Department of Mines, Petroleum and Exploration

GOVERNMENT OF WESTERN AUSTRALIA

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	11628/1
Permit type:	Purpose permit
Applicant name:	Pilbara Iron Pty Ltd
Application received:	28 May 2026
Application area:	35 hectares
Purpose of clearing:	Construction of a camp and associated activities
Method of clearing:	Mechanical blade-down clearing
Tenure:	Miscellaneous Licence 47/223
Location (LGA area):	Shire of Ashburton
Colloquial name:	Wildflower Camp

1.2. Description of clearing activities

Pilbara Iron Pty Ltd proposes to clear up to 35 hectares of native vegetation within a boundary of approximately 130.57 hectares, for the purpose of constructing a camp and associated activities, in order to facilitate rail maintenance and construction works along the Rio Tinto Integrated Rail Network (IRN) (Pilbara, 2026). The survey area is located east of Karijini National Park, approximately 85 km east of Tom Price within the Shire of Ashburton (AECOM, 2026; GIS Database). The duration of the clearing is 5 years, until 1 February 2032. This application is within the existing CPS 6110/8, however that will be amended to remove the camp so that the camp is solely managed under CPS 11628/1 (Pilbara, 2026).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	29 October 2026
Decision area:	35 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Mines, Petroleum and Exploration (DMPE) 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), 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 Delegated Officer also took into consideration the purpose of the clearing to construct a camp to support rail maintenance activities, which would be the fourth iteration of a camp site in this area.

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;
- impacts to conservation significant flora;
- the loss suitable foraging and burrowing habitat, particularly for the Western pebble-mound mouse (*Pseudomys chapmani*); and
- potential land degradation from the removal of native vegetation.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (Section 3.1), the Delegated Officer determined the proposed clearing likely to result in impacts to the environmental values listed above, however these can be minimised and managed via standard and bespoke conditions.

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;
- undertake staged clearing and 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 adjacent existing gravel extraction area to ensure fauna habitat is not permanently lost;
- Identifying and avoiding conservation significant flora;
- Identifying and avoiding western pebble-mound mouse burrows.

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 (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* (BAM Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Mining Act 1978* (WA)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)

The key guidance documents which inform this assessment are:

- A guide to the assessment of applications to clear native vegetation (DER, 2014)
- Procedure: Native vegetation clearing permits (DWER, 2021)
- Technical guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- Technical guidance – Terrestrial Fauna Surveys for Environmental Impact Assessment (EPA, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

Key environmental management measures were highlighted by the applicant, including:

- Visual inspections of disturbed areas for weed infestations and weed hygiene treatment of equipment prior to entering/exiting camp area;
- All new disturbances are kept to a minimum by utilising historically cleared & existing cleared areas where possible;
- Appropriate management/use of hydrocarbons on site and the inclusion of hydrocarbon spill response kits on site; and
- Managing dust emissions.

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values. The assessment against the clearing principles (Appendix B) identified the impacts of the proposed clearing are limited and able to be managed to be environmentally acceptable with both standard and bespoke management conditions.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 18 August 2026 by the Department of Mines, Petroleum and Exploration inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the area under application (DPLH, 2026). This claim has been determined by the Federal Court on behalf of the Banjima People (WCD2014/001). 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, 2026). 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.

It is noted that the proposed clearing is within the East Pilbara Strategic Proposal (EPSP) which was referred to the Environmental Protection Authority (EPA) by Pilbara Iron Pty Ltd on 7 July 2025 and is currently under assessment (Assessment Number 2515) (EPA, 2026). While this new clearing application is in support of supporting mine activities and infrastructure, it is unlikely to impact the EPA assessment or be considered direct implementation of the EPSP.

Other relevant authorisations required for the proposed land use include:

- A Programme of Work approved under the *Mining Act 1978*
- A Mining Development and Closure Proposal 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

<table>
<tr><th>Characteristic</th><th>Details</th></tr>
<tr><td>Local context</td><td>The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia, located within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion, and the Hammersley IBRA subregion (GIS Database). It is largely cleared in the northern portion of L47/223 due to a previously decommissioned camp site, with the southern portion featuring sparse vegetation (AECOM, 2026; GIS Database). The application has Packsaddle Road located to the north and connects to the Yandicoogina Rail/Junda Downs Junction Rail (GIS Database).</td></tr>
<tr><td>Ecological linkage</td><td>According to available databases, the application area does not contain any known or mapped ecological linkages (GIS Database).</td></tr>
<tr><td>Conservation areas</td><td>The nearest conservation area is the Karijini National Park (managed by DBCA) located approximately 0.2 kilometres north-west of the application area (GIS Database).</td></tr>
<tr><td>Vegetation description</td><td>The vegetation of the application area is broadly mapped as the following Beard vegetation association (BVA):

18: Low woodland; mulga (Acacia aneura) (GIS Database).

A flora and vegetation survey was conducted over the application area by AECOM during April 2025. The following vegetation associations were recorded within the application area (AECOM, 2026):

<table>
<tr><th>Beard's mapping unit (Shepherd vegetation association</th><th>Description</th><th>Extent in survey area (ha) (%)</th><th>Current extent in Pilbara bioregion (ha)</th><th>Pre-European extent (ha)</th><th>Percentage remaining (%)</th></tr>
<tr><td>Hamersley 18 (Mosaic 18)</td><td>Low woodland; mulga (Acacia aneura) and sparse shrubland on red sandy soils</td><td>169.61 (100%)</td><td>671,843.35</td><td>676,556.72</td><td>99.3</td></tr>
</table>

The vegetation communities described in the survey provided (AECOM, 2026) are:

• AaSaTm - Acacia aptaneura low open woodland
• EgHgTp - Eucalyptus gamophylla mallee woodland</td></tr>
<tr><td>Vegetation condition</td><td>The survey provided of the application area found the vegetation communities to be ranging from Excellent to Completely Degraded (Appendix D) as per the Trudgen scale and description of disturbance (AECOM, 2026; Trudgen, 1991). Majority of the application area was regarded as being in Excellent to Good condition, and weeds were identified in the areas marked Good to Completely Degraded (AECOM, 2026). The full Trudgen (1991) condition rating scale is provided in Appendix C.

<table>
<tr><th>Condition Rating</th><th>Extent (ha)</th><th>Percent of Survey Area</th></tr>
<tr><td>Excellent</td><td>73.79</td><td>44%</td></tr>
<tr><td>Very Good</td><td>67.57</td><td>40%</td></tr>
<tr><td>Good</td><td>11.63</td><td>7%</td></tr>
<tr><td>Poor</td><td>8.85</td><td>5%</td></tr>
<tr><td>Completely Degraded</td><td>7.77</td><td>4%</td></tr>
<tr><td>Total</td><td>169.61</td><td>100%</td></tr>
</table></td></tr>
<tr><td>Climate and landform</td><td>The Pilbara bioregion has a semi-desert-tropical climate, with the Hamersley subregion consisting of mountainous ranges and low mulga woodlands (CALM, 2002). With an average rainfall of approximately 313-318 millimetres per year, the Hamersley subregion is considered arid (AECOM, 2026; BoM, 2026). The application area has been described as semi-arid with hot summers, mild dry winters, and seasonal heavy rainfall and cyclones (AECOM, 2026).</td></tr>
<tr><td>Soil description</td><td>The application area is located across two land systems: the Boolgeeda System and the Wannamunna System:

• Boolgeeda: predominately friable non-cracking clay and red shallow loam soils, with stony slopes and plains to support spinifex grasslands and mulga shrublands
• Wannamunna: predominately red-brown hardpan shallow loam, with small traces of clays and red loamy earth, with internal drainage, and supporting mulga shrublands and woodlands.

(AECOM, 2026; DPIRD, 2026)</td></tr>
<tr><td>Land degradation risk</td><td>Both land systems (Boolgeeda and Wannamunna) are noted to be preferred by livestock or grazing animals due to their present grasses and shrublands, which makes feral animal control</td></tr>
</table>

Characteristic	Details
	important to reduce the impacts on native vegetation (CALM, 2002; Van Vreeswyk, *et al*, 2004). Due to the native vegetation present, fire control is also considered necessary (CALM, 2002; Van Vreeswyk, *et al*, 2004). Both land systems are not susceptible to erosion (Van Vreeswyk, *et al*, 2004).
Waterbodies	The application area is within the Weeli Wolli Creek catchment (AECOM, 2026). Aerial imagery indicates that two minor, non-perennial watercourses transect the area proposed to be cleared, and there are no wetlands or waterbodies within 50 kilometres of the application area (GIS Database).
Hydrogeography	There is no Public Drinking Water Source Area (PDWSA) within 50 kilometres of the application area (GIS Database). The application area is located within the Pilbara Ground Water Area and Pilbara Surface Water Area proclaimed under the *Rights in Water and Irrigation Act 1914* (GIS Database). The groundwater salinity is mapped as 500 to 1000 milligrams per litre total dissolved solids which is described as fresh to marginal (BoM, 2019; GIS Database).
Flora	According to the flora and vegetation assessment provided (AECOM, 2026), the desktop assessment identified 81 significant flora species with the potential to occur in the area, including *Tetratheca butcheriana* (listed as Endangered under the BC Act) and *Thryptomene wittweri* (listed as Vulnerable under the EPBC Act and BC Act). These species were not recorded during the field survey. According to the flora and vegetation assessment provided (AECOM, 2026), the April 2025 field survey recorded a total of 120 flora species, including: • One Priority species (P3 *Vittadinia sp. Coondewanna Flats (S. van Leeuwen 4684)* with 91 individuals recorded at 27 locations within the survey area, including in rehabilitated land (Appendix D). There were 16 other Priority species with a high likelihood of occurring in the area, however these were not observed during the survey. • *Halgania erecta* was recorded and verified as a range extension with the nearest record being more than 150 km south of the survey area. • Four weed species were identified, however these are common Pilbara weeds and none are considered significant species.
Ecological communities	No Threatened or Priority ecological communities were recorded within the application area, with the nearest being the Coolibah-Lignum Flats PEC located 21.97 kilometres away (AECOM, 2026; GIS Database)
Fauna	According to the fauna assessment provided (AECOM, 2026), 44 conservation significant fauna were identified as potentially occurring in a desktop assessment. Of these species, 13 were considered to have a moderate-to-high likelihood of occurring. • The northern quoll (*Dasyurus hallucatus*) • The grey falcon (*Falco hypoleucos*) • The peregrine falcon (*Falco peregrinus*) • The short-tailed mouse (*Leggadina lakedownensis*) • The greater stick-nest rat (*Leporillus conditor*) • The unpatterned robust slider (*Lerista macropisthopus remota*) • The Pilbara olive python (*Liasis olivaceus barroni*) • The ghost bat (*Macroderma gigas*) • The greater bilby (*Macrotis lagotis*) • The night parrot (*Pezoporus occidentalis)* • The western pebble-mound mouse (*Pseudomys chapmani*) • The Pilbara leaf-nosed bat (*Rhinonicteris aurantia* Pilbara form) • The Pilbara barking gecko (*Underwoodisaurus seorsus*) During the survey, only 2 mammal species (cattle and camels), 2 reptile species (dragons) and 34 bird species were recorded, with no species being identified as Threatened or Priority conservation significant fauna (AECOM, 2026). From the list above, it is noted that although no species had records intersecting the application area, all species (expect the greater stick-nest rat and the night parrot) had records within a 50 kilometres radius from the application area (GIS Database).
Fauna habitat	According to the habitat assessment provided, four fauna habitats were mapped in the area (AECOM, 2026): 1. Clay Plain (with Mulga woodland microhabitat) • Suitable foraging/dispersal habitat for the short-tailed mouse and unpatterened robust slider. • Supporting habitat for greater bilby (foraging, possible burrowing), Pilbara leaf-nosed bat (foraging) and grey falcon (foraging). 2. Stony Plain • Suitable habitat for the western pebble-mound mouse (foraging). Two inactive pebble-mounds were also recorded during the 2026 survey (Appendix D).

Characteristic	Details
	• Supporting foraging habitat for northern quoll, night parrot, Pilbara olive python, ghost bat, Pilbara leaf-nosed bat, and grey falcon. 3. Rehabilitated Land – may offer supporting habitat for species associated with the stony plain habitat, depending on rehabilitation progress and success. 4. Disturbed Land.

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The vegetation in the application area is considered common across the Pilbara IBRA bioregion, with the purpose of the proposed clearing being for a fourth iteration of a camp in the area (as seen by the 'disturbed' and 'rehabilitated' land within the permit boundary) (AECOM, 2026; GIS Database). There is no Priority ecological community (PEC) within the application area, with the closest being over 20 kilometres away and therefore unlikely to be impacted by the proposed clearing. The Priority flora recorded - *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) - is listed as a Priority 3, which has a spread out distribution within the Hamersley IBRA subregion (AECOM, 2026; WAH, 1998-). A total of 91 individuals were recorded at 27 locations during the survey (AECOM, 2026). This species can be found in sandy clay plains in association with low open woodland mulgas, however the survey provided also shows records of this species in the stony plains and rehabilitated areas within the permit boundary (AECOM, 2026). It is not stated that all individuals found will be removed, with Pilbara Iron Pty Ltd intending to remain to the previously cleared areas utilised for previous camp iterations (AECOM, 2026). However, if the proposed clearing resulted in the removal of the 91 *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684), given this species current distribution, is not likely that the clearing will have a significant impact on the conservation status of these species.	Not likely to be at variance	No
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The fauna assessment was conducted in April after an above-average period of rainfall, which is in accordance with the EPA fauna survey guidance, but may have also resulted in less species being observed due to the warmer conditions decreasing resource ability (AECOM, 2026; EPA, 2020). The four fauna habitats identified may provide transient/foraging habitat for many species (AECOM, 2026). The area proposed to be cleared contains potential burrowing habitat for the western pebble-mound mouse, with the stony plains supporting two inactive pebble-mounds recorded during the survey (AECOM, 2026). The western pebble-mound mouse is classified as Priority 4 species under the BC Act, and can be found in habitat with pebbly soils, tussock and hummock grasslands, and *Acacia* woodlands (AECOM, 2026). These habitat features may align with the stony plains and rehabilitated lands within the application area, which may see the mouse present as a transient visitor or as local burrower (AECOM, 2026). Although the two pebble-mounds found were deemed 'inactive', this does not eliminate the possibility of the mounds being used again (AECOM, 2026; Firman R.C. *et al*, 2025). It has also been noted that common processes historically used in identifying 'active' vs 'inactive' mounds may not be entirely accurate, and additionally, according to recent research, the highest activity time period for this species is June to September, which is outside the timing of the survey provided (Firman R.C. *et al*, 2025). Although the clearing is not expected to disrupt fauna movement or remove critical habitat (AECOM, 2026), a fauna management condition has been recommended to be imposed on the permit, so that these two mounds and any additional mounds or individuals observed can be safeguarded.	May be at variance	No
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment:	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Two Threatened species listed under the BC Act were identified via desktop to potential occur within the application area, however these species were not recorded during the April field survey (AECOM, 2026). The timing of the survey is as per the EPA flora survey timing guidance for the Eremaean area (EPA, 2016). *Tetratheca butcheriana* is recorded solely within the Hamersley subregion and has a concentrated population located approximately 125 kilometres away from the application area, while *Thryptomene wittweri* has a couple of populations across the Pilbara and Gascoyne bioregions, including records approximately 12.25 kilometres from the application area (WAH, 1998-; GIS Database). *Tetratheca butcheriana* has not been historically recorded within the application area which may be due to the lack of suitable habitat such as ironstone cliffs and breakaways (AECOM, 2026). *Thryptomene wittweri* has been recorded once previously in 2024, however their lack of frequent occurrence or reoccurrence may be due to the lack of suitable habitat (steep slopes, breakaways, summits of prominent hills) (AECOM, 2026). Therefore, it is unlikely that Threatened flora will be impacted by the proposed clearing.		
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 Threatened Ecological Communities (TECs) identified inside the permit boundary or within 50 kilometres of the application area (GIS Database).	Not at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of the mapped vegetation type (BVA 18) is consistent with the national objectives and targets for biodiversity conservation in Australia, with BVA 18 having over 99% of vegetation remaining (AECOM, 2026; Commonwealth of Australia, 2001; GIS Database). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area, noting that the vegetation and land in the permit boundary has been previously cleared and rehabilitated for the purpose of establishing a campsite (AECOM, 2026; GIS Database).	Not at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Karijini National Park is the closest conservation area, located 0.2 kilometres north-west of the application area (GIS Database). Given the purpose of the permit (campsite) and the distance from the conservation area, the proposed clearing is not likely to impact the environmental values of Karijini National Park.	Not likely to be at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: There are two minor non-perennial watercourses that intersect the permit boundary, however according to aerial imagery, these lines do not host riparian vegetation and have not been extensively cleared (GIS Database). The proposed clearing is unlikely to impact the hydrology and water quality of these watercourses.	Not likely to be at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are not considered susceptible erosion, with the biggest risk being fire and animal impacts on native vegetation (e.g. livestock grazing) (CALM, 2002; Van Vreeswyk *et al*, 2004). Noting the extent and location of the application area. the proposed clearing may have an appreciable impact on land degradation, which may	May be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
be managed via a rehabilitation and revegetation condition, as well as a staged clearing condition on the permit.		
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 PDWSAs within 50 kilometres of the application area (GIS Database). Given this distance, and the purpose of the permit (campsite), the proposed clearing is unlikely to impact surface or groundwater quality.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: Although the climate of the Pilbara bioregion and Hamersley subregion is subject to seasonal heavy rainfall (BoM, 2026), the properties of the mapped soils and watercourses in the area do not indicate that the proposed clearing is likely to contribute to increased incidence or intensity of flooding or waterlogging.	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

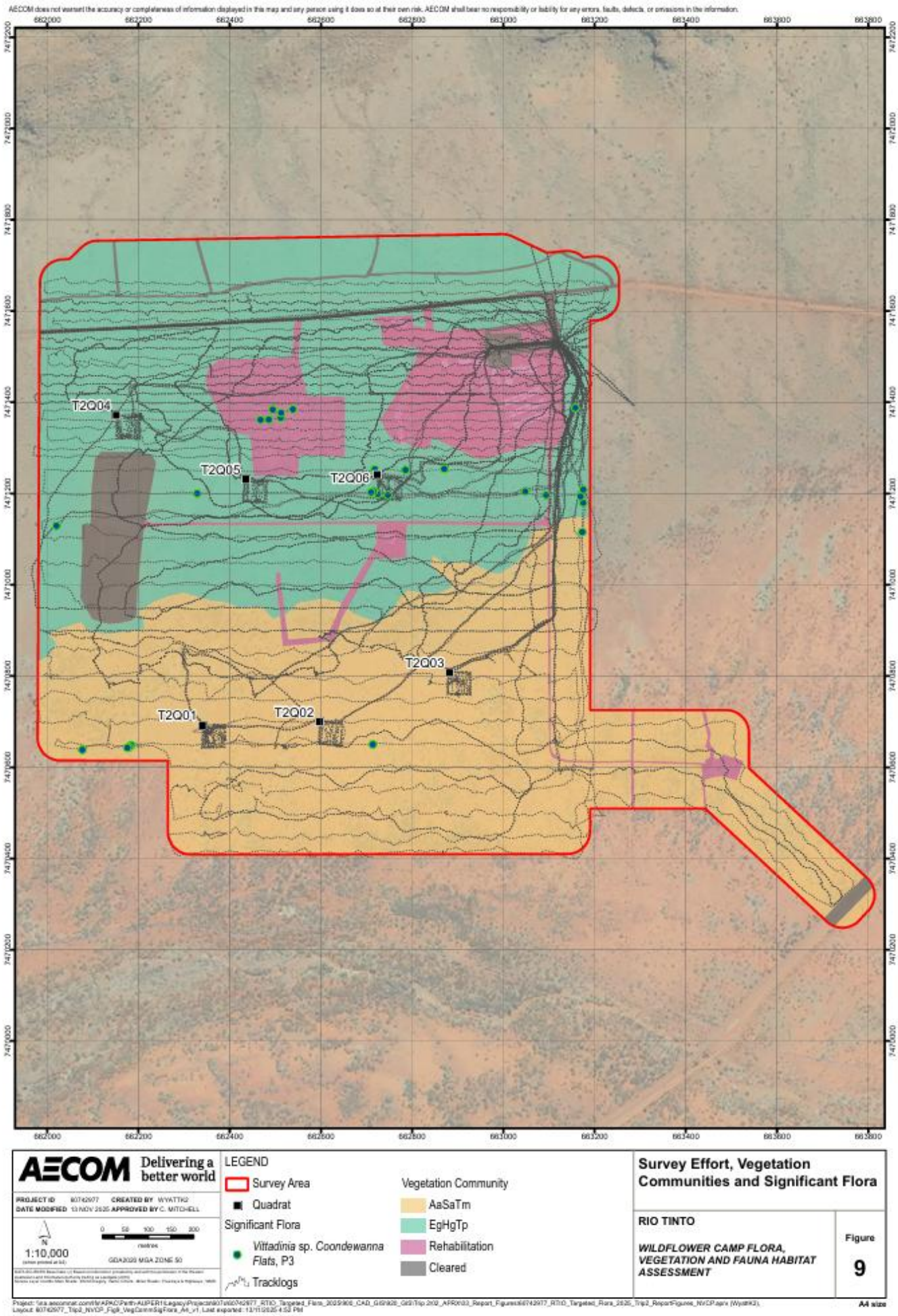
Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree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

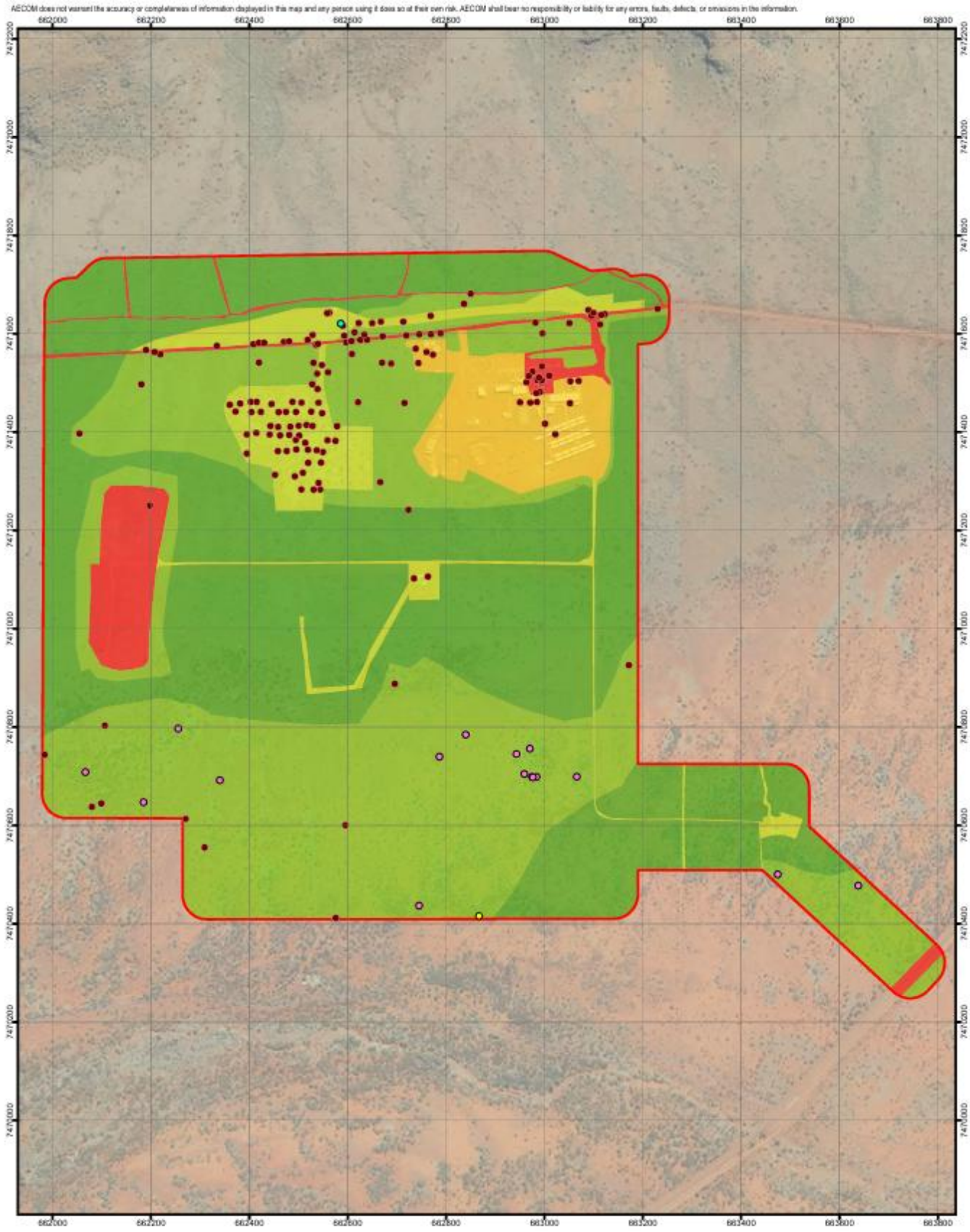
Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society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

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

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

Appendix D. Survey area mapping


AECOM does not warrant the accuracy or completeness of information displayed in this map and any person using it does so at their own risk. AECOM shall bear no responsibility or liability for any errors, faults, defects, or omissions in the information.
T2Q04
T2Q05
T2Q06
T2Q03
T2Q01
T2Q02
AECOM Delivering a better world
PROJECT ID 60742977 CREATED BY WYATTK2
DATE MODIFIED 13 NOV 2025 APPROVED BY C. MITCHELL
1:10,000
GDA2020 MGA ZONE 50
LEGEND
Survey Area
Quadrat
Significant Flora
Vittadinia sp. Coondewanna Flats, P3
Tracklogs
Vegetation Community
AaSaTm
EgHgTp
Rehabilitation
Cleared
Survey Effort, Vegetation Communities and Significant Flora
RIO TINTO
WILDFLOWER CAMP FLORA, VEGETATION AND FAUNA HABITAT ASSESSMENT
Figure
9
A4 size



AECOM Delivering a better world

PROJECT ID 60742677 CREATED BY WYATTK2
DATE MODIFIED 13 NOV 2025 APPROVED BY C. MITCHELL

N
1:10,000
(when printed at A4)
0 50 100 150 200
metres
GDA2020 MGA ZONE 50

LEGEND

Survey Area
Quadrat

Weeds
*Bidens bipinnata
*Cenchrus ciliaris
*Malvastrum americanum
*Melinis repens

Vegetation Condition
0.1 - Completely Degraded
0.4 - Poor
0.6 - Good
0.8 - Very Good
1 - Excellent

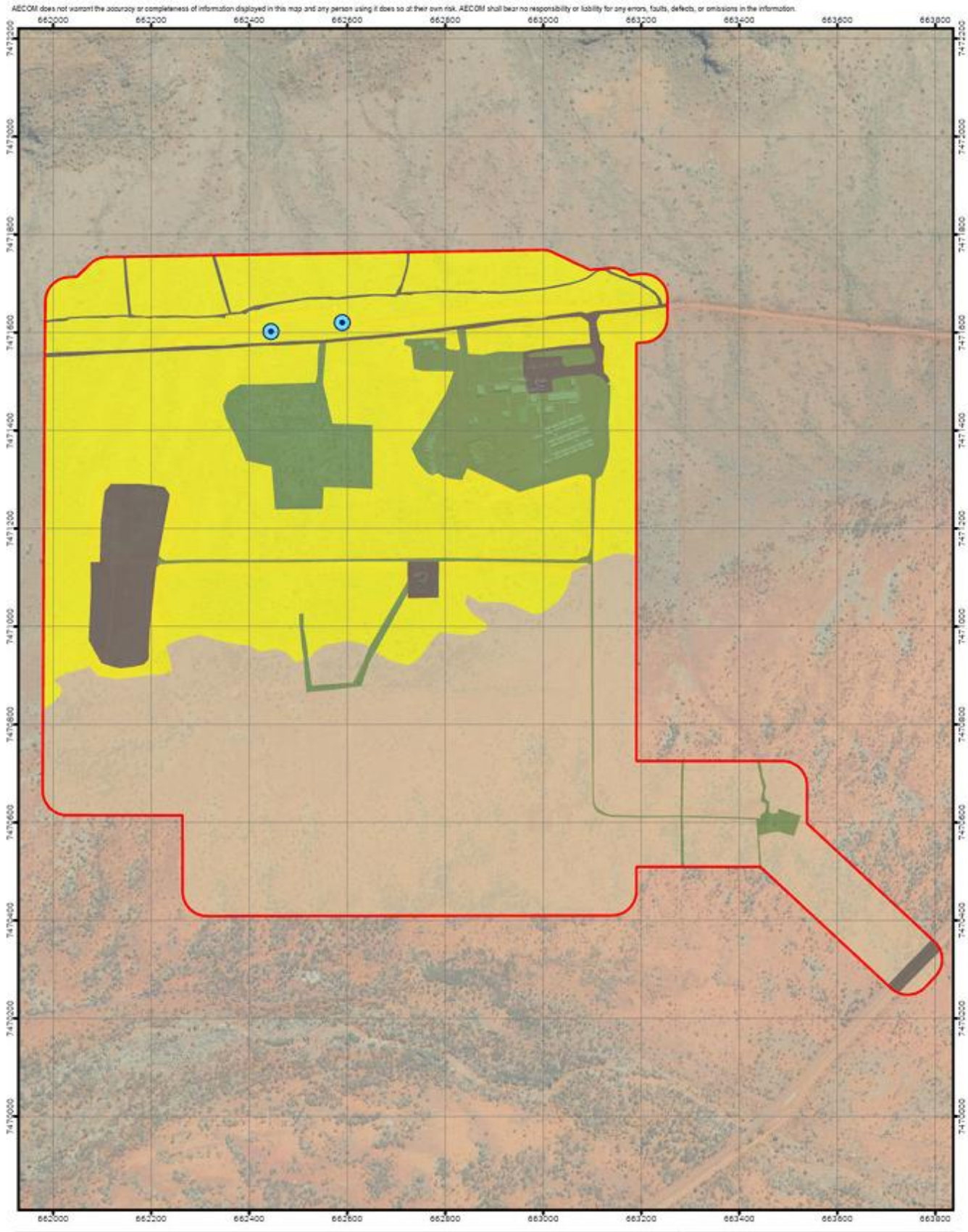
Vegetation Condition

RIO TINTO

WILDFLOWER CAMP FLORA, VEGETATION AND FAUNA HABITAT ASSESSMENT

Figure
10

A4 size



AECOM Delivering a better world

PROJECT ID 60742977 CREATED BY JOHNSTONES2
DATE MODIFIED 18 MAY 2026 APPROVED BY C. MITCHELL

N
0 50 100 150 200
metres
1:10,000
GDA2020 MGA ZONE 50

LEGEND

Survey Area

Pebble-mound Mouse observation (*Pseudomys chapmani*, P4)

Fauna Habitat

Clay Plain
Disturbed
Rehab
Stony Plain

Significant Fauna and Fauna Habitats

RIO TINTO

WILDFLOWER CAMP FLORA, VEGETATION AND FAUNA HABITAT ASSESSMENT

Figure **11**

A4 size

Appendix E. Sources of information

E.1. GIS datasets

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

- CAWSA Part 2A Clearing Control Catchments (DWER-004)
- Clearing Instruments Activities (Areas Approved to Clear) (DWER-076)
- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations - Schedule One Areas (DWER-057)
- DBCA - Lands of Interest (DBCA-012)
- DBCA - Legislated Lands and Waters (DBCA-011)
- DBCA Fire History (DBCA-060)
- EPA Referred Schemes Pending (DWER-121)
- EPA Referred Significant Proposals (DWER-120)
- EPA Referred Significant Proposals Pending (DWER-103)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- IBSA Survey Details (DWER-118)
- Local Government Area (LGA) Boundaries (LGATE-233)
- Localities (LGATE-234)
- Native Title (Determination) (LGATE-066)
- Native Title (ILUA) (LGATE-067)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- Public Drinking Water Source Areas (DWER-033)
- Reserves (LGATE-227)
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping - Best Available (DPIRD-027)
- Surface Water Management Areas (DWER-041)
- Townsites (LGATE-248)
- WA Now Aerial Imagery
- Waterways Conservation Act Management Areas (DWER-072)
- Wild Rivers (DWER-087)

Restricted GIS Databases used:

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

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Glossary

Acronyms:

BC Act	*Biodiversity Conservation Act 2016,* Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DCCEEW	Department of Climate Change, Energy, the Environment and Water, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety (now DMPE)
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DMPE)
DMP	Department of Mines and Petroleum, Western Australia (now DMPE)
DMPE	Department of Mines, Petroleum and Exploration
DoEE	Department of the Environment and Energy (now DCCEEW)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	*Environmental Protection Act 1986*, Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth Act)
GIS	Geographical Information System

ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	*Rights in Water and Irrigation Act 1914*, Western Australia
TEC	Threatened Ecological Community

Definitions:

DBCA (2023) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia:

Threatened species

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

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

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

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

CR **Critically endangered species**

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

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines.

EN **Endangered species**

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

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines.

VU **Vulnerable species**

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

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.

EX **Extinct species**

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

EW **Extinct in the wild species**

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

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild.

Specially protected species

SP **Specially protected species**

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

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

MI **Migratory species**

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

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

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

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

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

OS **Other specially protected species**

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

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

Priority species

P **Priority species**

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

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

Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened.

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

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

P1 **Priority One - Poorly-known species – known from few locations, none on conservation lands**

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, for example, agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

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

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, for example, national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

P3 **Priority Three - Poorly-known species – known from several locations**

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

Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. These species need further survey.

P4 **Priority Four - Rare, Near Threatened and other species in need of monitoring**

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

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as a conservation dependent specially protected species.

(c) Species that have been removed from the list of threatened species or lists of conservation dependent or other specially protected species, during the past five years for reasons other than taxonomy.

(d) Other species in need of monitoring.

Principles for clearing native vegetation:

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

(j) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.