



## CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

<b>Purpose Permit number:</b>	CPS 4442/6
<b>Permit Holder:</b>	Pilbara Iron Company (Services) Pty Ltd
<b>Duration of Permit:</b>	8 June 2012 – 30 June 2030

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 maintenance and improvement of the existing integrated Rio Tinto Iron Ore railway and transport corridor infrastructure system to ensure the ongoing operational efficacy of this system.

#### 2. Type of clearing authorised

- (a) In accordance with this Permit, the Permit Holder may clear native vegetation for *project activities*, which means any one or more of the following:
- (i) establishment of new water *bores* and pipelines to transport water from the water *bores*;
  - (ii) construction of new *turkey nest dams*;
  - (iii) maintenance of existing access tracks within environmentally sensitive areas;
  - (iv) construction of new access tracks;
  - (v) maintenance, installation and upgrade of *culverts, floodways, causeways and bridges* and drainage lines;
  - (vi) maintenance and installation of *level crossings* and road intersections along rail network;
  - (vii) maintenance and installation of signaling equipment and communications equipment;
  - (viii) construction, maintenance and upgrade of *sidings*;
  - (ix) widening of existing rail formations for *turnout* installations;
  - (x) repair works required as a result of flooding/derailment events, including derailment recovery operations and diversions of access roads and railway embankments;
  - (xi) construction of *laydown areas*;
  - (xii) installation of *temporary structures*;
  - (xiii) maintenance and upgrade of rail lines and formation materials;
  - (xiv) providing clear access to all parts of the railway track, including signal infrastructure, driver change out areas, hot bearing detectors, dragging equipment detectors and rail bearing acoustic monitoring assets;
  - (xv) creating and maintaining *firebreaks*;
  - (xvi) clearing of *cutting drains*;
  - (xvii) excavation of test pits and geotechnical works;
  - (xviii) construction of *borrow pits*;
  - (xix) construction of fences around *heritage sites* and other areas to be protected;
  - (xx) installation and maintenance of railway and access road signage;
  - (xxi) rehabilitation of previously cleared areas and rework of rehabilitated areas;
  - (xxii) installation, maintenance and upgrade of infrastructure, including power and fuel infrastructure;
  - (xxiii) dumping of *spoil*; and
  - (xxiv) installation, maintenance and upgrade of *crossovers*.

- (b) The Permit authorises the Permit Holder to clear native vegetation for *project activities* to the extent that the Permit Holder has the power to clear native vegetation for those *project activities* under any *written law*.

### 3. Land on which clearing is to be done

Clearing authorised under this Permit is to be undertaken within land tenure or rights administered under the *Mining Act 1904 (WA)*, *Mining Act 1978 (WA)*, *Land Act 1933 (WA)*, *Land Administration Act 1997 (WA)*, *Property Law Act 1969 (WA)*, *Transfer of Land Act 1893 (WA)*, *Strata Titles Act 1985 (WA)*, the *Rights in Water and Irrigation Act 1914 (WA)* or the following State Agreement Acts –

- *Iron Ore (Hamersley Range) Agreement Act 1963*
- *Iron Ore (Robe River) Agreement Act 1964*
- *Iron Ore (Hamersley Range) Agreement Act 1968(Paraburdoo)*
- *Iron Ore (Mount Bruce) Agreement Act 1972*
- *Iron Ore (Channar Joint Venture) Agreement Act 1987*
- *Iron Ore (Hope Downs) Agreement Act 1992*
- *Iron Ore (Yandicoogina) Agreement Act 1996*

### 4. Area of Clearing

The Permit Holder must not clear more than 500 hectares of native vegetation per calendar year, being a total of 2500 hectares of native vegetation for the term of this Permit.

### 5. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 31 December 2025.

### 6. 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.

### 7. Clearing not authorised

- (a) This Permit does not authorise the Permit Holder to clear native vegetation for *project activities*, where:

- (i) The Permit Holder does not have lawful authority to access land;
- (ii) the *project activity* lies within Millstream Chichester or Karijini National Parks;
- (iii) the *project activity* is within 200 metres of the outer boundary of known *threatened ecological communities*, unless approved by the *CEO* in writing; or
- (iv) one or more of the *project activities* are incorporated or related to a proposal that is *referred* to and assessed under Part IV of the *EP Act* by the *EPA*.

- (b) If a *proposal* incorporating one or more of the *project activities* has been *referred* to the *EPA*, this Permit does not authorise any clearing for that *project activity*, until:

- (i) the *EPA* has given notice under section 39A(3) of the *EP Act* that it has decided not to assess the proposal; and
- (ii) either:
  - (A) the period within which an appeal against the *EPA*'s decision may be lodged has expired without an appeal being lodged; or
  - (B) an appeal has been lodged against the *EPA*'s decision not to assess the proposal and the appeal was dismissed.

- (c) Condition 7(a) does not apply where the Permit Holder has obtained the consent of the *EPA* to conduct minor and preliminary works in accordance with section 41A(3), the Permit Holder may conduct any clearing in order to undertake those minor and preliminary works.

- (d) If the Permit Holder intends to clear native vegetation under this Permit for one or more of the *project activities* that are incorporated in a proposal *referred* to the *EPA*, then the Permit Holder must have regard to any advice or recommendations made by the *EPA* under section 39A(7) of the *EP Act*.

## PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

### **8. Avoid, minimise and reduce impacts and extent of clearing**

In determining the native vegetation authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

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

### **9. Weed control**

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

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

### **10. Flora management**

(a) Prior to undertaking any clearing, the Permit Holder shall engage a *botanist* to undertake a reconnaissance survey of the area(s) to be cleared in accordance with the *Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment*, to identify possible occurrences of, and habitat suitable for, threatened flora listed under the *BC Act* and *priority flora*.

(b) Prior to undertaking any clearing, where an area has been identified in accordance with condition 10(a) as containing possible occurrences of, and habitat suitable for, threatened or *priority flora*, the Permit Holder shall engage a *botanist* to conduct *targeted flora surveys* of that area(s) for the presence of threatened and *priority flora*.

(c) Where threatened flora or *priority flora* are identified in relation to condition 10(b) of this Permit, the Permit Holder shall ensure that:

- (i) no clearing occurs within 50 metres of identified threatened flora, unless approved by the *CEO* in writing;
- (ii) no clearing of identified threatened flora occurs unless approved under section 40 of the *BC Act*;
- (iii) no clearing of identified *priority flora* occurs unless approved by the *CEO* in writing; and
- (iv) no clearing occurs within 10 metres of identified *priority flora*, unless approved by the *CEO* in writing.

### **11. Priority and threatened ecological community management**

(a) Prior to undertaking any clearing within:

- (i) 20 metres of the boundary of any priority ecological communities listed in Appendix A; or
- (ii) 200 metres of the boundary of any threatened ecological communities listed in Appendix A;

the Permit Holder shall engage a *botanist* to undertake a *targeted flora* and vegetation survey of the area(s) to be cleared in accordance with *Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment*.

(b) The Permit Holder must ensure that no clearing occurs within:

- (i) 20 metres of the boundary of any priority ecological communities listed in Appendix A, unless approved by the *CEO* in writing; or
- (ii) 200 metres of the boundary of any threatened ecological communities listed in Appendix A, unless approved by the *CEO* in writing.

(c) If any possible new occurrences of any priority ecological community on the *Department's* "Priority Ecological Communities for Western Australia" list, or threatened ecological

community on the *Department's* "threatened ecological communities for Western Australia" list are located during surveys, then this information must be provided to the *Department*.

- (d) The Permit Holder must ensure that no clearing occurs in or within:
  - (i) 20 metres of the mapped boundary of any possible new occurrences of priority ecological communities located during surveys, unless approved by the *CEO* in writing.; and
  - (ii) 200 metres of the mapped boundary of any possible new occurrences of *threatened ecological communities* located during surveys, unless approved by the *CEO* in writing.

## 12. Fauna management

- (a) Prior to undertaking any clearing, the Permit Holder shall engage a *fauna specialist* to undertake a *desktop study* of the area(s) to be cleared, to identify areas of habitat on which, fauna listed in the *BC Act* in operation at the time, have a specific dependence.
- (b) Prior to undertaking any clearing, where habitat areas are identified in accordance with condition 12(a), the Permit Holder shall engage a *fauna specialist* to undertake a *fauna survey* of the area(s) to be cleared, in accordance with *Technical Guidance - Terrestrial vertebrate fauna surveys for environmental impact assessment*.
- (c) Prior to undertaking clearing, where habitat areas are identified in accordance with condition 12(a), the Permit Holder must:
  - (i) avoid the areas identified in accordance with condition 12(a); or
  - (ii) where the areas identified in accordance with condition 12(a) cannot be avoided, prepare, implement and adhere to a *Fauna Management Plan*, designed by a *fauna specialist*.
- (d) Prior to undertaking any clearing, where fauna is identified in accordance with condition 12(b), the Permit Holder must prepare, implement and adhere to a *Fauna Management Plan*, designed by a *fauna specialist*.
- (e) The *Fauna Management Plan* must include the following:
  - (i) a plan for managing the *impacts*;
  - (ii) a plan for managing any fauna identified in accordance with condition 12(b);
  - (iii) a table setting out the Permit Holder's commitments to the *Fauna Management Plan* requirements; and
  - (iv) a program for monitoring compliance with the Permit Holder's commitments.
- (f) Once the Permit Holder has developed a *Fauna Management Plan*, the Permit Holder must provide that *Fauna Management Plan* to the *CEO* for the *CEO's* approval. The clearing to which the *Fauna Management Plan* relates, and the implementation of the *Fauna Management Plan* shall not take place until the Permit Holder receives approval from the *CEO*.
- (g) If it is necessary to modify the *Fauna Management Plan* approved by the *CEO*, then the Permit Holder must provide that modified *Fauna Management Plan* to the *CEO* for the *CEO's* approval.

## 13. 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(s) that has already been cleared.
- (b) At an *optimal time* within 12 months following the completion of works 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) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land;
  - (ii) ripping the ground on the contour to remove soil compaction; and
  - (iii) laying the vegetative material and topsoil retained under condition 13(a) on the cleared area(s) no longer required for the purpose for which they were cleared under this Permit.

- (c) within 24 months of laying the vegetative material and topsoil on the cleared area(s) in accordance with condition 13(b) of this Permit:
  - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area(s) *revegetated* and *rehabilitated*; and
  - (ii) engage an *environmental specialist* to determine as to whether or not the composition structure and density determined under condition 13(c)(i) of this Permit will, without further *revegetation*, result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area(s).
- (d) If the determination made by the *environmental specialist* under condition 13(c)(ii) is that the composition structure and density determined under condition 13(c)(i) of this Permit will not, without further *revegetation*, result in a similar species composition, structure and density to the of pre-clearing vegetation types in that area(s), the Permit Holder shall *revegetate* the area(s) by deliberately *planting* and/or *seeding* native vegetation seeds that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area(s).
- (e) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 13(c) of this Permit, the Permit Holder shall repeat the activities required by condition 13(c) and 13 (d) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (f) Where a determination is made by an *environmental specialist* under condition 13(c)(ii) that the composition structure and density within area(s) *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area(s), that determination shall be submitted to the *CEO* within three months of the determination being made by the *environmental specialist*.
- (g) During the next *optimal time* occurring after receiving notice from the *CEO*:
  - (i) stating that the *CEO* disagrees with the determination submitted under condition 13(f); and
  - (ii) specifying that required further *planting* of *local provenance* propagating material and/or *direct seeding* of *local provenance* seeds that in the *CEO*'s reasonable opinion are necessary to ensure that the native vegetation will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area(s), the Permit Holder must carry out the further *planting* and/or *direct seeding* specified in the notice.

### **PART III – MONITORING, RECORD KEEPING AND REPORTING**

#### **14. 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 size of the area(s) cleared (in hectares);
  - (ii) the boundaries of the area(s) recorded as a *shapefile* or a co-ordinate of 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;
  - (iii) the dates on which clearing was done;
  - (iv) the species composition, structure and density of the cleared area(s);
  - (v) action taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 8 of this Permit;
  - (vi) actions taken to minimise the risk of the introduction and spread of *weeds* in accordance with Condition 9 of this Permit.
- (b) In relation to flora management pursuant to condition 10 of this Permit:
  - (i) the location of each threatened flora and *priority flora*, identified under condition 10 of this Permit, either as the location of individual plants, or where this is not practical, the areal extent of the population and an estimate number of plants 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 species name of each threatened flora and *priority flora* identified under condition 10 of this Permit; and
  - (iii) a copy of the *botanist's* flora survey report.
- (c) In relation to priority and threatened ecological community management pursuant to condition 11 of this Permit:
- (i) the name and site identification of each priority ecological community and possible new occurrences of priority or threatened ecological community;
  - (ii) the location of each priority ecological community and possible new occurrences of priority or threatened ecological community 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;
  - (iii) the boundary of the priority ecological community or possible new occurrences of priority or threatened ecological community identified;
  - (iv) the species composition of each priority ecological community identified;
  - (v) a map of the condition of each priority ecological community identified; and
  - (vi) a copy of the *botanist's* flora and vegetation survey report.
- (d) In relation to fauna management pursuant to condition 12 of this Permit:
- (i) a copy of the *desktop study* report prepared in accordance with condition 12(a) of this Permit;
  - (ii) if no *fauna survey* is required in accordance with condition 12(b) of this Permit, a written report justifying that no area(s) of habitat have been identified under condition 12(a);
  - (iii) a description and results of the fauna management activities undertaken in accordance with the *Fauna Management Plan* approved by the *CEO*; and
  - (iv) a copy of the *fauna specialist's* survey report;
- (e) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 13 of this Permit:
- (i) the location of any areas *revegetated* and *rehabilitated*, 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) a description of the *revegetation* and *rehabilitation* activities undertaken;
  - (iii) the size of the area(s) *revegetated* and *rehabilitated* (in hectares);
  - (iv) the date that the area(s) was *revegetated* and *rehabilitated*; and
  - (v) action and timing of remedial actions undertaken within the area(s) that was *revegetated* and *rehabilitated* where the *revegetation* will not result in a similar species composition, structure and density to that of pre-clearing vegetation type in that area(s).

## 15. 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 14 of this Permit; and
  - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the *CEO* on or before 30 June of each year.
- (c) Prior to 30 March 2030, the Permit Holder must provide to the *CEO* a written report of records required under condition 14 of this Permit where these records have not already been provided under condition 15(a) of this Permit.

## 16. Interpretation

The following rules of interpretation apply to this Permit:

- (a) a reference to any written law includes a reference to that written law as amended, repealed or replaced from time to time; and
- (b) if a word or phrase is defined, other parts of speech and grammatical forms of that word or phrase have corresponding meanings.

## 17. Severance

It is the intent of these conditions that they shall operate so that, if a condition or part of a condition is beyond the *CEO's* power to impose, or is otherwise ultra vires or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the *CEO's* power to impose and are not otherwise ultra vires or invalid.

## 18. Inconsistency

- (a) The *EP Act* prevails to the extent of any inconsistency between its provisions and the conditions of this Permit.
- (b) Subject to condition 18(a), this Permit prevails to the extent of any inconsistency between its conditions, and the provisions of any other document referred to in this Permit.

## DEFINITIONS

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

*BC Act* means *Biodiversity Conservation Act 2016*

*botanist*: means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of 2 years work experience in identification and surveys of flora native to the bioregion being inspected or surveyed, or who is approved by the *CEO* as a suitable botanist for the bioregion;

*bore/s* an opening in the ground made or used to obtain access to underground water;

*borrow pit/s* means an area from which material is sourced to construct infrastructure or to alter the ground level, including by filling a hole;

*bridge/s* a structure spanning an area, including a river, chasm, road or railway, and affording passage;

*causeway/s* means a raised road or path, as across low or wet ground or water bodies;

*CEO* means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *EP Act*;

*crossover/s* means a connection between two tracks achieved by linking two adjacent *turnouts*;

*culvert/s* means a metal, wooden, plastic, or concrete conduit through which surface water can flow under or across roads, railways or embankments;

*cutting drain/s* means a drain to allow water to be diverted away from an engineered structure;

*Department* means the Department of Water and Environment Regulation (Western Australia);

*desktop study* means a process of gathering contextual information on the area(s) to be cleared from existing surveys, literature, databases searches and spatial information undertaken by *fauna specialist* in accordance with *Technical Guidance - Terrestrial vertebrate fauna surveys for environmental impact assessment*

*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 holds a tertiary qualification in environmental science or equivalent, and has a minimum of 2 years work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit, or who is approved by the CEO as a suitable environmental specialist;

**EPA** means the Western Australian Environmental Protection Authority;

**EP Act** means the *Environmental Protection Act 1986*;

**Fauna management plan** means a plan developed by the Permit Holder for the management of fauna at the site in accordance with condition 12 of this Permit;

**fauna specialist** means a person who holds a tertiary qualification specializing in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Biodiversity Conservation Regulations 2018*;

**fauna survey** means a field-based investigation, including a review of established literature, of the biodiversity of fauna and/or fauna habitat of the Permit Area and where conservation significant fauna are identified in the Permit Area, also includes a fauna survey of surrounding areas to place the Permit Area into local context;

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

**firebreak/s** means a firebreak established in accordance with the *Bush Fires Act 1954*;

**floodway/s** means an engineered path to channel floodwaters away from areas to be protected;

**heritage site/s** means:

- (a) an "Aboriginal site" as defined in the *Aboriginal Heritage Act 1972* (WA);
- (b) a "significant Aboriginal area" or "significant Aboriginal object" as defined in the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth); or
- (c) a site that has or is proposed to be listed on the "Register", as that term is defined in the *Heritage of Western Australia Act 1990* (WA); and
- (d) a place that is listed, or proposed to be listed on the "National Heritage List", as that term is defined in the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

**Interim Biogeographic Regionalisation for Australia (IBRA)** means the national and regional planning framework for the systematic development of a comprehensive, adequate and representative 'CAR' National Reserve System within Thackway and Cresswell 1995, 'An Interim Biogeographic Regionalisation for Australia: a framework for establishing the national system of reserves';

**impacts** means any impact of clearing on environmental values;

**laydown area/s** means a place where materials, topsoil and equipment can be regularly stored on the ground for a period of time;

**level crossing/s** a place where a road and railway intersect at the same level;

**local provenance** means native vegetation seeds and propagating material from natural sources within 200 kilometres and the same IBRA subregion 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;

**optimal time** means the period from November to December for undertaking *planting* and *direct seeding*;



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

**priority flora** means those plant taxa described as priority flora classes 1, 2, 3, 4 or 5 in the *Department of Parks and Wildlife's Threatened and Priority Flora List for Western Australia* (as amended);

**project activity/ies** means those activities described in condition 2(a) of this Permit;

**referred** means referred to the Environmental Protection Authority under Part IV of the *Environmental Protection Act 1986*;

**regeneration** means *revegetation* that can be established from in situ seed banks contained either within the topsoil or seed-bearing *mulch*;

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

**revegetate, revegetated and revegetation** means the re-establishment of a cover of native vegetation in an area such that the species composition, structure, density and *condition* is similar to pre-clearing vegetation types in that area, and can involve regeneration, direct seeding and/or planting;

**shapefile** means a shapefile consisting of polygons using the Geocentric Datum of Australia (GDA);

**siding/s** means a short siding or passage which enables vehicles, including trains, to pass one another;

**site preparation** means management of existing site topsoil and preparation of the finished soil surface, for example by ripping or tilling the soil surface and resspreading site topsoil and chipped native vegetation;

**spoil** material that has built up around a structure, for example as a result of a derailment or weather event;

**targeted flora survey** means a field-based investigation, including a review of established literature, of the biodiversity of flora and vegetation of the Permit Area, focusing on habitat suitable for flora species that are being targeted and carried out during the optimal time to identify those species. Where target flora are identified in the Permit Area, the survey must also include a minimum of a 10 metre radius of the surrounding areas to place the Permit Area into local context;

**Technical Guidance - Terrestrial vertebrate fauna surveys for environmental impact assessment** means the Environmental Protection Authority "Technical Guidance - Terrestrial vertebrate fauna surveys for environmental impact assessment" (June 2020);

**Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment** means the Environmental Protection Authority "Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment" (December 2016);

**temporary structure/s** means a structure not placed on permanent footings;

**threatened ecological community/ies** means those ecological communities endorsed by the Minister for the Environment and described in the "List of Threatened Ecological Communities on the Department of Parks and Wildlife's Threatened Ecological Community (TEC) Database";

**turkey nest dam/s** means a dam constructed on relatively flat ground with earth walls on all sides;


**turnout** means an earthworks pad constructed to allow for access to install and maintain a rail *crossover*;

**vegetation establishment period** means a period of at least two summers after the *revegetation* during which time replacement and infill *revegetation* works may be required for areas in which revegetation has been unsuccessful, and involves regular inspections of *revegetation* sites to monitor the success of *revegetation*;

**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.

**written law** has the same meaning as it is given in section 5 of the *Interpretation Act 1984*.

 Ryan Mincham  
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Ryan Mincham  
MANAGER  
NATIVE VEGETATION REGULATION

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

23 December 2020

**Appendix A – Threatened and priority ecological communities in the local area**

Ecological community	State category	Site identifications
Brockman Iron cracking clay communities of the Hamersley Range	Priority 1	BROCKMAN01, BROCKMAN02a, BROCKMAN03, BROCKMAN04, BROCKMAN05, BROCKMAN06, BROCKMAN07, BROCKMAN08, BROCKMAN09, BROCKMAN10, BROCKMAN100, BROCKMAN101, BROCKMAN102, BROCKMAN103, BROCKMAN104a, BROCKMAN105, BROCKMAN106, BROCKMAN107, BROCKMAN108, BROCKMAN109, BROCKMAN11, BROCKMAN110, BROCKMAN111, BROCKMAN112, BROCKMAN113, BROCKMAN114, BROCKMAN115, BROCKMAN116, BROCKMAN117, BROCKMAN118, BROCKMAN119, BROCKMAN12, BROCKMAN120, BROCKMAN121, BROCKMAN122, BROCKMAN123, BROCKMAN124, BROCKMAN125, BROCKMAN126, BROCKMAN127, BROCKMAN128, BROCKMAN129, BROCKMAN13, BROCKMAN130, BROCKMAN131, BROCKMAN132, BROCKMAN14, BROCKMAN15, BROCKMAN16, BROCKMAN17, BROCKMAN18, BROCKMAN19, BROCKMAN20, BROCKMAN21a, BROCKMAN22, BROCKMAN23, BROCKMAN24, BROCKMAN25, BROCKMAN26, BROCKMAN27, BROCKMAN28, BROCKMAN29a, BROCKMAN30, BROCKMAN31, BROCKMAN32, BROCKMAN33, BROCKMAN34, BROCKMAN35a, BROCKMAN36, BROCKMAN37, BROCKMAN38, BROCKMAN39, BROCKMAN40, BROCKMAN41, BROCKMAN42a, BROCKMAN43a, BROCKMAN44, BROCKMAN45, BROCKMAN46, BROCKMAN47, BROCKMAN48, BROCKMAN49, BROCKMAN50, BROCKMAN51, BROCKMAN52, BROCKMAN53, BROCKMAN54, BROCKMAN55, BROCKMAN56, BROCKMAN57a, BROCKMAN58, BROCKMAN59, BROCKMAN60, BROCKMAN61a, BROCKMAN62, BROCKMAN63, BROCKMAN64, BROCKMAN65, BROCKMAN66, BROCKMAN67, BROCKMAN68, BROCKMAN69a, BROCKMAN70, BROCKMAN71, BROCKMAN72, BROCKMAN73, BROCKMAN74, BROCKMAN75, BROCKMAN76, BROCKMAN77, BROCKMAN78, BROCKMAN79, BROCKMAN80, BROCKMAN81, BROCKMAN82, BROCKMAN83, BROCKMAN84, BROCKMAN85, BROCKMAN86, BROCKMAN87, BROCKMAN88, BROCKMAN89, BROCKMAN90a, BROCKMAN91a, BROCKMAN92, BROCKMAN93, BROCKMAN94a, BROCKMAN95, BROCKMAN96, BROCKMAN97, BROCKMAN98, BROCKMAN99, BrockmanWH12204
Coolibah - Lignum Flats: sub type 2: Coolibah woodlands over lignum ( <i>Duma florulenta</i> ) over swamp wanderrrie (Lake Robinson)	Priority 1	COOLIBAH06
Coolibah - Lignum Flats: sub type 3. Coolibah woodland over lignum over	Priority 1	COOLIBAH01, COOLIBAH02, COOLIBAH05

silky browntop (Mt Bruce flats)		
Fortescue Marsh (Marsh Land System)	Priority 1	FM1
Four plant assemblages of the Wona Land System (previously 'Cracking clays of the Chichester and Mungarooona Range')	Priority 1	Mt Florance, Wittenoorn, Wona01, Wona02, Wona03, Wona04, Wona05, Wona06, Wona07, Wona08, Wona09, Wona10, Wona11, Wona12, Wona13, Wona14, Wona15, Wona16, Wona17, Wona18, Wona19, Wona20, Wona21, Wona22, Wona23, Wona24, Wona25, Wona26, Wona27, Wona28, Wona29, Wona30, Wona31, Wona32, Wona33, Wona34, Wona35, Wona36, Wona37, Wona38, Wona39, Wona40, Wona41, Wona42, Wona43, Wona44, Wona45, Wona46, Wona47, Wona48, Wona49, Wona50, Wona51, Wona52, Wona53, Wona54, Wona55, Wona56, Wona57, Wona58, Wona59, Wona60, Wona61, Wona62, Wona63, Wona64, Wona65, Wona66, Wona67, Wona68, Wona69, Wona70, Wona71, Wona72, Wona73, Wona74, Wona75, Wona76, Wona77, Wona78, Wona79, Wona80, Wona81, Wona82, Wona87, Wona88, Wona90, Wona91, Wona94, Wona95.
Freshwater claypans downstream of the Fortescue Marsh - Goodiadarrie Hills on Mulga Downs Station.	Priority 1	MulgaDownsOutCamp_South, MungthannannieWell
Horseflat Land System of the Roebourne Plains	Priority 3	hof1063, hof1064, hof1077, hof1093, hof1098, hof1180, hof1204, hof1227, hof1238, hof1257, hof1274, hof1289, hof1298, hof1302, hof1389, hof1430, hof1474, hof1482, hof1518, hof1580, hof614, hof616, hof654, hof713, hof714, hof721, hof742, hof757, hof763, hof782, hof794, hof798, hof831, hof839, hof845, hof849, hof853, hof890, hof921, hof984, hof993, KarrHF01, KarrHF02, KarrHF03, KarrHF04, KarrHF05, KarrHF06, KarrHF07, KarrHF08, KarrHF09, KarrHF10.
Invertebrate assemblages (Errawallana Spring type) Coolawanya Station	Priority 4	Erra01
Invertebrate assemblages (Nyeetberry Pool Type)	Priority 4	NYEETO
Roebourne Plains coastal grasslands with gilgai microrelief on deep cracking clays (Roebourne Plains gilgai grasslands)	Priority 1	Blackhill N, Blackhill S, DRW14, Edna01, Edna02, ElevenMile01, ElevenMile02, KA01a, KA01b, KA01c, KA01e, Nichol River NE, Nichol River NW01, Nichol River NW02, Nichol River SE, Nichol River SW01, Nichol River SW02, Tobacco
Sand Sheet vegetation (Robe Valley)	Priority 1	MEA14, SandSheetMEA
Stony Chenopod association of the Roebourne Plains area	Priority 1	RPG2, RPG2b
Stygofaunal Community of the	Priority 1	Bungaroo01

Bungaroo Aquifer		
Subterranean invertebrate communities of mesas in the Robe Valley region	Priority 1	MesaA, MesaB, MesaC, MesaF, MesaG, MesaJ, MesaK, Middle Robe
Subterranean invertebrate community of pisolitic hills in the Pilbara	Priority 1	MesaH, Todd Bore
Tanpool Land System	Priority 1	Tanpool01, Tanpool02, Tanpool03, Tanpool04, Tanpool05, Tanpool06, Tanpool07, Tanpool08
Themeda grasslands on cracking clays (Hamersley Station, Pilbara)	Vulnerable	HAMERSL01a, HAMERSL07, HAMERSL08, HAMERSL09, HAMERSL10, HAMERSL100, HAMERSL101, HAMERSL102, HAMERSL11, HAMERSL12a, HAMERSL13, HAMERSL14, HAMERSL15, HAMERSL16, HAMERSL17a, HAMERSL18, HAMERSL19, HAMERSL20, HAMERSL21, HAMERSL22, HAMERSL23, HAMERSL24a, HAMERSL25, HAMERSL26, HAMERSL27, HAMERSL28, HAMERSL29, HAMERSL30, HAMERSL31, HAMERSL32, HAMERSL33a, HAMERSL34, HAMERSL35, HAMERSL36, HAMERSL37, HAMERSL38, HAMERSL39, HAMERSL40, HAMERSL41, HAMERSL42, HAMERSL43, HAMERSL44, HAMERSL45, HAMERSL46, HAMERSL47, HAMERSL48, HAMERSL49, HAMERSL50a, HAMERSL51, HAMERSL52, HAMERSL53, HAMERSL54, HAMERSL55, HAMERSL56, HAMERSL57, HAMERSL58, HAMERSL59, HAMERSL60, HAMERSL61, HAMERSL62, HAMERSL63, HAMERSL64, HAMERSL65, HAMERSL66, HAMERSL67, HAMERSL68, HAMERSL69, HAMERSL70, HAMERSL71, HAMERSL72, HAMERSL73, HAMERSL74, HAMERSL75, HAMERSL77a, HAMERSL78, HAMERSL83, HAMERSL84, HAMERSL85, HAMERSL86a, HAMERSL87, HAMERSL90, HAMERSL91, HAMERSL92, HAMERSL93, HAMERSL94, HAMERSL95, HAMERSL96, HAMERSL97, HAMERSL98, HAMERSL99.
Triodia pisolitica (previously Triodia sp. Robe River) assemblages of mesas of the West Pilbara	Priority 3	ELTRR1_01, ELTRR1_02, ELTRR1_03, ELTRR1_04, ELTRR1_05, ELTRR2_01, ELTRR2_02, ELTRR2_03, HBr28_1, HBr29_1, HBr31_1, HBr31_2, HBr31_3, HBr31_4, HBr31_5, HBr31_6, HBr31_7, HBr34_8, HBr35_1, HBr35_2, HBr37_1, HBr37_11, HBr37_2, HBr37_3, HBr37_4, HBr37_5, HBr37_7, HBr37_8, HBr37_9, HBr46_1, HBr46_2, HBr46_3, HBr48_15, HBr48_20, HBr48_36, HBr48_38, HBr48_41, HBr48_5, HBr48_9, HBr4813, HBr4814, HBr4816, HBr4817, HBr4818, HBr4821, HBr4822, HBr4823, HBr4824, HBr4825, HBr4826, HBr4827, HBr4829, HBr4830, HBr4831, HBr4832, HBr4833, HBr4834, HBr4835, HBr4837, HBr4839, HBr4840, HBr4844, HBr4845, HBr4846, TPA_Eliwana04, TPA_Eliwana05, TPA_Eliwana07, TPA_Robe16, TPA_Robe17, TPA_Robe31, TPA_Robe32, TPA_Robe33, TPA_Robe34, TPA_Robe35, TPA_Robe36, TPA_Robe37, TPA_Robe38, TPA_Robe40, TPA_Robe41, TPA_Robe42, TPA_Robe43, TPA_Robe44, TPA_Robe45, TPA_Robe46, TPA_Robe47, TPA_Robe48, TPA_Robe49, TPA_Robe50, TPA_Robe51, TPA_Robe52, TPA_Robe53, TPA_Robe54, TPA_Robe55, TPA_Robe56, TPA_Robe57, TPA_Robe58, TPA_Robe59, TPA_Robe60, TPA_Robe61, TPA_Robe62, TPA_Robe63, TPA_Robe64, TPA_Robe65, TPA_Robe66, TPA_Robe67, TPA_Robe68, TPA_Robe69, TPA_Robe70, TPA_Robe71,

		TPA_Robe72, TPA_Robe74, TPA_Robe75, TPA_Robe76.
Vegetation of sand dunes of the Hamersley Range/Fortescue Valley	Priority 3	FVSD01, FVSD02, FVSD03, FVSD04, FVSD05, FVSD06, FVSD07, FVSD08, FVSD09, FVSD10, FVSD11, SandDunes02, SandDunes03, SandDunes05.
Weeli Wolli Spring Community	Priority 1	WeWo01, WeWo02
West Angelas Cracking-Clays	Priority 1	ANGELAS01, ANGELAS02, ANGELAS03, ANGELAS04, ANGELAS05, ANGELAS06, ANGELAS07, ANGELAS08, ANGELAS09, ANGELAS10, ANGELAS11, ANGELAS12, ANGELAS13, Angelas15, Angelas19, Angelas20, Angelas21, Angelas22, Angelas23, Angelas24, Angelas25



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4442/6  
Permit type: Purpose Permit

### 1.2. Applicant details

Applicant's name: Pilbara Iron Company (Services) Pty Ltd

### 1.3. Property details

#### Land on which clearing is to be done:

Clearing authorised under this Permit is to be undertaken within land tenure or rights administered under the *Mining Act 1904 (WA)*, *Mining Act 1978 (WA)*, *Land Act 1933 (WA)*, *Land Administration Act 1997 (WA)*, *Property Law Act 1969 (WA)*, *Transfer of Land Act 1893 (WA)*, *Strata Titles Act 1985 (WA)*, the *Rights in Water and Irrigation Act 1914 (WA)* or the following State Agreement Acts –

- *Iron Ore (Hamersley Range) Agreement Act 1963*
- *Iron Ore (Robe River) Agreement Act 1964*
- *Iron Ore (Hamersley Range) Agreement Act 1968(Paraburdoo)*
- *Iron Ore (Mount Bruce) Agreement Act 1972*
- *Iron Ore (Channar Joint Venture) Agreement Act 1987*
- *Iron Ore (Hope Downs) Agreement Act 1992*
- *Iron Ore (Yandicoogina) Agreement Act 1996*

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2500		Mechanical Removal	Railway construction or maintenance

### 1.5. Reason for decision

Decision on permit application: Granted

Decision date: 23 December 2020

Reasons for decision: In undertaking their assessment and in accordance with section 51O of the *Environmental Protection Act 1986* (the EP Act), the Delegated Officer has given consideration to:

- The Clearing Principles in Schedule 5 of the EP Act;
- Relevant datasets available at the time of the decision;
- Relevant planning instruments and other pertinent matters that deemed relevant to the assessment;
- Review of the annual reports required under conditions of various versions of Clearing Permit 4442;
- Advice received from the applicant.

Following the review of the current datasets, the Delegated Officer added multiple ecological communities on the Clearing Permit, within which the Permit Holder is not authorised to clear native vegetation.

A review of current environmental information did not identify anything new that would alter the assessment against the clearing principles. Therefore, the assessment has not changed and can be found in the Clearing Permit Decision Report CPS 4442/1.

To limit any unnecessary clearing, the Delegated Officer has decided to add a condition on the permit which requires the applicant to avoid, minimise and reduce impacts and the extent of clearing.

The Delegated Officer has determined that the conditions of the Clearing Permit are still adequate to mitigate any potential impacts to biodiversity, conservation significant flora and fauna, as well as priority and/or threatened ecological communities.

The conditions of the Clearing Permit were updated to reflect modern nomenclature and standards.

## 2. Site Information

### Clearing Description

The clearing of up to 500 hectares per year for the maintenance and improvement of the existing integrated Rio Tinto Iron Ore railway and transport corridor infrastructure system to ensure the ongoing operational efficiency of this system.

### Vegetation Description

- Mapped Beard vegetation associations (Shepherd et al., 2001):
- Association 117 - Hummock grasslands, grass steppe; soft spinifex.
- Association 127 - Bare areas; mud flats.
- Association 589 - Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex.
- Association 157 - Hummock grasslands, grass steppe; hard spinifex, *Triodia wiseana*.
- Association 152 - Hummock grasslands, grass steppe; soft & hard spinifex soft spinifex.
- Association 93 - Hummock grasslands, shrub steppe; kanji over soft spinifex.
- Association 619 - Medium woodland; river gum (*Eucalyptus camaldulensis*).
- Association 587 - Mosaic: Hummock grasslands, open low tree-steppe; snappy gum over *Triodia wiseana* / Hummock grasslands, shrub-steppe; kanji over *Triodia pungens*.
- Association 603 - Hummock grasslands, sparse shrub steppe; *Acacia bivenosa* over hard spinifex.
- Association 175 - Short bunch grassland - savanna/grass plain (Pilbara).
- Association 607 - Hummock grasslands, low tree steppe; snappy gum & bloodwood over soft spinifex & *Triodia wiseana*.
- Association 609 - Mosaic: Hummock grasslands, open low tree steppe; bloodwood with sparse kanji shrubs over soft spinifex / Hummock grasslands, open low tree steppe; snappy gum over *Triodia wiseana* on a lateritic crust.
- Association 605 - Hummock grasslands, shrub steppe; *Acacia pachycarpa* & waterwood over soft spinifex.
- Association 82 - Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*.
- Association 29 - Sparse low woodland; mulga, discontinuous in scattered groups.
- Association 583 - Hummock grasslands, sparse shrub steppe; kanji & *Acacia bivenosa* over hard spinifex *Triodia basedowii* & *T. wiseana*.
- Association 646 - Hummock grasslands, shrub steppe; snakewood over *Triodia basedowii*.
- Association 644 - Hummock grasslands, open low tree steppe; mulga & snakewood over soft spinifex & *Triodia basedowii*.
- Association 645 - Hummock grasslands, shrub steppe; kanji & snakewood over soft spinifex & *Triodia wiseana*.
- Association 565 - Hummock grasslands, low tree steppe; bloodwood over soft spinifex.
- Association 567 - Hummock grasslands, shrub steppe; mulga & kanji over soft spinifex & *Triodia basedowii*.
- Association 18 - Low woodland; mulga (*Acacia aneura*).
- Association 162 - Shrublands; snakewood scrub.
- Association 181 - Shrublands; mulga & snakewood scrub.

### Vegetation Condition

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994)

To

Pristine: No obvious signs of disturbance (Keighery, 1994).

The condition of the vegetation was determined via aerial imagery.

## 3. Avoid, minimise and mitigation measures

In relation to whether alternatives have been considered that would avoid the need for clearing, the applicant has advised that, if practical, the required works occur on previously disturbed areas. To minimise the need for clearing, the applicant develops smart designs of the works and clearly demarcates the areas proposed to be cleared (Applicant, 2020).

## 4. Assessment of application against clearing principles

This amendment has been made to extend the clearing duration by an additional five years; i.e. until 31 December 2025. This also required that the permit duration be extended until 31 December 2030 to account for revegetation requirements under the permit.

As outlined in Section 1.5 of this report, in the assessment of the application the Delegated Officer has reviewed the current available databases to identify new information that would change the assessment against the clearing principles. The Delegated Officer noted that additional records of conservation significant flora and fauna species, as well as ecological communities were recorded within the local area. Subsequently, the list of ecological communities on the clearing permit, within which the applicant is not authorised to clear native vegetation, has been extended. Based on the outcomes of the review, the



Delegated Officer has determined that the conditions on the permit are still adequate to mitigate any potential impacts to conservation significant flora, fauna and/or ecological communities.

Given the above, the assessment against the clearing principles has not changed and can be found in the Clearing Permit Decision Report CPS 4442/1.

The conditions of the Clearing Permit were updated to reflect modern nomenclature and standards.

### Planning instruments and other relevant matters.

The assessment against Planning Instruments and Other Matters has not changed and can be found in Clearing Permit Decision Report CPS 4442/1.

A review of the annual reports identified that of the 2,500 ha of native vegetation authorised to be cleared under different versions of the permit, the applicant has cleared approximately 3.5 per cent (approximately 88.04 hectares). A review of the compliance with clearing permit conditions did not identify any non-compliance.

The applicant has confirmed they have current authorisation to access and clear the areas authorised under this clearing permit (Applicant, 2020b).

On 15 October 2020, in accordance with section 51E(4)(b) of the EP Act, comments on the application were sought from the City of Karratha (former Shire of Roebourne), the Shire of Ashburton and the Shire of East Pilbara. The City of Karratha (2020), which previously noted that clearing of 500 hectares per year appeared to be large given the purposes of the clearing, had no objections to the proposed amendment. Similarly, the Shire of Ashburton (2020) advised it had no objections to the proposed extension subject to the initial permit requirements in relation to clearing and impacted communities (flora and fauna) being reported annually to DWER for scrutiny. No comments from the Shire of East Pilbara were received.

The application to amend Clearing Permit CPS 4442/5 was advertised for 21 calendar days and one submission was received. DWER has considered and prepared a consolidated summary of the concerns raised in the submission and how these concerns were addressed by DWER (Table 1).

The application was re-advertised on 11 and 15 December 2020 to reflect changes in the approximate clearing boundaries. No additional comments were received.

**Table 1** Summary of the concerns raised in a public submission and the DWER's consideration of them

Summary of comments	Consideration of comment
Absence of current flora surveys, particularly targeted surveys for threatened and priority flora species and potential impacts on these species.	<p>Condition 10 (previously Condition 9) of the permit requires the applicant to conduct a reconnaissance survey and, if required, a targeted survey of the proposed clearing area prior to undertaking any clearing.</p> <p>Under this condition, the applicant must ensure that no clearing of threatened and priority flora species and within their respective 50 and 10 metre buffers occurs, unless approved by the Chief Executive Officer of DWER.</p> <p>DWER considers that this condition adequately mitigates any potential impacts to threatened and priority flora taxa.</p>
Absence of alternative options that would avoid or minimise the need for clearing	<p>In the assessment of the amendment application, DWER sought advice from the applicant in relation to the alternatives that would avoid and/or minimise the need for clearing. In response, the applicant advised that, if practical, the works always occur on previously disturbed areas. To minimise the need for clearing, the applicant develops smart designs of the works and clearly demarcates the areas proposed to be cleared (Applicant, 2020).</p> <p>DWER also requested the applicant to provide a justification of the need to clear 500 hectares of native vegetation on an annual basis. The applicant replied that they maintain a large rail network which covers a distance of approximately 1,800 kilometres (Figure 1). In addition, the applicant has planned a rail maintenance program over the coming years which will require some clearing of native vegetation adjacent to the rail. Taking into consideration the large extent of the rail network, the applicant applied to clear 500 hectares per year to have enough flexibility to undertake works authorised under the clearing permit (Applicant, 2020).</p> <p>The applicant further advised that the application area was determined based on the liaison with DWER prior to granting Clearing Permit CPS 4442/1.</p> <p>A review of the applicant's annual reports noted that no more than 33.16 hectares of native vegetation has been cleared in a financial year.</p> <p>To limit any unnecessary clearing, the Delegated Officer has decided to add a condition on the permit which requires the applicant to avoid, minimise and reduce impacts and the extent of clearing.</p>

Summary of comments	Consideration of comment
Absence of an independent, publicly available audit of the permit holder's compliance with the clearing permit conditions	DWER has reviewed the annual reports received and did not identify any non-compliance with the permit conditions.

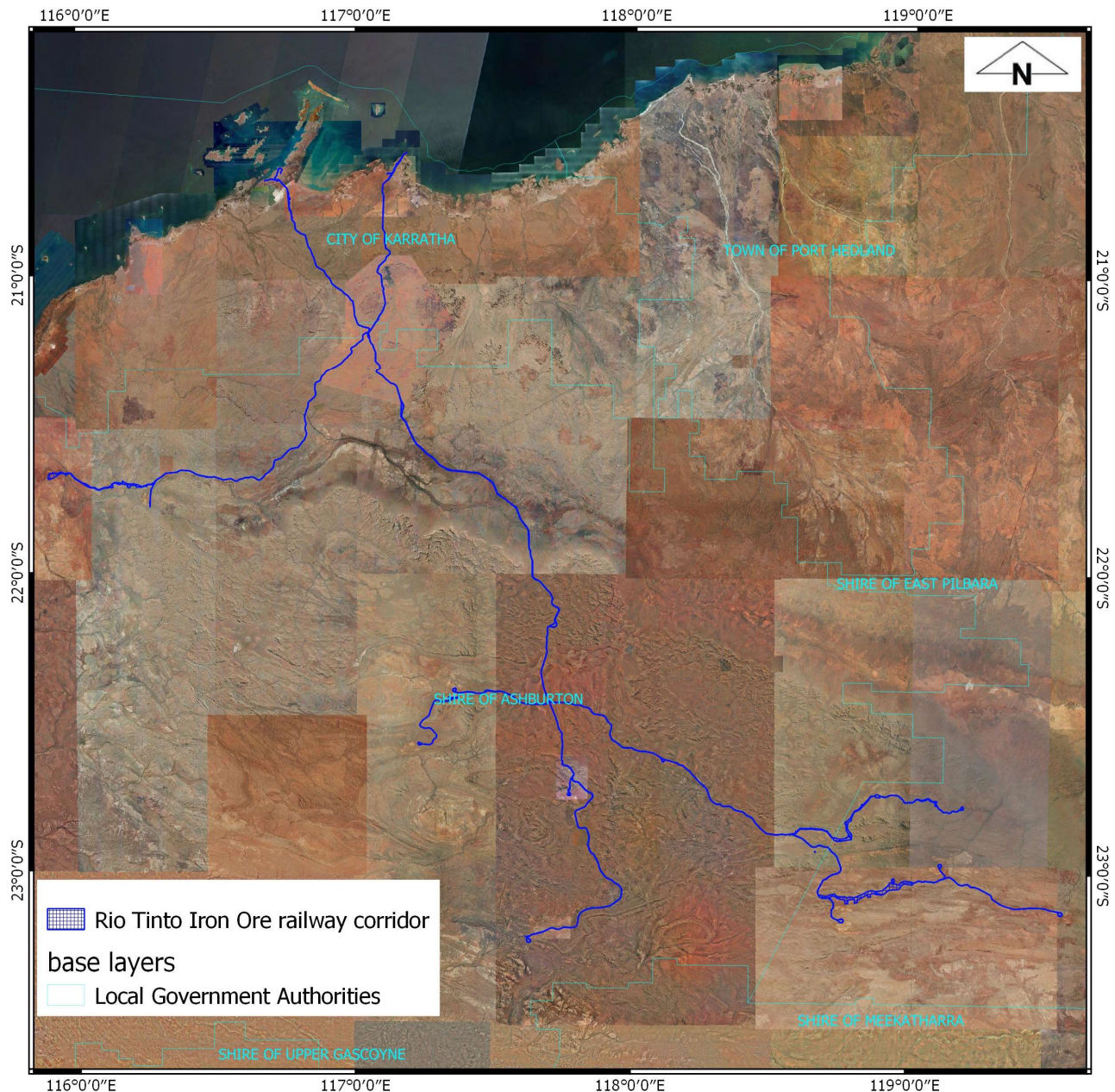


Figure 1 The area cross-hatched blue show an approximate extent of the existing integrated Rio Tinto Iron Ore railway corridor

## 5. References

- Applicant (2020) Supporting information received in relation to clearing permit application CPS 4442/6. Received by DWER on 3 December 2020. DWER Ref: A1961213.
- Applicant (2020b) Additional supporting information in relation to application to amend clearing permit 4442/5. Received by DWER on 12 October 2020. DWER Ref: A1942451.
- City of Karratha (2020) Advice received in relation to application to amend clearing permit CPS 4442/5. Received by DWER on 4 November 2020. DWER Ref: A1950005.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Shire of Ashburton (2020) Advice received in relation to application to amend clearing permit CPS 4442/5. Received by DWER on 19 October 2020. DWER Ref: A1944561.