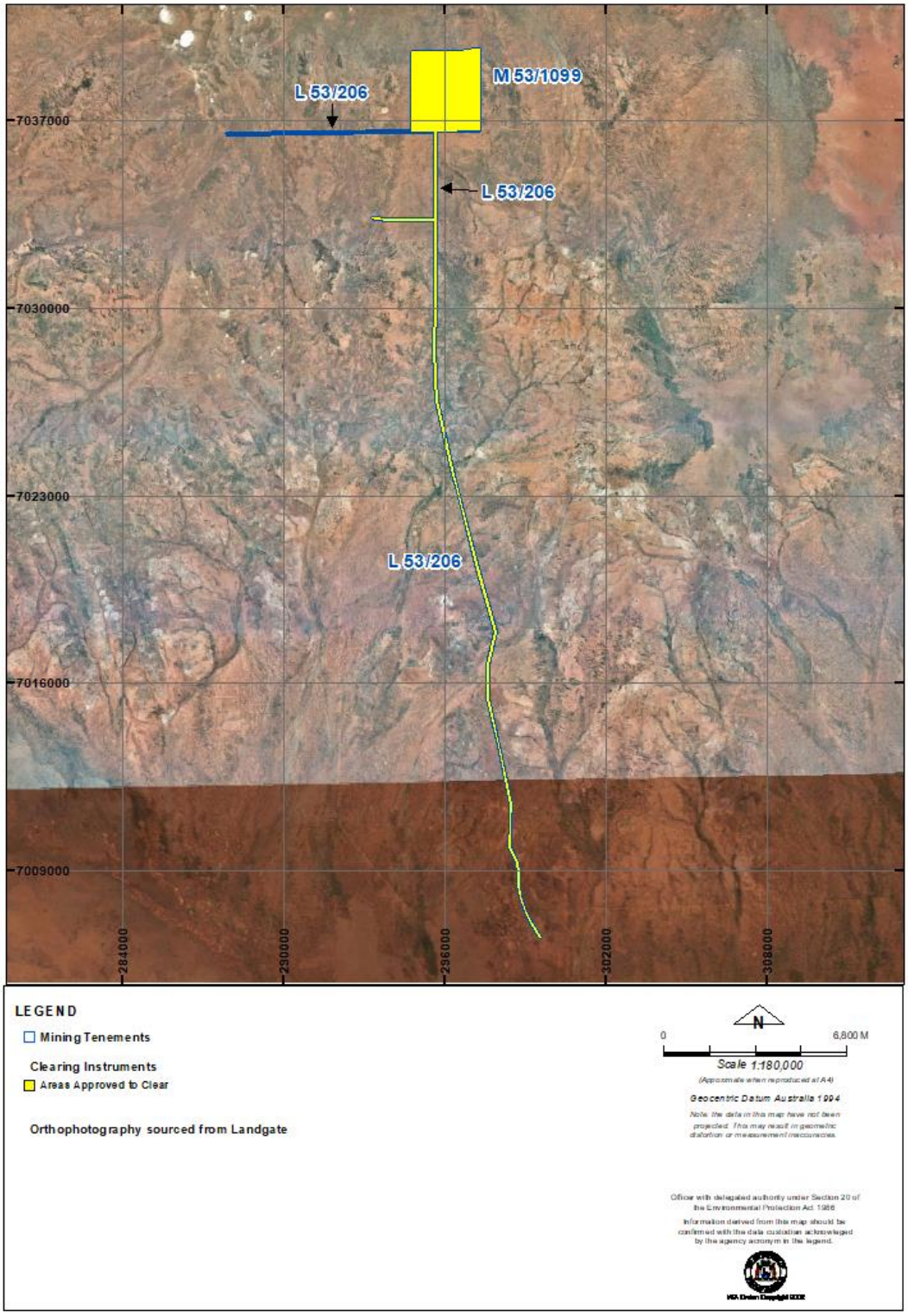

Figure 1: Map of the boundary of the area within which clearing may occur

Government of Western Australia
Department of Mines, Industry Regulation and Safety

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	7422/4
Permit type:	Purpose Permit
Applicant name:	Northern Star (Bronzewing) Pty Ltd
Application received:	31 August 2021
Application area:	600 hectares
Purpose of clearing:	Mineral production and associated activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Lease 53/1099
	Miscellaneous Licences 53/203, 53/204, 53/206
Location (LGA area/s):	Shire of Wiluna
Colloquial name:	Julius Project

1.2. Description of clearing activities

Northern Star (Bronzewing) Pty Ltd has applied to amend existing clearing permit CPS 7442/3. The clearing permit is for the Julius gold mine and associated haul road and is located approximately 70 kilometres southeast of Wiluna, within the Shire of Wiluna.

Clearing permit CPS 7422/1 was granted by the Department of Mines and Petroleum (now the Department of Mines, Industry Regulation and Safety) on 16 February 2017 and was valid from 11 March 2017 to 31 March 2021. The permit authorised the clearing of up to 406 hectares of native vegetation within a boundary of approximately 406 hectares, for the purpose of mineral production.

CPS 7422/2 was granted on 22 February 2018, amending the permit to increase the amount of clearing authorised to 486 hectares, and increase the permit boundary to approximately 534 hectares. The amendment was to allow for the construction of a haul road. The purpose for which clearing may be done was amended to 'mineral production and associated activities'. Miscellaneous Licences 53/204 and 53/206 were also added to the permit.

CPS 7422/3 was granted on 26 November 2020 to extend the permit duration by five years, and to update the Permit Holder name from Echo Resources Limited to Northern Star (Bronzewing) Pty Ltd.

The application to amend CPS 7422/3 is to increase the amount of clearing authorised to 600 hectares and increase the permit boundary to approximately 878.5 hectares. An area of haul road on Miscellaneous Licence 53/203 will be removed from the permit area as no clearing has been done and it is not required for the project.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	28 April 2022
Decision area:	600 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51KA of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Mines, Industry Regulation and Safety (DMIRS) on 31 August 2021. DMIRS advertised the application for a public comment for a period of 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix 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;
- potential land degradation in the form of water erosion.

The assessment has not changed since the assessment for CPS 7422/3, except in the case of principle (g). The Delegated Officer determined that the proposed increase in clearing and permit boundary is not likely to lead to an unacceptable risk to environmental values. The Delegated Officer decided to grant a clearing permit with the existing permit conditions.

1.5. Site map

A site map of proposed clearing is provided in Figures 1 and 2 below.

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

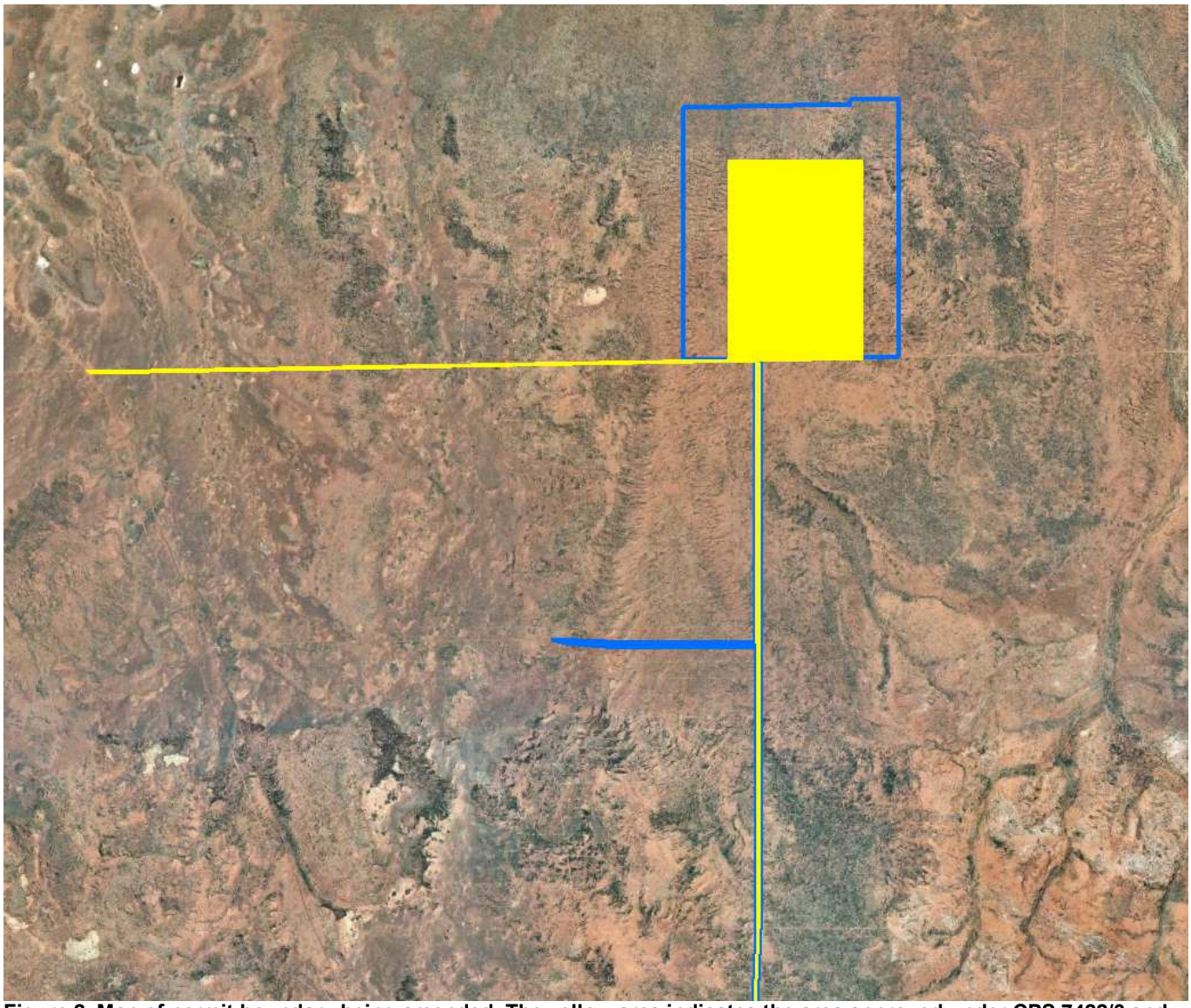

Figure 2. Map of permit boundary being amended. The yellow area indicates the area approved under CPS 7422/3 and the blue indicates the application area for CPS 7422/4.

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 key guidance documents which inform this assessment are:

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

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. Whilst this amendment is increasing the footprint of the clearing, areas which were no longer required have been removed from the permit boundary.

3.2. Assessment of impacts on environmental values

A review of current environmental information (Appendix A) reveals that the assessment against the clearing principles has not changed significantly from the Clearing Permit Decision Report CPS 7422/3. The additional proposed clearing is not likely to significantly increase the environmental impacts and the proposed clearing can be managed by the current permit conditions.

3.2.1. Biological values (flora) - Clearing Principle (a) and (c)

Assessment

There are no records of Threatened or Priority flora within the permit area (GIS Database). The previous flora surveys over the permit area did not record any Threated or Priority flora species (Botanica, 2016; 2017). The majority of the additional areas included in this amendment are mapped as the SLP-AFW1 vegetation community (Botanica, 2016; 2017). The flora surveys mapped 777 hectares of the SLP-AFW1 vegetation community, making it the most dominant community within the permit area (Botanica, 2016; 2017). It is also common in areas surrounding the permit area (Botanica, 2016; 2017). This community does not contain habitat features such as banded iron ridges or salt lakes which are likely to support more restricted species. There are several species of Priority flora which, based on known records and habitat preference are possibly occurring within the permit area (Botanica, 2016; 2017; GIS Database). The additional clearing of the common vegetation community SLP-AFW1 is not likely to have a significant impact on Priority flora in the local area.

There is a record of the Threatened flora species *Seringia exastia* approximately 5 kilometres from the permit area. This species was previously only found in the Kimberley region however, a taxonomic study concluded that *Seringia exastia* is the same species as *Seringia elliptica* (Binks et al., 2020). *Seringia elliptica* is common species and has a range that extends throughout the Pilbara region, central Western Australia, the Northern Territory and into South Australia (Australasian Virtual Herbarium, 2021, Western Australian Herbarium, 1998-). The taxonomy of the genus has been revised to synonymise *Seringia elliptica* under *Seringia exastia* as it is the oldest effectively published name (Binks et al., 2020). This has resulted in *Seringia exastia* now being a common and widespread species with no significant threats. Therefore, the proposed clearing will not have a significant impact on this species.

The flora surveys did not observe high levels of weeds within the permit area (Botanica, 2016; 2017). Weeds have the potential to out-compete native flora and reduce the biodiversity of an area and care should be taken to ensure clearing does not spread weeds into the area. A weed management condition is on the current permit. Potential impacts to biodiversity as a result of the introduction of weeds may be minimised by the continued implementation of this condition.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on habitat for Priority flora is not likely to be significant. There is a high likelihood of weeds being present within the application area and the proposed clearing has the potential to exacerbate the spread of weeds.

Conditions

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

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

3.3. Relevant planning instruments and other matters

The clearing permit amendment application was advertised on 5 November 2021 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There are three native title claims over the area under application (DPLH, 2022). These claims have been determined by the Federal Court on behalf of the claimant groups. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2022). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Other relevant authorisations required for the proposed land use include:

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

It is 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 application area is located approximately 70 kilometres southeast of Wiluna. The area to be cleared us part of an expansive tract of vegetation in the extensive land use zone of Western Australia. The amendment area is located adjacent to existing disturbance for the Julius gold mine.
Ecological linkage	According to available databases, the application area does not contain any known or mapped ecological linkages.
Conservation areas	The closest conservation area is the Wanjarri Nature Reserve which is located approximately 26 kilometres southwest of the permit area.
Vegetation description	The vegetation of the application area is broadly mapped as the following Beard vegetation associations (GIS Database): 18: Low woodland; mulga (*Acacia aneura*); 29: Sparse low woodland; mulga, discontinuous in scattered groups; and 39: Shrublands; mulga scrub. Two flora and vegetation surveys have been conducted over different sections of the application area by Botanica Consulting (Botanica) during May 2016 and February 2017. The following vegetation associations were recorded within the application area (Botanica, 2016; Botanica, 2017): **CLP-AFW1**: Low woodland of *Acacia incurvaneura* over low scrub of *Eremophila linearis/ Senna* sp. Meekatharra (E. Bailey 1-26) and dwarf scrub of *Maireana triptera* on clay-loam plain/ stony flat. **CLP-AFW2**: Open low woodland of *Acacia pruniocarpa* over mid sparse shrubland of *Eremophila fraseri/ Eremophila paisleyi* and low open tussock grassland of *Eragrostis eriopoda* on clay-loam plain. **SLP-AFW1**: Low woodland of *Acacia caesaneura/ A. incurvaneura* over low scrub of *Eremophila* spp. and low grass of *Eragrostis eriopoda/* mid-dense hummock grass of *Triodia irritans* on sand-loam plain. **DD-AFW1**: Open forest of *Acacia incurvaneura* over tall open shrubland of *Acacia ramulosa* var. *ramulosa* and low tussock grassland of *Eragrostis kennedyae* in drainage depression. **QRP-AFW1**: Low woodland of *Acacia incurvaneura* over mid open shrubland of *Senna* sp. Meekatharra (E. Bailey 1-26) and low open tussock grassland of *Eragrostis eriopoda* on quartz-rocky plain. **QRP-AFW2**: Low woodland of *Acacia incurvaneura* over mid open shrubland of *Senna* sp. Meekatharra (E. Bailey 1-26) and low open shrubland of *Ptilotus obovatus* on quartz-rocky plain. **RH-AFW1**: Low woodland of *Acacia incurvaneura/ A. pruniocarpa* over mid open shrubland of *Scaevola spinescens* and low open tussock grassland of *Eriachne mucronata*/ *Eragrostis eriopoda* on rocky hillslope. **RH-AFW2**: Low woodland of *Acacia balsamea* over mid open shrubland of Senna sp. Meekatharra (E. Bailey 1-26) and low open shrubland of *Ptilotus obovatus/ Solanum lasiophyllum* on rocky hillslope.
Vegetation condition	The vegetation surveys by Botanica (2016; 2017) indicate the vegetation within the proposed clearing area is in very good to good (Keighery, 1994) condition. The full Keighery (1994) condition rating scale is provided in Appendix CC.
Climate and landform	The application area is mapped within elevations of 500-550 metres AHD. The annual average rainfall (Leinster) is 251.6 millimetres (BoM, 2022).
Soil description	The soil within the permit area has been mapped as the Fa7 soil unit (GIS Database). The Fa7 soil unit is described as greenstone hills and low ranges with some slate and basalt (Northcote et al., 1960-68). Dominant soils are shallow earthy loams on the steep slopes while overlying red-brown hardpan occur on the stony pediments (Northcote et al., 1960-68).

Characteristic	Details
Land degradation risk	The permit area has been mapped as the Ararak, Barwidgee, Tiger, Trennaman, Violet, Wiluna, and Yanganoo land systems (GIS Database).
Waterbodies	The desktop assessment and aerial imagery indicated that several minor, non-perennial watercourses transect the area proposed to be cleared.
Hydrogeography	The application area is not within any public drinking water supply areas. The mapped groundwater salinity is 3,000-7,000 milligrams per litre total dissolved solids which is described as saline (GIS Database).
Flora	There has been no previous records of Threatened or Priority flora within the permit area (Botanica, 2016; 2017; GIS Database). There are records of one Threatened species and four Priority species within the local area (20 kilometre radius) (see flora analysis table below).
Ecological communities	There are no mapped Priority or Threatened Ecological Communities within the permit area (GIS Database). The closest TEC or PEC is the 'Barwidgee calcrete groundwater assemblage type on Carey paleodrainage on Barwidgee Station' PEC approximately 9 kilometres south of the permit area.
Fauna	According to available databases, there are seven records of conservation significant fauna species within the local area (20 kilometre radius) all of which are the Crest-tailed Mulgara (*Dasycercus cristicauda* – Priority 4).

A.2. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix D.1) the following conservation significant flora have been recorded in the local area (20 kilometres).

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)
Cratystylis centralis	Priority 3	Y	Y	Y	10
Eremophila pungens	Priority 4	Y	Y	Y	5
Seringia exastia	Threatened	Y	Y	Y	5
Tecticornia cymbiformis	Priority 3	N	N	N	7
Tecticornia enodis	Priority 1	N	N	N	19

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: There are no records of any Threatened or Priority flora within the permit area (Botanica, 2016, 2017). The vegetation within the permit area is not likely to contain a high level of diversity and is common and widespread in the local area (20 kilometres). There is not likely to be a diverse range of fauna habitats which would support a diverse faunal assemblage.	Not likely to be at variance as per CPS 7422/3	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: No fauna species or evidence of conservation significance have been recorded within the permit area (Botanica 2016; 2017; GIS Database). The habitats present have the potential to be utilised by the Malleefowl (*Leipoa ocellata* – Vulnerable), Peregrine Falcon (*Falco peregrinus* – OS), Fork Tailed Swift (*Apus pacificus* - IA) and the Brush-tailed mulgara (*Dasycercus blythi* – Priority 4).	Not likely to be at variance as per CPS 7422/3	No

Assessment against the clearing principles	Variance level	Is further consideration required?
The fauna habitats present within the application area appear to be widespread and common in surrounding areas. The habitat within the additional areas is similar to the habitats within the previous permit boundary (Botanica, 2016; 2017). There are no habitat types present within the application area that would be considered necessary for the continued survival of local fauna species, including species of conservation significance, and the proposed clearing is not anticipated to impact on the conservation status of any of the abovementioned fauna species, known from the local area.		
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 the permit area (GIS Database). Flora surveys of the permit area did not record any species of Threatened flora (Botanica, 2016; 2017). There is a record of the Threatened flora species *Seringia exastia* approximately 5 kilometres from the permit area however, this species is common and widespread and is not likely to be significantly impacted by the proposed clearing. Based on the habitat present, the other Threatened flora species known from the Murchison bioregion are not likely to be present within the permit area and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened (rare) flora.	Not likely to be at variance as per CPS 7422/3	Yes Refer to Section 3.2.1, above.
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 permit area (GIS Database). The flora and vegetation surveys over the permit area have not identified any TECs (Botanica, 2016; 2017).	Not likely to be at variance as per CPS 7422/3	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 Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99.73% of the pre-European vegetation still exists in the Murchison Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation associations 18, 29 and 39 (GIS Database). These vegetation associations have not been extensively cleared as over 99% of the pre-European extent of these vegetation associations remain uncleared at both the state and bioregional level (Government of Western Australia, 2019). The permit area does not contain any remnants nor does it form part of any remnants in the local area (GIS Database).	Not at variance as per CPS 7422/3	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: 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 likely to be at variance as per CPS 7422/3	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: There are several minor ephemeral drainage lines which intersect the application area (GIS Database). These drainage lines are common in the local area (20 kilometre	At variance as per CPS 7422/3	No

Assessment against the clearing principles	Variance level	Is further consideration required?
radius) and the proposed clearing is not likely to have a significant impact on riparian vegetation and surface water flow on a broader scale. None of the drainage lines are located within additional areas being included as part of this amendment (GIS Database).		
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped land systems are generally not susceptible to erosion (Pringle et al., 1994). The Violet land system becomes moderately susceptible to water erosion in areas where the soil surface has been disturbed (Pringle et al., 1994). The majority of the additional areas included in this amendment are mapped as the Violet land system (GIS Database). A staged clearing condition is currently on the permit requiring activities are undertaken within three months following any clearing. Potential impacts from erosion may be minimised by the continued implementation of this condition.	May be at variance changed from CPS 7422/3	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: 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 (GIS Database). Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall. The proposed clearing is unlikely to result in significant changes to surface water flows or to cause deterioration in the quality of underground water.	Not likely to be at variance as per CPS 7422/3	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: There are no permanent water courses or waterbodies within the application area (GIS Database). Seasonal drainage lines are common in the region and temporary localised flooding may occur briefly following heavy rainfall events. However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.	Not likely to be at variance as per CPS 7422/3	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 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.

Condition	Description
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Sources of information

D.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)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Contours (DPIRD-073)
- Clearing Regulations – Schedule One Areas (DWER-057)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- 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
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- 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

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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)
DAWE	Department of Agriculture, Water and the Environment, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DoEE	Department of the Environment and Energy (now DAWE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	*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.