



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4919/4
Permit Holder:	Hamersley Iron Pty Ltd
Duration of Permit:	18 May 2012 – 31 December 2028

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

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

- Clearing for the purpose of construction of a pipeline and associated lay down areas, car parks, surge tanks, chlorination units, pump stations, booster stations, site offices, storage areas; and
- Clearing for the purpose of a borefield including bores, pipelines, powerlines, access tracks and other infrastructure.

2. Land on which clearing is to be done

Lot 9 on Plan 47815, Tom Price
Lot 9 on Plan 47815, Mount Sheila
Lot 8 on Plan 241372, Mount Sheila
Lot 56 on Plan 216344, Tom Price
Lot 557 on Plan 70685, Mount Sheila
Lot 556 on Plan 70685, Mount Sheila
Lot 556 on Plan 404911, Mount Sheila
Lot 555 on Plan 70686, Mount Sheila
Lot 522 on Plan 69942, Tom Price
Lot 520 on Plan 69942, Tom Price
Lot 51 on Plan 241992, Mount Sheila
Lot 500 on Plan 406730, Tom Price
Lot 47 on Plan 241809, Mount Sheila
Lot 46 on Plan 55948, Mount Sheila
Lot 36 on Plan 51845, Tom Price
Lot 35 on Plan 93088, Tom Price
Lot 354 on Plan 15091, Tom Price
Lot 331 on Plan 74355, Mount Sheila
Lot 32 on Plan 55948, Mount Sheila
Lot 323 on Plan 14565, Tom Price
Lot 3013 on Plan 44791, Tom Price
Lot 3007 on Plan 58290, Mount Sheila
Lot 3000 on Plan 44791, Tom Price
Lot 277 on Plan 15091, Tom Price
Lot 271 on Plan 15093, Tom Price
Lot 26 on Plan 241873, Tom Price
Lot 1235 on Plan 15091, Tom Price
Lot 107 on Plan 243223, Mount Sheila
Lot 106 on Plan 243222, Mount Sheila
Road Reserve - 11731208, Mount Sheila
Road Reserve - 11432490, Tom Price

Road Reserve - 11432484, Tom Price
Unallocated Crown Land, Tom Price
Road Reserve - 11432488, Tom Price
Road Reserve - 11432489, Tom Price
Unallocated Crown Land, Mount Sheila

3. Area of Clearing

The Permit Holder must not clear more than 90 hectares of native vegetation within the area shaded yellow on attached Plan 4919/4.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the right to access land under the *Water Agencies (Powers) Act 1984* or any other written law.

6. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 31 December 2023.

PART II –MANAGEMENT CONDITIONS

7. Avoid, minimise, and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

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

8. Weed control

- (a) When undertaking any clearing authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds*:
 - (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - (ii) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
 - (iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.
- (b) At least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

9. Watercourse

- (a) Where practicable the Permit Holder shall avoid clearing riparian vegetation.
- (b) Where a watercourse is to be impacted by clearing, the Permit Holder shall maintain the existing surface flow of that watercourse by use of culverts.

10. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) within 6 months following clearing authorised under this Permit, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this Permit by:
 - (i) laying the vegetative material and topsoil retained under condition 10(a) on the cleared area(s) that are no longer required.

- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 10(b) of this Permit:
 - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 10(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.
- (d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 10(c)(ii) of this Permit, the Permit Holder shall repeat condition 10(c)(i) and 10(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (e) Where a determination is made by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 10(c)(i) and (ii) of this Permit, that determination shall be submitted for the *CEO's* consideration. If the *CEO* does not agree with the determination made under condition 10(c)(ii), the *CEO* may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 10(c)(ii).

PART III - RECORD KEEPING AND REPORTING

11. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) the date that the area was cleared;
 - (iii) the size of the area cleared (in hectares);
 - (iv) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 7 of the Permit;
 - (v) actions taken to minimise the risk of the introduction and spread of weeds in accordance with condition 8 of the Permit; and
 - (vi) actions taken to minimise impacts to watercourses in accordance with condition 9 of this Permit..
- (b) In relation to the revegetation and rehabilitation of areas pursuant to condition 10 of this Permit:
 - (i) the location of any areas revegetated and rehabilitated, recorded using a GPS unit set to GDA94, expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) a description of the revegetation and rehabilitation activities undertaken;
 - (iii) the date that the area was revegetated and rehabilitated;
 - (iv) the size of the area revegetated and rehabilitated (in hectares); and
 - (v) a copy of the *environmental specialist's* report detailing the species composition, structure and density of the area revegetated and rehabilitated including the methodology used in determining those values.

12. Reporting

- (a) The Permit Holder must provide to the *CEO* on or before 30 June of each year, a written report:
- (i) of records required under condition 11 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 30 September 2028 the Permit Holder must provide to the *CEO* a written report of records required under condition 11 of this Permit where these records have not already been provided under condition 12(a) of this Permit.

DEFINITIONS

The following meanings are given to terms used in this Permit:

CEO means the Chief Executive Officer of the Department responsible for administering the clearing provisions contained within *the Environmental Protection Act 1986*;

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

fill means material used to increase the ground level, or fill a hollow;

local provenance means native vegetation seeds and propagating material from natural sources within 100 kilometres of the area cleared;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

regenerate/ed/ion means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area; and

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Biodiversity, Conservation and Attractions Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

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


5 April 2019

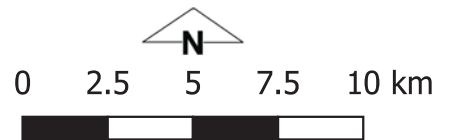
Plan 4919/4

117°45'0"E 117°48'0"E 117°51'0"E 117°54'0"E 117°57'0"E 118°00'0"E 118°30'0"E 118°60'0"E



Legend

 CPS areas approved to clear
Image



MGA 94
Geocentric Datum of Australia 1994

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



GOVERNMENT OF
WESTERN AUSTRALIA



1. Application details

1.1. Permit application details

Permit application No.: 4919/4
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Hamersley Iron Pty Ltd
Application received date: 18 May 2018

1.3. Property details

Property:

Lot 9 on Plan 47815, Tom Price	Lot 32 on Plan 55948, Mount Sheila
Lot 9 on Plan 47815, Mount Sheila	Lot 323 on Plan 14565, Tom Price
Lot 8 on Plan 241372, Mount Sheila	Lot 3013 on Plan 44791, Tom Price
Lot 56 on Plan 216344, Tom Price	Lot 3007 on Plan 58290, Mount Sheila
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Lot 46 on Plan 55948, Mount Sheila	Road Reserve - 11432484, Tom Price
Lot 36 on Plan 51845, Tom Price	Unallocated Crown Land, Tom Price
Lot 35 on Plan 93088, Tom Price	Road Reserve - 11432488, Tom Price
Lot 354 on Plan 15091, Tom Price	Road Reserve - 11432489, Tom Price
Lot 331 on Plan 74355, Mount Sheila	Unallocated Crown Land, Mount Sheila

Local Government Authority: Shire of Ashburton
Localities: Tom Price and Mount Sheila

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing
90	-	Mechanical Removal

Purpose category:

Construction and maintenance of a pipeline and associated lay down areas, car parks, surge tanks, chlorination units, pump stations, booster stations, site offices, storage areas, bores, access tracks, powerlines and associated infrastructure. Bores, pipelines, powerlines, access tracks and other infrastructure associated with a borefield.

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 5 April 2019
Reasons for Decision:

The clearing permit amendment application was received on 18 May 2018 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing is likely to be at variance to Principle (f), may be at variance to Principle (h), and is not likely to be at variance to the remaining clearing principles.

To mitigate impacts to watercourses, a condition has been included on the permit that requires the permit holder to avoid clearing of riparian vegetation where practicable and to maintain existing surface water flow through the use of culverts.

A weed management condition has been included on the permit to mitigate impacts to nearby conservation areas.

In determining to grant a clearing permit subject to conditions, the Delegated Officer considered that the proposed clearing is not likely to lead to an unacceptable risk to the environment.

2. Site Information

Clearing Description

The proposed amendment is for the clearing of 90 hectares of native vegetation within a larger area of approximately 913 hectares (increased from clearing of 82 hectares within a larger area of 163 hectares in CPS 4919/3), within various properties in the Shire of Ashburton, for the purposes of establishing/ maintaining bores, pipes, powerlines, access tracks and other infrastructure associated with a borefield.

The amendment also includes amending the purpose of the permit (Condition 1) to include bores, access tracks, powerlines and associated infrastructure, and to extend the expiry date of the permit from 31 December 2027 to 31 December 2028 and extend the period in which clearing is authorised (Condition 6) from 31 December 2022 to 31 December 2023.

Vegetation Description

The application area is mapped as:

- Beard vegetation association 18, described as low woodland; mulga (*Acacia aneura*);
- Beard vegetation association 567, described as hummock grasslands, shrub steppe; mulga and kanji over soft spinifex and *Triodia basedowii*;
- Beard vegetation association 29, described as sparse low woodland; mulga, discontinuous in scattered groups;
- Beard vegetation association 82, described as Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*; and
- Beard vegetation association 157, described as Hummock grasslands *Triodia wiseana* (Shepherd, 2009).

A biological survey conducted in March 2018 found that the survey area (area in addition to previous clearing permit, CPS 4919/3) contained a total of 12 vegetation units from four landforms, one from low hills and slopes, one from gullies, three from drainage lines, and seven from undulating plains (Rio Tinto, 2018).

Vegetation of plains, P4, described as tall open shrubland of *Acacia ancistrocarpa*, *A. pruinocarpa*, *A. aptaneura* and *A. atkinsiana* over open hummock grassland of *Triodia melvillei*, was found to be the most widespread vegetation unit within the study area, covering approximately 44 per cent of the study area (Rio Tinto, 2018).

Vegetation Condition

The application area has been determined to be in an excellent to completely degraded condition (Keighery, 1994), described as:

- Excellent: vegetation structure intact; disturbance affecting individual species, weeds non-aggressive; and
- Completely Degraded: no longer intact, completely/almost completely without native species.

Vegetation condition was established from the following flora surveys undertaken in September 2008 (Mattiske Consulting Pty Ltd, 2008), November 2010 (Pilbara Flora, 2011), and March 2018 (Rio Tinto, 2018). Of the vegetation surveyed within the (additional) amended area, approximately 95 per cent was described as very good to good condition (Rio Tinto, 2018).

Soil Type

Soils within the application area are mapped according to the following land subsystems (DPIRD, 2017):

- Boolgeeda Land System subsystem, which is mapped across approximately 34 per cent of the application area, is described as Stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands or mulga shrublands. Vegetation is generally not prone to degradation and the system is not susceptible to erosion.
- Parburdoo Land System subsystem, which is mapped across approximately 19 per cent of the application area, is described as Basalt derived stony gilgai plains and stony plains supporting snakewood and mulga shrublands with spinifex, chenopods and tussock grasses. Stony drainage floors and gilgai plains developed from basalt; snakewood with stony chenopod pastures in poor to fair condition; moderate erosion on drainage floors.
- Marandoo Land System subsystem, which is mapped across approximately 18 per cent of the application area, is described as Basalt hills and restricted stony plains supporting grassy mulga shrublands.
- Newman Land System subsystem, which is mapped across approximately eight per cent of the application area, is described as, rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands.
- Rocklea Land System subsystem, which is mapped across approximately seven per cent of the application area, is described as, basalt hills, plateaux, lower slopes and minor stony plains supporting hard spinifex (and occasionally soft spinifex) grasslands.
- Platform Land System subsystem, which is mapped across approximately six per cent of the application area, is described as, dissected slopes and raised plains supporting hard spinifex grasslands.
- McKay Land System subsystem, which is mapped across approximately five per cent of the application area, is described as, hills, ridges, plateaux remnants and breakaways of meta sedimentary and sedimentary rocks supporting hard spinifex grasslands.

- Jurrawarrina Land System subsystem, which is mapped across approximately three per cent of the application area, is described as Hardpan plains and alluvial tracts supporting mulga shrublands with tussock and spinifex grasses.

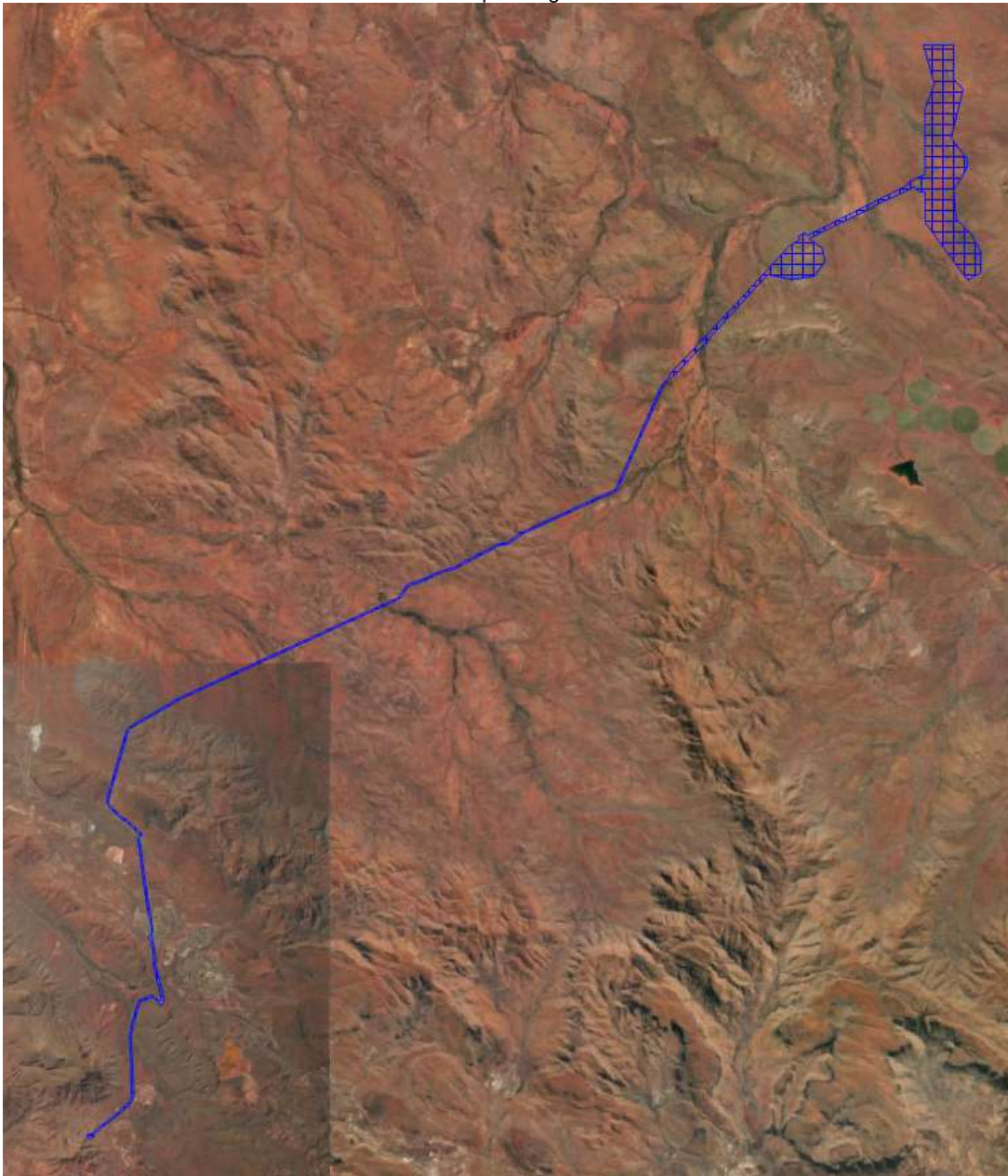


Figure 1: Application area shown in blue

3. Minimisation and mitigation measures

The applicant provided the following avoidance and mitigation measures in support of the application:

- the application seeks to include areas that were previously cleared under pre-existing Clearing Permits so as to allow a number of aging bores to be replaced to sustain water supply from the Southern Fortescue Borefield to Tom Price (including the township). Clearing will be limited to areas that are previously cleared for existing infrastructure, as far as practicable;
- any new clearing will avoid areas of elevated conservation significance, as far as practicable;
- priority flora species identified will be avoided, unless CEO approval is obtained to disturb, if required;
- any future western pebble-mound mouse mounds if found within the clearing area will be avoided;
- standard weed management procedures will continue to be implemented; and
- undertake rehabilitation of cleared areas that are no longer required as soon as practicable to standard rehabilitation requirements (i.e. within 4 years of commencing revegetation, engage an environmental specialist to determine the species composition, structure and density of the area revegetated and rehabilitated and submit this report to DWER).

4. Assessment of application against clearing principles

The amendment application is to clear 90 hectares of native vegetation within various properties in the Shire of Ashburton, for the purposes of construction and maintenance of a pipeline and associated lay down areas, car parks, surge tanks, chlorination units, pump stations, booster stations, site offices, storage areas, bores, access tracks, powerlines and associated infrastructure, and establishing/maintenance of a borefield, including bores, pipes, powerlines, and access tracks.

No threatened flora have been recorded within the application area, nor within the surrounding local area (50 kilometre radius). A biological survey has found that a number of priority (P) flora species are likely to occur within, or close to the application area (Rio Tinto, 2018). Long linear areas within the application area have been disturbed by previous clearing activity. The application area contains a range of established infrastructure, including railway, pipelines, powerlines, bores, access roads, water tanks, and other structures. Given this, and the extensive surrounding remnant vegetation in similar or better condition to that found within the application area, it is unlikely that the proposed clearing would significantly impact these species or that the application area could be considered an area of high biodiversity. A precautionary approach is recommended for the clearing of a small number of poorly researched or restricted species; the clearing of the following species should be avoided where possible:

- *Calotis squamigera* (P1), this species is a small annual herb, recorded from plains of red-brown loam. The closest recorded population of this species is located approximately 10.0 kilometres from the application area. A flora survey conducted by Rio Tinto found that, due to its small size, this species could potentially occur in the study area despite not being detected during the survey (Rio Tinto, 2018);
- *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) (P1), recorded from plains and broad drainage lines with dark reddish-brown sandy clay and loam. The closest recorded population is located approximately 18.9 km south-east of survey study area (Rio Tinto, 2018). A flora survey found that this species could potentially occur within the application area, but would be expected in low, scattered numbers (Rio Tinto, 2018);
- *Euphorbia inappendiculata* var. *inappendiculata* (P2), a small annual herb, known from seasonally inundated plains and flats, with dark reddish brown silty clay/loam and cracking clay. The closest recorded population is located approximately 9.5 kilometres from application area. A flora survey found that, due to its small size, this species could potentially occur in the study area despite not being detected during the survey (Rio Tinto, 2018);
- *Acacia dawsoniana* (P3), a low spreading shrub recorded within the local area, was assumed not to be present within the application area due to the readily identifiable features of the species and lack of presence during the flora survey (Rio Tinto, 2018); and
- *Acacia effusa* (P3), a low spreading shrub recorded within the local area, was assumed not to be present within the application area due to the readily identifiable features of the species and lack of presence during the flora survey (Rio Tinto, 2018).

Advice received from the DBCA Pilbara region (DBCA, 2018) found that mulga (*Acacia aneura*) communities within the Hamersley Interim Biogeographic Regionalisation of Australia (IBRA) subregion were identified within the application area. DBCA has deemed this community to be an 'Ecosystem at Risk' and, if subject to ongoing impacts, may meet the criteria for listing as a priority or threatened ecological community (DBCA, 2018). DBCA advised that mulga communities identified within the application area are proposed for protection by addition into the conservation estate (ex-Hamersley pastoral station). DBCA recommends that the applicant avoid clearing mulga communities in good to excellent condition, minimise the clearing of all other mulga communities, and manage indirect impacts to this community, e.g. changes to surface water flow regimes (DBCA, 2018). As outlined in Section 3, the applicant will limit clearing to areas that are previously cleared for existing infrastructure and avoid clearing of areas of elevated conservation significance, as far as practicable.

According to available databases, twenty conservation significant fauna species have been recorded within a 40 kilometre radius of the application area (DBCA, 2007-). While the area may contain habitat suitable for a number of threatened, specially protected, and priority fauna species, it is only likely to contain core habitat for a small number of priority fauna species (Rio Tinto, 2018). The fauna habitats within the areas proposed to be cleared are well represented elsewhere within the local and regional area, and no significant loss of habitat for fauna indigenous to Western Australia is expected. The areas to be cleared do not represent a fauna corridor and therefore the clearing will not remove an ecological linkage that is necessary for the maintenance of faunal assemblages. Advice received from the DBCA Pilbara region considered the proposed clearing unlikely to detrimentally impact the sustainability of conservation significant fauna. However, the advice recommends the applicant avoid disturbance to any active pebble-mound mouse (*Pseudomys chapmani*) mounds (DBCA, 2018). As outlined in Section 3, the applicant will avoid any pebble-mound mouse (*Pseudomys chapmani*) mounds found during works.

There were no priority ecological communities (PEC) or threatened ecological communities (TEC) recorded within the application area. One TEC, *Themeda grasslands on cracking clays (Hamersley Station, Pilbara)*, is recorded within the local area (50 kilometre radius), located approximately 23.7 kilometres from the application area. Three PECs were recorded within the local area (50 kilometre radius). The closest recorded PEC is located approximately 5.5 kilometres from the application area (*Brockman Iron cracking clay communities of the Hamersley Range*) and is not likely to occur within application area. A flora survey of the application area identified that vegetation assemblages found within the survey area did not meet the identification criteria for any known TECs or PECs (Rio Tinto, 2018).

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The application area is located within the Pilbara IBRA bioregion, which retains approximately 99 per cent of the pre-European vegetation extent. Similarly, Beard vegetation associations 18, 567, 29, 82 and 157 each retain approximately 99 per cent of the pre-European vegetation extent within this bioregion (Government of Western Australia, 2018). Given the extent remaining, the application area is not likely to be a significant remnant in an area that has been extensively cleared.

Four non-perennial watercourses intersect the application area, three major rivers and one minor river. These riparian areas are impacted by an existing access road, therefore, the proposed clearing is unlikely to significantly impact riparian vegetation. As the application area includes vegetation which is growing in association with a watercourse, the proposed clearing is at variance to Principle (f). Conditions requiring the flow of surface water be maintained will help to minimise further disturbance to riparian ecosystems.

As the application area is intersected by four non-perennial watercourses, the proposed clearing may cause an increase in sediment levels in surface water runoff. However, this increase is likely to be temporary and restricted to periods of works. The proposed clearing is not likely to have a significant impact on the quality or quantity of surface or groundwater (DWER, 2018).

Given the long linear nature of the proposed clearing area and that it is surrounded by a larger areas of intact remnant vegetation, appreciable land degradation is not likely to occur.

The nearest conservation area is Karijini National Park. The most eastern section of the application area borders the western boundary of the Karijini National Park for approximately six kilometres reaching as close as 172 metres for approximately 600 metres. Whilst the proposed clearing occurs near this conservation area, the proposed clearing is not likely to significantly impact on the environmental values of Karijini National Park. Implementing weed hygiene management practices will limit the risk of weeds spreading within the conservation estate.

DBCA Pilbara regional advice (DBCA, 2018) indicates that the eastern most part of the application area overlaps an area designated as a proposed conservation estate (ex-Hamersley Station). Therefore, the proposal may be at variance to Principle (h). The principles of avoid, minimise and reduce impacts are to be considered, and that this area be rehabilitated when no longer required. As outlined in Section 3, the applicant will continue to use standard weed management procedures and rehabilitate cleared areas that are no longer required as soon as practicable.

DBCA (2018) notes that the weeds present within the application area, as identified by a biological survey (Rio Tinto, 2018), are species known to have a high ecological impact and are readily invasive. DBCA recommends strict weed hygiene protocols, and frequent eradication/reduction in the extent of weed species within the application area (DBCA, 2018). As outlined in Section 3, standard weed management procedures will continue to be implemented.

The existing vegetation consists mainly of shallow rooted grasses and shrubs with minimal tree root systems, thus the proposed clearing of vegetation is not likely to significantly affect the level of the groundwater table. As the proposed clearing is for 90 hectares over a long and linear area that is surrounded by a larger areas of intact remnant vegetation, is not considered likely to increase the occurrence of flooding.

Given the above, the proposed clearing is at variance to Principle (f), may be at variance to Principle (h), and is not likely to be at variance to the remaining clearing principles.

Planning instruments and other relevant matters

Water landuse planning advice was received from the Department of Water and Environmental Regulation (DWER) Northwest Region on 30 August 2018. This advice indicated that the Southern Fortescue and Marandoo water reserves supply water to the town of Tom Price. Rio Tinto Limited (through its subsidiary Hamersley Iron Pty Ltd) is the licensed water service provider for the town. The advice recommended that the applicant adhere to DWER Water Quality Protection Guidelines and Water Quality Protection Notes when undertaking the proposed activities in the reserve (<http://www.water.wa.gov.au/search-publications>). The proposed clearing is located within the Pilbara Surface Water Area and Pilbara Groundwater Areas, which are both proclaimed under the *Rights in Water and Irrigation Act 1914*. Rio Tinto Limited (through its subsidiary Pilbara Iron Company (Services) Pty Ltd) holds the necessary water licences and permits under the *Rights in Water and Irrigation Act 1914* (DWER, 2018).

Minor wording changes to the permit conditions have been made to bring the conditions in line with current DWER practice.

There are seven Aboriginal sites of significance mapped within the application area, for which the applicant has responsibilities under the *Aboriginal Heritage Act 1972*.

This application was received on 18 May 2018. The clearing permit application was advertised on the DWER website on 6 August 2018 with a 21 day submission period. No public submissions were received in relation to this application.

5. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Primary Industries and Regional Development (DPIRD) (2017). NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <https://maps.agric.wa.gov.au/nrm-info/> (accessed 12 September 2018).
- Department of Biodiversity, Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed September 2018
- Department of Biodiversity, Conservation and Attractions (DBCA) (2018) Regional advice provided in relation to clearing permit application CPS 4919/4, received 4 December 2018, (DWER ref. A1745626).
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GIS databases:

- CPS Areas applied to clear
- NatureMap (conservation significant fauna)
- DAFWA Subsystems V5
- Soils of WA
- Vegetation Complexes
- Managed Tenure
- Environmentally Sensitive Areas
- TPFL Data
- WAHerb Data
- Aboriginal Sites Register
- IBRA Vegetation WA
- WA TEC/PEC
- Land Degradation Hazards
- Cadastre
- Local Government Authorities
- Hydrography
- RIWI surface water and groundwater
- Public drinking water source areas
- Aboriginal sites of significance.