



Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	6225/4
Permit type:	Purpose Permit
Applicant name:	Nifty Copper Pty Ltd
Application received:	27 November 2023
Application area:	180 hectares
Purpose of clearing:	Mineral Production and Associated Activities
Method of clearing:	Mechanical Removal
Tenure:	<i>Western Mining Corporation Limited (Throssell Range) Agreement Act 1985</i> , Mining Lease 271SA (AM 70/271)
Location (LGA area/s):	Shire of East Pilbara
Colloquial name:	Nifty Copper Operations

1.2. Description of clearing activities

Nifty Copper Pty Ltd proposes to clear up to 180 hectares of native vegetation within a boundary of approximately 311 hectares, for the purpose of mineral production and associated activities. The project is located approximately 150 kilometres northeast of Nullagine, within the Shire of East Pilbara. The total cumulative area of land cleared to date is 54.59 hectares (Nifty Copper Ltd Pty, 2024a).

The amendment application was applied to extend the period in which clearing of native vegetation is authorised under Condition 5 to 31 October 2026. The Delegated Officer extended the duration of the permit by two years to 31 October 2032 to allow for rehabilitation.

Clearing permit CPS 6225/1 was granted by the Department of Mines and Petroleum (now the Department of Energy, Mines, Industry Regulation and Safety) on 6 November 2014 and was valid from 29 November 2014 to 31 October 2024. The permit authorised the clearing of up to 180 hectares of native vegetation within a boundary of approximately 350 hectares, for the purpose of mine water discharge.

CPS 6225/2 was granted on 19 September 2019, amending the permit to extend the duration to 31 October 2029. The area of clearing authorised and the permit boundaries remained unchanged.

CPS 6225/3 was granted on 6 September 2022, amending the permit to change the purpose of clearing from 'mine water discharge' to 'mineral production and associated activities', decrease the permit boundary to not overlap with CPS 9493/1 and updating the permit holder name.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	22 February 2024
Decision area:	180 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51KA(1) of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) on 27 November 2023. DEMIRS advertised the application for a public comment for a period of 7 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics, relevant datasets (Appendix B), supporting information provided by the applicant, including the results of flora and vegetation surveys, the clearing principles set out in Schedule 5 of the EP Act, 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 impacts to conservation significant flora;
- potential impacts to conservation significant fauna; and
- potential land degradation.

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

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

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- fauna management condition requiring the permit holder to undertake clearance surveys to ensure that no conservation significant fauna species are impacted through the proposed clearing;
- commence construction no later than three months after undertaking clearing to reduce the risk of erosion;
- retain cleared vegetation and topsoil and respread this on a cleared area of equivalent size within the permit boundary within 12 months of clearing to ensure vegetation and fauna habitat are not permanently lost.

The assessment has not changed since the assessment for CPS 6225/3, except in the case of principle (a) and principle (b). The Delegated Officer determined that the proposed amendment for Condition 5 "period in which clearing is authorised" being extended is not likely to lead to an unacceptable risk to environmental values and can be managed by the permit conditions and avoidance and mitigation measures in place.

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)
- *Biosecurity and Agriculture Management Act 2007*
- *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 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. 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. Control measures were submitted by the applicant demonstrating (Nifty Copper Pty Ltd, 2023; Preston, 2021):

- Clearing will be managed under a ground disturbing procedure;
- Clearing will be kept to a minimum within the permit boundaries and only completed when required;
- Clearing will be identified using GPS coordinates; with mapped boundaries provided to the clearing operator;
- Cleared areas will progressively be rehabilitated if not required during operations;
- Clearing will be conducted on a progressive basis to reduce disturbance impacts; and
- All vehicles, equipment and personnel will be inspected and cleaned as required to prevent the incidental spread of weeds.

3.2. Assessment of impacts on environmental values

No clearing has occurred since 2016 and no mine water has been discharged since 2020 (Nifty Copper Pty Ltd, 2024a). The initial assessment identified short term impacts associated with increased soil salinity from mine water discharge as a result of evaporative concentration of salts. Given the previous clearing for mine water discharge was predominately localised to discharge pads and no activity has taken place since underground works were discontinued in 2020, there is potential for suitable habitat for conservation significant flora or fauna to occur within the amendment area. The applicant provided

supporting information regarding a fire that went through the amendment area on 17 and 18 January 2024 followed by rainfall on 19 January and provided imagery of the vegetation that has been significantly burnt (Nifty Copper Pty Ltd, 2024b).

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

Assessment

A flora survey was conducted over the Nifty mine site, which includes the amendment area, with field trips conducted from 2012 to July 2014 and recorded Priority flora species: *Indigofera ammobia* Maconochie (P3), *Dampiera atriplicina* Rajput & Carolin (P3), *Goodenia hartiana* L.W.Sage (P2) (BGPA, 2014a). A targeted flora survey was conducted on 1 and 2 July 2014 detailing time constraints and recent fire as limitations (BGPA, 2014b). The survey identified *Goodenia hartiana* near the amendment area (BGPA, 2014b). No new flora and vegetation surveys have been conducted over the amendment area since 2014.

A detailed flora and vegetation survey was conducted adjacent to the amendment area over the same land system. The field survey was conducted by Western Botanical over two field trips between 31 May and 3 June 2021, and 21 June and 1 July 2021 covering approximately 565 hectares and identified six Priority species that occurred within 7.5 kilometres of the amendment area (Western Botanical, 2021):

- *Thysanotus* sp. Desert East of Newman (R.P. Hart 964) (P2)
- *Goodenia hartiana* L.W.Sage (P2)
- *Dasymalla chorisepala* (Munir) B.J.Conn & Henwood (P3)
- *Synostemon arenosus* (J.T.Hunter & J.J.Bruhl) I.Telford & J.J.Bruhl (formerly *Sauropus arenosus*) (P3)
- *Indigofera ammobia* Maconochie (P3)
- *Corynotheca asperata* (P3)

A targeted flora survey was conducted by Western Botanical in the surrounding area outside the amendment area over 23 and 30 September 2022 to gain a better understanding of the local abundance and distribution of the above species (Western Botanical, 2023).

A total of 2,196 *Goodenia hartiana* individuals have been recorded across nine populations outside the amendment area (Western Botanical, 2023). DBCA (2022) advised that specimen records suggest that this species is often recorded as locally common, with over 3,000 plants recorded at one location. It has been recorded within the Walyarta Conservation Park, however most of its known range is covered by mining tenements (DBCA, 2022). The proposed clearing is unlikely to significantly impact the conservation status of this species.

A total of 178 *Thysanotus* sp. Desert East of Newman individuals have been recorded across nine populations outside the amendment area (Western Botanical, 2023). The field survey records represent this species northern extent of its known range (DBCA, 2022). This species has been recorded within the Karlamilyi National Park and Pila Nature Reserve Park. Roughly 30% of the recorded locations occur within mining tenements (DBCA, 2022). The proposed clearing is unlikely to significantly impact the conservation status of this species.

A total of 227 *Corynotheca asperata* individuals have been recorded across 11 populations outside the amendment area (Western Botanical, 2023). The known range of this species spans approximately 300 kilometres north-south and 900 kilometres east-west from Marble Bar across the Great Sandy Desert to Tanami in the Northern Territory (DBCA, 2022). This species has been recorded at one location with an estimated 10,000 plants over 60 hectares (DBCA, 2022). The amendment area is located within the western portion and is a 100-kilometre infill of this species' known range, suggesting that the species is more widespread than what is currently known (DBCA, 2022; Western Botanical, 2021). The proposed clearing is unlikely to significantly impact the conservation status of this species.

A total of 4,138 *Dasymalla chorisepala* individuals have been recorded in one population outside the amendment area (Western Botanical, 2023). There are 8 records all occurring within the Great Sandy Desert (Western Australian Herbarium, 1998-). Individuals at the Nifty mine site are the most southerly record for this species. The proposed clearing is unlikely to significantly impact the conservation status of this species.

A total of 13,054 *Indigofera ammobia* individuals have been recorded across 18 populations outside the amendment area (Western Botanical, 2023). This species is known from several locations across the Great Sandy Desert from Marble Bar to north of Alice Springs in the Northern Territory (DBCA, 2022). There are known populations within Kurriji Pa Yajula Nature Reserve, Walyarta Conservation Park, and many locations within live mining tenure (DBCA, 2022). The proposed clearing is unlikely to significantly impact the conservation status of this species.

A total of 256 *Synostemon arenosus* individuals have been recorded in three populations outside the amendment area (Western Botanical, 2023). This species has limited records, however has a large range spreading across five IBRA subregions (Western Botanical, 2021). The proposed clearing is unlikely to significantly impact the conservation status of this species.

There is a possibility *Comesperma sabulosum* A.J.Ford & Halford (P3) may occur within the amendment area (Western Botanical, 2021). This species has 11 records within the Great Sandy Desert bioregion, with records in red dunes/swales/sandplains that is consistent with land system of the amendment area (Western Australian Herbarium, 1998-; Western Botanical, 2021). The nearest record is 23 kilometres northeast of the application area (GIS Database). A survey would be required for confirmation of presence within the amendment area and to determine level of impact to species, however, due to recent fire across amendment area, it is unlikely individuals would be identifiable. If individuals were present, retention of topsoil will contain seed bank that can be utilised during rehabilitation post extraction.

There is a possibility *Dampiera atriplicina* Rajput & Carolin (P3) may occur within the amendment area (Western Botanical, 2021). The species has previously been recorded at the Nifty mine site (BGPA, 2014a). There are 15 records, three of which are recorded approximately 38 kilometres northwest, with habitat type consistent to the amendment area (Western Australian CPS 6225/4

Herbarium, 1998-). A survey would be required for confirmation of presence within the amendment area and to determine level of impact to species, however, due to recent fire across amendment area, it is unlikely individuals would be identifiable. If individuals were present, retention of topsoil will contain seed bank that can be utilised during rehabilitation post extraction.

The uniformity of the landforms in the application area are present across most of the Great Sandy Desert bioregion (Western Botanical, 2021). It is possible these species could be present within the amendment area based on similar landforms and habitat, however recent fires went through the amendment area between 17 and 18 January 2024, disturbing the condition of the vegetation (Nifty Copper Pty Ltd, 2024b).

Two introduced flora species previously recorded within the amendment area and an additional species during flora survey in adjacent area (BCPA, 2014; Western Botanical, 2021). None of the species are listed as Weeds of National Significance or declared pest plants in Western Australia under the *Biosecurity and Agriculture Management Act 2007*, however weeds have the potential to out-compete native flora and reduce the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing of native vegetation that may impact conservation significant flora, however due to the permit holder undertaking targeted flora survey for 6 of the Priority species outside the proposed clearing area and the recent fire over the amendment area, it is unlikely to impact the conservation status of these individuals and can be managed through rehabilitation of the site post extraction. The proposed clearing has the potential to introduce and spread weeds within the application area that can be managed through weed management.

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; and
- retain cleared vegetation and topsoil and respread this on a cleared area of equivalent size within the permit boundary within 12 months of clearing to ensure vegetation is not permanently lost.

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

Assessment

There has been no recent fauna survey or habitat assessment over the amendment area since 2014, however, a fauna survey was conducted adjacent to the amendment area by Biota Environmental Sciences (Biota) between 10 to 16 June 2021 and 5 to 8 July 2021 (Biota, 2021).

Potential fauna habitat was identified based on the land system and identified broad vegetation types of Sand Plains and Sand Dunes (BGPA, 2014a; Biota, 2021):

- **Sand dune:** Tall longitudinal sand dunes. Open Eucalyptus/Corymbia over scattered Acacia species and Eremophila shrubs, over Triodia open hummock grassland and very open tussock grassland.
- **Sandplain:** Open sandplains dominated by scattered Acacia species and Eremophila shrubs, over Triodia open hummock grassland.

These are consistent with the mapped habitat types in adjacent amendment area (Biota, 2021). None of the habitats present were restricted to the adjacent amendment area, all fauna habitats are well represented in the surrounds and are common and widespread throughout the region (Biota, 2021).

Species that potentially utilise the habitat present within the amendment area based on fauna surveys conducted at the Nifty mine site include (Biota, 2021):

- greater bilby (*Macrotis lagotis*, VU)
- northern marsupial mole (*Notoryctes caurinus*, P4)
- brush-tailed mulgara (*Dasymercus blythi*, P4)

Sandplain and sand dune habitats provide suitable burrowing, foraging and dispersal habitat for bilbies (Biota, 2021). Recent record of bilby tracks were identified within 3.5 kilometres of the amendment area; however, no burrows were located (Biota, 2021). Given the amendment area has not been utilised for the purpose of mine water discharge since 2020 and historical records of bilbies at the Nifty mine site area, there is potential for bilbies to utilise habitat within the amendment area.

Northern marsupial mole was recorded during a recent survey from two trenches dug in sand dune habitat; the nearest record was within 1 kilometre of amendment area (Biota, 2021). Identification of evidence of marsupial mole burrows may have been impacted during the July field assessment due to significant rainfall that may have removed old evidence of marsupial mole burrows (Biota, 2021). Sand dune habitat is preferred for the northern marsupial mole, and there is potential for this species to utilise habitat within the amendment area.

Brush-tailed mulgaras have potential to occur within the amendment area based on habitat suitability and previous records at Nifty Mine site (Biota, 2021) There has been a previous record approximately 8 kilometres east of the application area in 2005 (Biota, 2021). While no evidence of brush-tailed mulgaras was recorded during the field assessment, the sandplain habitat would provide suitable habitat for this species (Biota, 2021). The habitats within the application area may be utilised by this species following significant rainfall when conditions are favourable and population numbers in the surrounding landscape are high (Biota, 2021).

Recent fire has impacted the condition of vegetation and may have reduced the likelihood of conservation significant fauna utilising habitat in the immediate future post fire.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation significant fauna habitat can be managed by undertaking a clearance survey, slow directional clearing to allow fauna to move into adjacent vegetation and rehabilitating the site post extraction to ensure the habitat is not permanently lost.

Conditions

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

- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.
- fauna management condition requiring the permit holder to undertake clearance surveys to ensure that no conservation significant fauna species are impacted through the proposed clearing.
- retain cleared vegetation and topsoil and respread this on a cleared area of equivalent size within the permit boundary within 12 months of clearing to ensure fauna habitat is not permanently lost.

3.3. Relevant planning instruments and other matters

The clearing permit amendment application was advertised on 19 December 2023 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 one native title claim (WC1996/078) over the area under application (DPLH, 2024). This claim has been determined by the Federal Court on behalf of the claimant group. 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, 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:

- A Programme of Work approved under the *Mining Act 1978*.
- 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. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared may contain regionally significant flora.</p>	<p>May be at variance Changed from CPS 6225/3</p>	<p>Yes <i>Refer to Section 3.2.1, above.</i></p>
<p><u>Principle (b):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared contains potential habitat for three conservation significant fauna.</p>	<p>May be at variance changed from CPS 6225/3</p>	<p>Yes <i>Refer to Section 3.2.2, above.</i></p>
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u> There are no known records of Threatened flora within the application area (GIS Database). Flora surveys of the application area and surrounds did not record any species of Threatened flora (BGPA, 2014a; Western Botanical, 2021). None of the vegetation types recorded within the application area are known habitat for any species of Threatened flora, and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened flora (BGPA, 2014a; Western Botanical, 2021).</p>	<p>Not likely to be at variance As per CPS 6225/3</p>	<p>No</p>
<p><u>Principle (d):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.”</i></p> <p><u>Assessment:</u> There are no known Threatened Ecological Communities (TECs) located within the application area or the Mackay subregion (GIS Database). Flora and vegetation surveys of the amendment area and surrounds did not identify any vegetation representative of a TEC (BGPA, 2014; Western Botanical, 2021). The nearest known TEC is located approximately 200 kilometres north of the application area.</p>	<p>Not likely to be at variance As per CPS 6225/3</p>	<p>No</p>
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u> The extent of the mapped vegetation type is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.</p>	<p>Not at variance As per CPS 6225/3</p>	<p>No</p>
<p><u>Principle (h):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p><u>Assessment:</u> Given the nearest conservation area, Karlamilyi National Park is located approximately 75.5 kilometres south of the application area (GIS Database), the proposed clearing is unlikely have an impact on the environmental values of any conservation areas.</p>	<p>Not likely to be at variance As per CPS 6225/3</p>	<p>No</p>
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u> Given no permanent or ephemeral water courses or wetlands are recorded within the</p>	<p>Not likely to be at variance As per CPS 6225/3</p>	<p>No</p>

Assessment against the clearing principles	Variance level	Is further consideration required?
application area, the proposed clearing is unlikely to impact on vegetation growing in association with a watercourse of wetland (GIS Database).		
<p>Principle (g): <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils are moderately susceptible to wind erosion. Noting the extent of the application area and the condition of the vegetation, the proposed clearing may potentially have an appreciable impact on land degradation. Potential erosion impacts as a result of the proposed clearing may be minimised by the continued implementation of a staged clearing condition to ensure large areas are not void of vegetative cover for extended periods.</p>	<p>May be at variance</p> <p>As per CPS 6225/3</p>	No
<p>Principle (i): <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p><u>Assessment:</u></p> <p>Given there are no Public Drinking Water Source Areas within or in close proximity to the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p>	<p>Not likely to be at variance</p> <p>As per CPS 6225/3</p>	No
<p>Principle (j): <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>Given no watercourses are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging or prone to flooding events.</p>	<p>Not likely to be at variance</p> <p>As per CPS 6225/3</p>	No

Appendix B. Sources of information

B.1. GIS databases

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

- 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
- 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)

B.2. References

- BGPA (2014a) Botanic Gardens and Parks Authority, An updated plant species list for Nifty mine site, Great Sandy Desert, Western Australia, July 2014.
- BGPA (2014b) Botanic Gardens and Parks Authority, Targeted Rare Flora Survey – Nifty Copper Operations, Western Australia. Prepared by Botanic Gardens and Parks Authority, for Birla Nifty Pty Ltd, July 2014.

- Biota (2021) Nifty Copper Mine Targeted Fauna Assessment. Prepared by Biota Environmental Services, for Cyprium Metals Ltd, November 2021.
- Department of Biodiversity, Conservation and Attractions (DBCA) (2022) Advice received in relation to Clearing Permit Application CPS 9493/1. Species and Communities Branch, Department of Biodiversity, Conservation and Attractions, Western Australia, August 2022.
- 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> (24 January 2024).
- Department of Primary Industries and Regional Development (DPIRD) (2024) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <https://dpiird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f> (25 January 2024).
- 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
- Environmental Protection Authority (EPA) (2016) Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment. Available from: http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf
- Environmental Protection Authority (EPA) (2016) Technical Guidance – Terrestrial Fauna Surveys. Available from: https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Tech%20guidance-%20Terrestrial%20Fauna%20Surveys-Dec-2016.pdf
- Environmental Protection Authority (EPA) (2020) Technical Guidance – Terrestrial Fauna Surveys. Available from: https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/2020.09.17%20-%20EPA%20Technical%20Guidance%20-%20Vertebrate%20Fauna%20Surveys%20-%20Final.pdf
- Nifty Copper Pty Ltd (2023) Clearing permit application form, CPS 6225/4, received 27 November 2023.
- Nifty Copper Pty Ltd (2024a) Clearing permit additional information, CPS 6225/4, email received 22 January 2024.
- Nifty Copper Pty Ltd (2024b) Clearing permit additional information, CPS 6225/4, email received 29 January 2024.
- Preston (2021) Nifty Copper Operation. Native Vegetation Clearing Permit Application Supporting Information. Prepared by Preston Consulting Pty Ltd, for Cyprium Metals Limited, November 2021.
- Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (29 January 2024).
- Western Botanical (2021) Detailed Flora and Vegetation Assessment of the Nifty Copper Mine. Prepared by Western Botanical, for Cyprium Metals Ltd, June 2021.
- Western Botanical (2023) Memo report (WB990) Targeted Priority Flora survey for *Thysanotus* sp. Desert East of Newman (R.P. Hart 964) (P2), and *Corynotheca asperata* (P3) located at Cyprium Metals – Nifty Project, March 2023.

4. Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DCCEEW	Department of Climate Change, Energy, the Environment and Water, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
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	<i>Environmental Protection Act 1986</i> , Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union

PEC	Priority Ecological Community, Western Australia
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

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

T Threatened species:

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

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

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

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

CR Critically endangered species

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

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

EN Endangered species

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

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

VU Vulnerable species

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

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

Extinct Species:

EX Extinct species

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

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

EW Extinct in the wild species

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

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

Specially protected species:

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting

one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

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

MI Migratory species

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

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

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

CD Species of special conservation interest (conservation dependent fauna)

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

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

OS Other specially protected species

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

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

P Priority species:

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

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

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

P1 Priority One - Poorly-known species

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

P2 Priority Two - Poorly-known species

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

P3 Priority Three - Poorly-known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy

of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

P4

Priority Four - Rare, Near Threatened and other species in need of monitoring

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.

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

Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.
- (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.
- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.
- (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.
- (j) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.