



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6961/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

1.3. Property details

Property: Iron Ore (Hamersley Range) Agreement Act 1963, Mineral Lease 4SA (AML 70/4)
Local Government Area: Shire of Ashburton
Colloquial name: Brockman Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
500		Mechanical Removal	Mineral Exploration, Hydrogeological and Geotechnical Investigation and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 4 August 2016

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description Beard vegetation associations have been mapped for the whole of Western Australia. Four Beard vegetation association have been mapped within the application area (GIS Database):

- 18: Low woodland; mulga (*Acacia aneura*)
- 82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*;
- 175: Short bunch grassland – savannah/grass plain (Pilbara); and
- 567: Hummock grasslands, shrub steppe; mulga & kanji over soft spinifex & *Triodia basedowii*.

The application area consists of several separate areas covering a total area of approximately 9,035 hectares. Numerous vegetation surveys have been undertaken within the application area and surrounding areas (Hamersley Iron, 2016a; Rio Tinto, 2016). These surveys have been consolidated into one report, and have identified a total of 128 vegetation associations occurring within the application area (Hamersley Iron, 2016a; 2016b).

Aa-hp	<i>Acacia aneura</i> and <i>Eucalyptus leucophloia</i> scattered low trees / low open woodland, over <i>Acacia aneura</i> var. <i>pilbarana</i> , tall shrubland, over <i>Acacia aneura</i> and <i>Acacia hamersleyensis</i> open shrubland, over <i>Triodia wiseana</i> open hummock grassland.
AapAciTeTw	<i>Acacia aptaneura</i> , <i>A. citrinoviridis</i> tall shrubland over <i>Triodia epactia</i> , <i>T. wiseana</i> open hummock grassland
AbAexAaTw	<i>Acacia bivenosa</i> , <i>A. exigua</i> , <i>A. ancistrocarpa</i> tall open shrubland over <i>Triodia wiseana</i> hummock grassland
AbTw	<i>Acacia bivenosa</i> , <i>Senna glutinosa</i> subsp. <i>glutinosa</i> and <i>Maireana georgei</i> low open shrubland over <i>Triodia wiseana</i> scattered hummock grasses.
AfAxTw	Scattered low trees of <i>Acacia fuscaneura</i> over tall open shrubland of <i>Acacia xiphophylla</i> over scattered shrubs of <i>Senna glutinosa</i> subsp. <i>glutinosa</i> and <i>Senna glutinosa</i> subsp. <i>x luerssenii</i> over very open hummock grassland of <i>Triodia wiseana</i>
AmDp-rs	Isolated <i>Eucalyptus leucophloia</i> low trees, over Scattered <i>Astrotricha hamptonii</i> and <i>Acacia aneura</i> tall shrubs, over open shrubland / low shrubland of <i>Acacia marramamba</i> , <i>Dodonaea pachyneura</i> , and <i>Astrotricha hamptonii</i> , over <i>Triodia wiseana</i> very open hummock grassland
AmoApyCAgTw	<i>Acacia monticola</i> , <i>A. pyrifolia</i> tall shrubland to tall open shrubland over <i>Cassia glutinosa</i> open shrubland over <i>Triodia wiseana</i> hummock grassland
ApDpTw	Tall open shrubland of <i>Acacia pteraneura</i> , <i>Acacia aptaneura</i> and <i>Acacia pruinocarpa</i> over scattered shrubs of <i>Dodonaea pachyneura</i> and <i>Senna glutinosa</i> subsp. <i>glutinosa</i> over very open hummock grassland of <i>Triodia wiseana</i> over scattered tussock grasses of <i>Cymbopogon ambiguus</i> over very open bunch grassland of <i>Eriachne mucronata</i> , <i>Paspalidium basicladum</i> and <i>Paraneurachne muelleri</i> over scattered herbs of <i>Dysphania rhadinostachya</i>
AxAapT spp	<i>Acacia xiphophylla</i> , (<i>A. aptaneura</i>) tall shrubland over <i>Triodia</i> spp. very open hummock grassland

AxSITpTw	<i>Acacia xiphophylla</i> tall open shrubland over <i>Triodia pungens</i> and <i>Triodia wiseana</i> open hummock grassland occurring on flat plains.
BR01	<i>Eucalyptus leucophloia</i> scattered trees to low open woodland over <i>Senna glutinosa</i> subsp. <i>glutinosa</i> , <i>Acacia bivenosa</i> and/ or <i>A. synchronicia</i> scattered shrubs over <i>Triodia epactia</i> open hummock grassland.
CD	Completely Degraded
CD1	<i>Eucalyptus camaldulensis</i> , <i>E. victrix</i> open woodland over <i>Acacia citrinoviridis</i> tall shrubland over mixed open tussock grassland
CD12	<i>Eucalyptus xerothermica</i> , <i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia bivenosa</i> , <i>A. cowleana</i> , <i>A. elachantha</i> , <i>A. exilis</i> tall shrubland over <i>Triodia epactia</i> hummock grassland and <i>Eulalia aurea</i> open tussock grassland
CD16	<i>Eucalyptus xerothermica</i> low woodland over <i>Acacia bivenosa</i> , <i>A. atkinsiana</i> , <i>A. maitlandii</i> shrubland to closed heath over <i>Triodia epactia</i> hummock grassland
CD19	<i>Eucalyptus leucophloia</i> low woodland over <i>Acacia citrinoviridis</i> , <i>Acacia monticola</i> , <i>Dodonaea pachyneura</i> tall shrubland over <i>Triodia epactia</i> hummock grassland
CD24	<i>Corymbia hamersleyana</i> , <i>Eucalyptus leucophloia</i> low woodland over <i>Grevillea wickhamii</i> tall shrubland over <i>Gossypium robinsonii</i> open shrubland over <i>Themeda</i> sp. Mt. Barricade, <i>Eulalia aurea</i> , <i>Paraneurachne muelleri</i> open tussock grassland or <i>Triodia epactia</i>
CD28	<i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia bivenosa</i> , <i>Petalostylis labicheoides</i> shrubland over <i>Triodia epactia</i> hummock grassland
CD31	<i>Acacia monticola</i> , <i>A. maitlandii</i> , <i>A. atkinsiana</i> , <i>A. exilis</i> , <i>A. ancistrocarpa</i> tall shrubland over <i>Triodia epactia</i> , <i>T. wiseana</i> open hummock grassland
CD32	<i>Petalostylis labicheoides</i> shrubland over <i>Triodia epactia</i> hummock grassland
CD33	<i>Stylobasium spathulatum</i> shrubland over <i>Triodia epactia</i> hummock grassland
CD4	<i>Eucalyptus victrix</i> scattered low trees to open woodland over <i>Goodenia lamprosperma</i> , <i>Pluchea dentex</i> very open herbland
CD5	<i>Eucalyptus victrix</i> , <i>E. xerothermica</i> open woodland over <i>Acacia citrinoviridis</i> tall open scrub over mixed tussock grassland
CD6	<i>Eucalyptus xerothermica</i> low open woodland over <i>Acacia citrinoviridis</i> tall open scrub over <i>Triodia epactia</i> open hummock grassland and/or mixed tussock grassland
CD7	<i>Acacia citrinoviridis</i> tall shrubland over mixed tussock grassland or <i>Triodia epactia</i> hummock grassland
CD9	<i>Acacia citrinoviridis</i> , <i>A. aneura</i> tall open shrubland over mixed open hummock grassland
CdTw	<i>Corymbia deserticola</i> subsp. <i>deserticola</i> scattered low trees over <i>Triodia wiseana</i> and <i>Triodia schinzii</i> very open hummock grassland.
CD	Completely Degraded
CD1	<i>Eucalyptus camaldulensis</i> , <i>E. victrix</i> open woodland over <i>Acacia citrinoviridis</i> tall shrubland over mixed open tussock grassland
CD12	<i>Eucalyptus xerothermica</i> , <i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia bivenosa</i> , <i>A. cowleana</i> , <i>A. elachantha</i> , <i>A. exilis</i> tall shrubland over <i>Triodia epactia</i> hummock grassland and <i>Eulalia aurea</i> open tussock grassland
CD16	<i>Eucalyptus xerothermica</i> low woodland over <i>Acacia bivenosa</i> , <i>A. atkinsiana</i> , <i>A. maitlandii</i> shrubland to closed heath over <i>Triodia epactia</i> hummock grassland
CD19	<i>Eucalyptus leucophloia</i> low woodland over <i>Acacia citrinoviridis</i> , <i>Acacia monticola</i> , <i>Dodonaea pachyneura</i> tall shrubland over <i>Triodia epactia</i> hummock grassland
CD24	<i>Corymbia hamersleyana</i> , <i>Eucalyptus leucophloia</i> low woodland over <i>Grevillea wickhamii</i> tall shrubland over <i>Gossypium robinsonii</i> open shrubland over <i>Themeda</i> sp. Mt. Barricade, <i>Eulalia aurea</i> , <i>Paraneurachne muelleri</i> open tussock grassland or <i>Triodia epactia</i>
CD28	<i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia bivenosa</i> , <i>Petalostylis labicheoides</i> shrubland over <i>Triodia epactia</i> hummock grassland
CD31	<i>Acacia monticola</i> , <i>A. maitlandii</i> , <i>A. atkinsiana</i> , <i>A. exilis</i> , <i>A. ancistrocarpa</i> tall shrubland over <i>Triodia epactia</i> , <i>T. wiseana</i> open hummock grassland
CD32	<i>Petalostylis labicheoides</i> shrubland over <i>Triodia epactia</i> hummock grassland
CD33	<i>Stylobasium spathulatum</i> shrubland over <i>Triodia epactia</i> hummock grassland
CD4	<i>Eucalyptus victrix</i> scattered low trees to open woodland over <i>Goodenia lamprosperma</i> , <i>Pluchea dentex</i> very open herbland
CD5	<i>Eucalyptus victrix</i> , <i>E. xerothermica</i> open woodland over <i>Acacia citrinoviridis</i> tall open scrub over mixed tussock grassland
CD6	<i>Eucalyptus xerothermica</i> low open woodland over <i>Acacia citrinoviridis</i> tall open scrub over <i>Triodia epactia</i> open hummock grassland and/or mixed tussock grassland
CD7	<i>Acacia citrinoviridis</i> tall shrubland over mixed tussock grassland or <i>Triodia epactia</i> hummock grassland
CD9	<i>Acacia citrinoviridis</i> , <i>A. aneura</i> tall open shrubland over mixed open hummock grassland
CdTw	<i>Corymbia deserticola</i> subsp. <i>deserticola</i> scattered low trees over <i>Triodia wiseana</i> and <i>Triodia schinzii</i> very open hummock grassland.
CfDpTw	Scattered low trees of <i>Corymbia ferritcola</i> and <i>Acacia aptaneura</i> over open shrubland of <i>Dodonaea pachyneura</i> , <i>Astrotricha hamptonii</i> , <i>Senna glutinosa</i> subsp. <i>glutinosa</i> and <i>Acacia marramamba</i> over open hummock grassland of <i>Triodia wiseana</i> and <i>Triodia epactia</i> over very open tussock grassland of <i>Cymbopogon ambiguus</i> and <i>Eriachne mucronata</i>
ChAaAmAp	<i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia ancistrocarpa</i> , <i>Acacia monticola</i> , <i>Acacia pruinocarpa</i> tall open shrubland over <i>Triodia pungens</i> mid-dense hummock grassland
ChAaTe	Scattered low trees of <i>Corymbia hamersleyana</i> and <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> over scattered tall shrubs of <i>Acacia aptaneura</i> and <i>Acacia atkinsiana</i> over open shrubland of <i>Acacia ancistrocarpa</i> , <i>Acacia bivenosa</i> and <i>Acacia</i>

	<i>synchronicia</i> over scattered low shrubs of <i>Senna glutinosa</i> subsp. <i>×luerssenii</i> over open hummock grassland of <i>Triodia epactia</i> over scattered herbs of <i>Ptilotus calostachyus</i> and <i>Ptilotus nobilis</i> over scattered bunch grasses of <i>Eriachne pulchella</i>
ChAiGsTw	Scattered low trees of <i>Corymbia hamersleyana</i> , and <i>Eucalyptus leucophloia</i> and <i>Hakea chordophylla</i> over tall open shrubland of <i>Acacia inaequilatera</i> , <i>Acacia atkinsiana</i> , <i>Acacia pruinocarpa</i> and <i>Acacia trudgeniana</i> over scattered low shrubs of <i>Goodenia stobbsiana</i> and <i>Ptilotus calostachyus</i> over open hummock grassland of <i>Triodia wiseana</i> and <i>Triodia epactia</i> over scattered bunch grasses of <i>Amphipogon sericeus</i> and <i>Eriachne pulchella</i>
ChEgAiSg	<i>Corymbia hamersleyana</i> and <i>Eucalyptus gamophylla</i> scattered low trees (or mallee) over <i>Acacia inaequilatera</i> and <i>Senna glutinosa</i> subsp. <i>pruinosa</i> tall scattered shrubs over <i>Triodia pungens</i> hummock grassland occurring on plains.
ChEIAcPIGr	<i>Corymbia hamersleyana</i> and <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered trees over <i>Acacia citrinoviridis</i> , <i>Petalostylis labicheoides</i> and <i>Gossypium robinsonii</i> open shrubland over <i>Triodia pungens</i> open hummock grassland
ChEIAhAbAprTe	<i>Corymbia hamersleyana</i> , <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees to low open woodland over <i>Acacia hamersleyensis</i> , <i>A. bivenosa</i> , <i>A. pruinocarpa</i> scattered shrubs to open shrubland over <i>Triodia epactia</i> hummock grassland
ChEIAhAbAprTp	<i>Corymbia hamersleyana</i> , <i>Eucalyptus leucophloia</i> scattered low trees over <i>Acacia hamersleyensis</i> , <i>A. bivenosa</i> , <i>A. pruinocarpa</i> scattered shrubs over <i>Triodia pungens</i> hummock grassland
CfDpTw	Scattered low trees of <i>Corymbia ferritcola</i> and <i>Acacia aptaneura</i> over open shrubland of <i>Dodonaea pachyneura</i> , <i>Astrotricha hamptonii</i> , <i>Senna glutinosa</i> subsp. <i>glutinosa</i> and <i>Acacia marramamba</i> over open hummock grassland of <i>Triodia wiseana</i> and <i>Triodia epactia</i> over very open tussock grassland of <i>Cymbopogon ambiguus</i> and <i>Eriachne mucronata</i>
ChAaAmAp	<i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia ancistrocarpa</i> , <i>Acacia monticola</i> , <i>Acacia pruinocarpa</i> tall open shrubland over <i>Triodia pungens</i> mid-dense hummock grassland
ChAaTe	Scattered low trees of <i>Corymbia hamersleyana</i> and <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> over scattered tall shrubs of <i>Acacia aptaneura</i> and <i>Acacia atkinsiana</i> over open shrubland of <i>Acacia ancistrocarpa</i> , <i>Acacia bivenosa</i> and <i>Acacia synchronicia</i> over scattered low shrubs of <i>Senna glutinosa</i> subsp. <i>×luerssenii</i> over open hummock grassland of <i>Triodia epactia</i> over scattered herbs of <i>Ptilotus calostachyus</i> and <i>Ptilotus nobilis</i> over scattered bunch grasses of <i>Eriachne pulchella</i>
ChAiGsTw	Scattered low trees of <i>Corymbia hamersleyana</i> , and <i>Eucalyptus leucophloia</i> and <i>Hakea chordophylla</i> over tall open shrubland of <i>Acacia inaequilatera</i> , <i>Acacia atkinsiana</i> , <i>Acacia pruinocarpa</i> and <i>Acacia trudgeniana</i> over scattered low shrubs of <i>Goodenia stobbsiana</i> and <i>Ptilotus calostachyus</i> over open hummock grassland of <i>Triodia wiseana</i> and <i>Triodia epactia</i> over scattered bunch grasses of <i>Amphipogon sericeus</i> and <i>Eriachne pulchella</i>
ChEgAiSg	<i>Corymbia hamersleyana</i> and <i>Eucalyptus gamophylla</i> scattered low trees (or mallee) over <i>Acacia inaequilatera</i> and <i>Senna glutinosa</i> subsp. <i>pruinosa</i> tall scattered shrubs over <i>Triodia pungens</i> hummock grassland occurring on plains.
ChEIAcPIGr	<i>Corymbia hamersleyana</i> and <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered trees over <i>Acacia citrinoviridis</i> , <i>Petalostylis labicheoides</i> and <i>Gossypium robinsonii</i> open shrubland over <i>Triodia pungens</i> open hummock grassland
ChEIAhAbAprTe	<i>Corymbia hamersleyana</i> , <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees to low open woodland over <i>Acacia hamersleyensis</i> , <i>A. bivenosa</i> , <i>A. pruinocarpa</i> scattered shrubs to open shrubland over <i>Triodia epactia</i> hummock grassland
ChEIAhAbAprTp	<i>Corymbia hamersleyana</i> , <i>Eucalyptus leucophloia</i> scattered low trees over <i>Acacia hamersleyensis</i> , <i>A. bivenosa</i> , <i>A. pruinocarpa</i> scattered shrubs over <i>Triodia pungens</i> hummock grassland
CfDpTw	Scattered low trees of <i>Corymbia ferritcola</i> and <i>Acacia aptaneura</i> over open shrubland of <i>Dodonaea pachyneura</i> , <i>Astrotricha hamptonii</i> , <i>Senna glutinosa</i> subsp. <i>glutinosa</i> and <i>Acacia marramamba</i> over open hummock grassland of <i>Triodia wiseana</i> and <i>Triodia epactia</i> over very open tussock grassland of <i>Cymbopogon ambiguus</i> and <i>Eriachne mucronata</i>
ChAaAmAp	<i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia ancistrocarpa</i> , <i>Acacia monticola</i> , <i>Acacia pruinocarpa</i> tall open shrubland over <i>Triodia pungens</i> mid-dense hummock grassland
ChAaTe	Scattered low trees of <i>Corymbia hamersleyana</i> and <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> over scattered tall shrubs of <i>Acacia aptaneura</i> and <i>Acacia atkinsiana</i> over open shrubland of <i>Acacia ancistrocarpa</i> , <i>Acacia bivenosa</i> and <i>Acacia synchronicia</i> over scattered low shrubs of <i>Senna glutinosa</i> subsp. <i>×luerssenii</i> over open hummock grassland of <i>Triodia epactia</i> over scattered herbs of <i>Ptilotus calostachyus</i> and <i>Ptilotus nobilis</i> over scattered bunch grasses of <i>Eriachne pulchella</i>
EIAciAprTe	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Acacia pruinocarpa</i> , <i>A. citrinoviridis</i> tall open shrubland over <i>Triodia epactia</i> open hummock grassland
EIAcTe	Scattered <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> over tall shrubland of <i>Acacia citrinoviridis</i> and <i>Acacia pruinocarpa</i> over open shrubland of <i>Acacia marramamba</i> , <i>Acacia atkinsiana</i> and <i>Senna glutinosa</i> subsp. <i>glutinosa</i> over open hummock grassland of <i>Triodia epactia</i> and <i>Triodia wiseana</i>
EIAcTe	Scattered low trees of <i>Eucalyptus leucophloia</i> over tall open shrubland of <i>Acacia citrinoviridis</i> and <i>Acacia pruinocarpa</i> over open shrubland of <i>Acacia marramamba</i> , <i>Acacia atkinsiana</i> and <i>Senna glutinosa</i> subsp. <i>glutinosa</i> over open hummock grassland of <i>Triodia epactia</i> and <i>Triodia wiseana</i>
EIAiTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Acacia inaequilatera</i> scattered tall shrubs over <i>Triodia wiseana</i> hummock grassland

EIAmAatAexTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Acacia maitlandii</i> , <i>A. atkinsiana</i> , <i>A. exigua</i> open shrubland over <i>Triodia wiseana</i> hummock grassland
EIAmoAmAatTe	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Acacia monticola</i> , <i>A. maitlandii</i> , <i>A. atkinsiana</i> tall open scrub over <i>Triodia epactia</i> , <i>T. wiseana</i> open hummock grassland
EIAmTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Acacia maitlandii</i> shrubland over <i>Triodia wiseana</i> open hummock grassland
EIAAbSEn spp	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Acacia synchronicia</i> , <i>A. bivenosa</i> , <i>Senna</i> spp. scattered shrubs over <i>Triodia brizoides</i> open hummock grassland
EICdEgAatAex	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> , <i>Corymbia deserticola</i> subsp. <i>deserticola</i> scattered low trees over <i>E. gamophylla</i> scattered low mallees over <i>Acacia atkinsiana</i> , <i>A. exigua</i> open shrubland over <i>Triodia wiseana</i> open hummock grassland
EICdTpTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> and occasionally <i>Corymbia deserticola</i> subsp. <i>deserticola</i> scattered low trees over <i>Triodia pungens</i> and <i>Triodia wiseana</i> hummock grassland
EICfAciAapGb	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> , <i>Corymbia ferritcola</i> , <i>Acacia citrinoviridis</i> , <i>A. aptaneura</i> , (<i>Grevillea berryana</i>) low woodland over <i>Dodonaea pachyneura</i> tall open shrubland over <i>Triodia epactia</i> very open hummock grassland
EICfAprAapDp	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> , <i>Corymbia ferritcola</i> , <i>Acacia pruinocarpa</i> , <i>A. aptaneura</i> low open woodland over <i>Dodonaea pachyneura</i> scattered tall shrubs over <i>Triodia epactia</i> very open hummock grassland with <i>Eriachne mucronata</i> open tussock grassland
EICfAprApyHcTeTht	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> , <i>Corymbia ferritcola</i> low open woodland over <i>Acacia pruinocarpa</i> , <i>A. pyrifolia</i> , <i>Hakea chordophylla</i> tall open shrubland over <i>Triodia epactia</i> hummock grassland and <i>Themeda triandra</i> open tussock grassland
EICHaATp	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> and <i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia aptaneura</i> open shrubland over <i>Triodia pungens</i> hummock grassland occurring on flat plains and low rises.
EICHApYAinAmTeTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> , <i>Corymbia hamersleyana</i> low open woodland over <i>Acacia pyrifolia</i> , <i>A. inaequilatera</i> , <i>A. maitlandii</i> tall open shrubland over <i>Triodia epactia</i> , <i>T. wiseana</i> hummock grassland
EICHtw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> , <i>Corymbia hamersleyana</i> low open woodland over <i>Triodia wiseana</i> hummock grassland
EICHtw	<i>Eucalyptus leucophloia</i> , <i>Corymbia hamersleyana</i> low open woodland over scattered mixed tall shrubs over <i>Triodia wiseana</i> hummock grassland
EI-ck/Rg	<i>Eucalyptus leucophloia</i> low open woodland, over <i>Hakea chordophylla</i> , <i>Gossypium robinsonii</i> , and <i>Acacia pruinocarpa</i> scattered tall shrubs (to tall open shrubland), over <i>Gossypium robinsonii</i> , <i>Acacia bivenosa</i> , <i>Jasminum didymum</i> , and <i>Acacia maitlandii</i> open shrubland
EIEgAaTw	Scattered low trees of <i>Eucalyptus leucophloia</i> over tall open (mallee) shrubland of <i>Eucalyptus gamophylla</i> over scattered shrubs of <i>Acacia atkinsiana</i> and <i>Senna glutinosa</i> subsp. <i>glutinosa</i> over low open shrubland of <i>Goodenia stobbsiana</i> over open hummock grassland of <i>Triodia wiseana</i> over scattered herbs of <i>Ptilotus</i> spp.
EIEgAmTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> low open woodland over <i>E. gamophylla</i> low open mallee woodland over <i>Acacia maitlandii</i> open shrubland over <i>Triodia wiseana</i> hummock grassland
EIGrTe	Scattered low trees of <i>Eucalyptus leucophloia</i> and <i>Corymbia hamersleyana</i> over tall open shrubland of <i>Gossypium robinsonii</i> and <i>Petalostylis labicheoides</i> over open shrubland of <i>Acacia bivenosa</i> , <i>Acacia maitlandii</i> , <i>Acacia monticola</i> , <i>Acacia pyrifolia</i> var. <i>pyrifolia</i> , <i>Senna glutinosa</i> subsp. <i>glutinosa</i> , <i>Indigofera</i> sp. Bungaroo Creek (S. van Leeuwen) over open hummock grassland of <i>Triodia epactia</i> and <i>Triodia wiseana</i> over very open tussock grassland of <i>Themeda</i> sp. Mt Barricade (M.E. Trudgen 2471), <i>Themeda triandra</i> and <i>Cymbopogon ambiguus</i> over very open bunch grassland of <i>Eriachne mucronata</i> and <i>Paraneurache muelleri</i> .
EIGwTp	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> low open woodland over <i>Acacia citrinoviridis</i> , <i>Grevillea wickhamii</i> and <i>Gossypium robinsonii</i> shrubland over <i>Triodia pungens</i> hummock grassland.
EIIAmTp	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> and <i>Corymbia ferritcola</i> scattered low trees over <i>Acacia monticola</i> , <i>Acacia hamersleyana</i> and <i>Dodonaea pachyneura</i> open shrubland over <i>Triodia pungens</i> , <i>Triodia brizoides</i> and <i>Triodia epactia</i> open hummock grasslands
EIIApTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Eucalyptus gamophylla</i> open mallees over <i>Acacia pruinocarpa</i> scattered shrubs over <i>Triodia wiseana</i> and <i>Triodia brizoides</i> hummock grassland over <i>Eriachne mucronata</i> scattered tussock grass
EIIegTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Eucalyptus gamophylla</i> open mallees over <i>Acacia maitlandii</i> and <i>Acacia monticola</i> scattered shrubs over <i>Triodia wiseana</i> open hummock grassland over <i>Eriachne mucronata</i> and <i>Cymbopogon ambiguus</i>
EIIHcTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> and <i>Corymbia hamersleyana</i> low open woodland over <i>Hakea chordophylla</i> scattered tall shrubs over <i>Acacia maitlandii</i> and <i>Senna glutinosa</i> subsp. <i>glutinosa</i> shrubland over <i>Triodia wiseana</i> open hummock grassland.
EI-low	<i>Eucalyptus leucophloia</i> low open woodland, over <i>Acacia pruinocarpa</i> , <i>Acacia bivenosa</i> , and <i>Acacia ancistrocarpa</i> scattered shrubs, over <i>Triodia wiseana</i> hummock grassland.
EIIsgTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Senna glutinosa</i> subsp. <i>glutinosa</i> , <i>Acacia maitlandii</i> and <i>Acacia ancistrocarpa</i> open shrubland over <i>Triodia wiseana</i> open hummock grassland over <i>Eriachne mucronata</i> , <i>Paraneurachne muelleri</i>

EI-lsw	<i>Eucalyptus leucophloia</i> scattered low trees, over <i>Acacia bivenosa</i> , <i>Acacia ancistrocarpa</i> , and <i>Acacia marramamba</i> scattered shrubs, over <i>Triodia wiseana</i> hummock grassland.
EITwEm	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> , <i>Corymbia ferritcola</i> and <i>Corymbia hamersleyana</i> scattered low trees over <i>Triodia wiseana</i> very open hummock grassland over <i>Eriachne mucronata</i> , <i>Themeda triandra</i> and <i>Cymbopogon ambiguus</i> very open tussock grassland
EITaTlo	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Triodia angusta</i> , <i>T. longiceps</i> hummock grassland
EITbr	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Triodia brizoides</i> hummock grassland
EITbr/EITe	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Triodia brizoides</i> hummock grassland/ <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> low open woodland over <i>Triodia epactia</i> open hummock grassland
EITe	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> low open woodland over <i>Triodia epactia</i> open hummock grassland
EITe/EITw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> low open woodland over <i>Triodia epactia</i> open hummock grassland/ <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Triodia wiseana</i> open hummock grassland
EITw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Triodia wiseana</i> open hummock grassland
EITwTspm	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Triodia wiseana</i> , (<i>T. sp.</i> Millstream (A.A. Mitchell PRP 207)) open hummock grassland
EvAcTt	Open woodland of <i>Eucalyptus victrix</i> with scattered <i>Eucalyptus camaldulensis</i> over scattered low trees of <i>Eucalyptus xerothermica</i> and <i>Corymbia hamersleyana</i> over tall open shrubland of <i>Acacia citrinoviridis</i> and <i>Gossypium robinsonii</i> over open tussock grassland of * <i>Cenchrus ciliaris</i> and <i>Themeda triandra</i>
ExMeTl	Scattered low trees of <i>Eucalyptus xerothermica</i> and <i>Eucalyptus leucophloia</i> over scattered low shrubs of <i>Melaleuca eleuterostachya</i> over open hummock grassland of <i>Triodia longiceps</i> and <i>Triodia wiseana</i>
GG01	<i>Corymbia ferritcola</i> low open woodland over <i>Acacia pruinocarpa</i> scattered tall shrubs to tall open shrubland over <i>Triodia epactia</i> very open hummock grassland and <i>Cymbopogon ambiguus</i> , <i>Aristida burbidgeae</i> scattered tussock grasses.
GG02	<i>Eucalyptus leucophloia</i> low open woodland over <i>Indigofera monophylla</i> scattered low shrubs over <i>Triodia epactia</i> very open hummock grassland and <i>Cymbopogon ambiguus</i> scattered tussock grasses.
H1	<i>Acacia aneura</i> low open woodland over <i>Triodia wiseana</i> , <i>T. epactia</i> hummock grassland
H12	<i>Acacia bivenosa</i> , <i>A. exilis</i> , <i>A. synchronicia</i> scattered shrubs to open shrubland over <i>Triodia longiceps</i> , <i>T. wiseana</i> open hummock grassland
H14	<i>Eucalyptus leucophloia</i> scattered low trees over <i>Triodia epactia</i> and/or <i>T. wiseana</i> hummock grassland
H2	<i>Acacia aneura</i> low woodland over <i>Triodia epactia</i> hummock grassland
H3	<i>Acacia aneura</i> , <i>Corymbia ferritcola</i> low woodland over <i>Triodia epactia</i> hummock grassland or <i>Cymbopogon ambiguus</i> , <i>Themeda triandra</i> open tussock grassland
H5	<i>Eucalyptus leucophloia</i> scattered low trees over <i>Acacia maitlandii</i> shrubland over <i>Triodia wiseana</i> hummock grassland
H6	<i>Acacia hamersleyensis</i> tall open shrubland over <i>Triodia wiseana</i> closed hummock grassland
H7	<i>Eucalyptus leucophloia</i> scattered low trees over <i>Acacia pruinocarpa</i> open shrubland over <i>Triodia epactia</i> or <i>T. wiseana</i> hummock grassland
H8	<i>Eucalyptus leucophloia</i> scattered low trees over <i>Acacia atkinsiana</i> , <i>A. exilis</i> , <i>A. bivenosa</i> , <i>A. ancistrocarpa</i> open shrubland over <i>Triodia wiseana</i> or <i>T. epactia</i> hummock grassland
H9	<i>Eucalyptus leucophloia</i> scattered low trees over <i>Acacia inaequilatera</i> tall shrubland over <i>Triodia wiseana</i> hummock grassland
HD-BG	Scattered very low shrubs, tussock grasses and hummock grasses in some places. Essentially devoid of vegetation for the most part.
HD-RG-Ash	Mixed acacia shrublands typically dominated by <i>Acacia pruinocarpa</i> , <i>Acacia maitlandii</i> , <i>Acacia ancistrocarpa</i> , <i>Acacia bivenosa</i> , <i>Acacia monticola</i> , and <i>Acacia synchronicia</i> , with isolated emergent <i>Eucalyptus leucophloia</i> and <i>Corymbia hamersleyana</i> low trees
HG1	<i>Corymbia ferritcola</i> , <i>Eucalyptus leucophloia</i> low open woodland over <i>Acacia hamersleyensis</i> , <i>A. pruinocarpa</i> scattered tall shrubs over <i>Dodonaea pachyneura</i> open shrubland over <i>Triodia epactia</i> or <i>T. wiseana</i> open hummock grassland and mixed open tussock grassland
HG2	<i>Eucalyptus leucophloia</i> low open woodland over <i>Acacia hamersleyensis</i> open shrubland over <i>Triodia brizoides</i> , <i>T. epactia</i> hummock grassland and <i>Themeda triandra</i> , <i>Eriachne mucronata</i> open tussock grassland
HG3	<i>Eucalyptus leucophloia</i> low open woodland over <i>Acacia bivenosa</i> open shrubland over <i>Triodia brizoides</i> , <i>T. epactia</i> hummock grassland and <i>Themeda sp.</i> Mt. Barricade, <i>Cymbopogon ambiguus</i> open tussock grassland
HG4	<i>Eucalyptus leucophloia</i> scattered low trees to low open woodland over <i>Astrotricha hamptonii</i> , <i>Ficus brachypoda</i> scattered tall shrubs over <i>Themeda sp.</i> Mt Barricade, <i>Eriachne mucronata</i> open tussock grassland and <i>Triodia brizoides</i> , <i>T. epactia</i> open hummock
HS01	<i>Eucalyptus leucophloia</i> and/ or <i>Corymbia deserticola</i> subsp. <i>deserticola</i> low open woodland over <i>Triodia wiseana</i> , <i>T. epactia</i> open hummock grassland.
HS02	<i>Eucalyptus gamophylla</i> low open woodland over <i>Acacia maitlandii</i> scattered shrubs to open shrubland over <i>Triodia wiseana</i> open hummock grassland.

I-IG-EFw	<i>Eucalyptus leucophloia</i> scattered trees, over <i>Corymbia ferriticola</i> low open woodland to open woodland, over <i>Acacia pruinocarpa</i> and <i>Gossypium robinsonii</i> and <i>Acacia monticola</i> tall open shrubland, over <i>Acacia monticola</i> , <i>Acacia pruinocarpa</i> , <i>Senna glutinosa</i>
I-LS-EIap	<i>Eucalyptus leucophloia</i> scattered trees, over <i>Eucalyptus leucophloia</i> and <i>Corymbia ferriticola</i> low open woodland, over <i>Acacia pruinocarpa</i> tall open shrubland, over <i>Acacia pruinocarpa</i> open shrubland / scattered low shrubs, over <i>Eriachne mucronata</i>
I-MS-Eflow	Scattered <i>Eucalyptus leucophloia</i> trees, over and <i>Corymbia ferriticola</i> low open woodland (with scattered <i>Eucalyptus leucophloia</i> low trees), over <i>Grevillea wickhamii</i> and <i>Hakea chordophylla</i> , and <i>Acacia pruinocarpa</i> scattered tall shrubs
I-SF-Ash	Scattered <i>Eucalyptus leucophloia</i> low trees, over <i>Acacia maitlandii</i> , and <i>Acacia bivenosa</i> scattered tall shrubs, over mixed <i>Acacia</i> shrubland typically dominated by, <i>Acacia maitlandii</i> , <i>Acacia ancistrocarpa</i> , <i>Acacia bivenosa</i> , and <i>Acacia monticola</i>
I-SF-Ch/Ash	<i>Corymbia hamersleyana</i> and <i>Eucalyptus leucophloia</i> scattered trees, over <i>Corymbia hamersleyana</i> and <i>Hakea chordophylla</i> low open woodland, over <i>Hakea chordophylla</i> and <i>Acacia bivenosa</i> scattered tall shrubs, over <i>Senna glutinosa</i> subsp. <i>glutinosa</i>
MA-Te	<i>Eucalyptus leucophloia</i> scattered low trees, over <i>Hakea chordophylla</i> and <i>Grevillea wickhamii</i> scattered tall shrubs, over mixed <i>Acacia</i> spp. open shrubland (to low open shrubland) typically dominated by <i>Acacia bivenosa</i> , <i>Acacia ancistrocarpa</i>
MCK-Aas	<i>Eucalyptus leucophloia</i> scattered low trees, over <i>Acacia atkinsiana</i> and <i>Acacia pachyacra</i> tall open shrubland, over <i>Acacia atkinsiana</i> shrubland, over <i>Triodia epactia</i> hummock grassland with scattered <i>Themeda triandra</i> tussock grasses.
mD01	<i>Corymbia hamersleyana</i> and/ or <i>Eucalyptus leucophloia</i> scattered low trees to low open woodland over <i>Acacia monticola</i> (<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>) tall shrubland over <i>Triodia wiseana</i> , <i>T. epactia</i> hummock grassland.
PI01	<i>Eucalyptus leucophloia</i> low open woodland over <i>Acacia exilis</i> and <i>Acacia sibirica</i> scattered tall shrubs to tall open shrubland over <i>Triodia wiseana</i> hummock grassland.
PL2	<i>Eucalyptus socialis</i> and/or <i>E. leucophloia</i> low open woodland over <i>Acacia bivenosa</i> , <i>A. exilis</i> scattered shrubs over <i>Triodia wiseana</i> , <i>T. angusta</i> hummock grassland
PL3	<i>Eucalyptus leucophloia</i> scattered low trees over <i>Acacia bivenosa</i> scattered shrubs over <i>Triodia longiceps</i> , <i>T. wiseana</i> hummock grassland
PL5	<i>Melaleuca eleuterostachya</i> open shrubland over <i>Triodia wiseana</i> , (<i>T. angusta</i>) hummock grassland
PL6	<i>Acacia synchronicia</i> scattered shrubs over <i>Triodia angusta</i> hummock grassland on calcareous plains
PS1	<i>Acacia aneura</i> , <i>A. ayersiana</i> tall open shrubland over <i>Triodia epactia</i> , <i>T. wiseana</i> hummock grassland
PS1/PS6	<i>Acacia aneura</i> , <i>A. ayersiana</i> tall open shrubland over <i>Triodia epactia</i> , <i>T. wiseana</i> hummock grassland/ <i>Acacia synchronicia</i> scattered shrubs over <i>Triodia angusta</i> hummock grassland
PS10	<i>Acacia synchronicia</i> , <i>A. bivenosa</i> , <i>Senna</i> spp. shrubland over <i>Triodia brizoides</i> hummock grassland
PS13	<i>Eucalyptus leucophloia</i> scattered low trees over <i>Acacia exilis</i> open shrubland to shrubland over <i>Triodia brizoides</i> hummock grassland
PS16	<i>Eucalyptus leucophloia</i> scattered low trees over <i>Triodia longiceps</i> , <i>T. angusta</i> hummock grassland
PS3	<i>Acacia xiphophylla</i> , <i>A. aneura</i> low woodland to tall open shrubland over <i>Triodia wiseana</i> , (<i>T. epactia</i>) open hummock grassland
PS4	<i>Acacia xiphophylla</i> tall open shrubland over <i>Triodia epactia</i> , <i>T. longiceps</i> hummock grassland
PS5	<i>Acacia xiphophylla</i> , <i>A. aneura</i> tall shrubland over <i>Triodia brizoides</i> , <i>T. epactia</i> open hummock grassland
PS6	<i>Eucalyptus leucophloia</i> , (<i>E. gamophylla</i> , <i>Corymbia deserticola</i> , <i>C. hamersleyana</i>) scattered low trees over <i>Acacia atkinsiana</i> , <i>A. exilis</i> , <i>A. bivenosa</i> , <i>A. ancistrocarpa</i> , <i>Senna</i> spp. shrubland over <i>Triodia epactia</i> and/or <i>T. wiseana</i> hummock grassland
PS7	<i>Eucalyptus leucophloia</i> , (<i>Corymbia hamersleyana</i>) scattered low trees over <i>Acacia inaequilatera</i> scattered shrubs to tall open shrubland over <i>Triodia wiseana</i> , (<i>T. epactia</i>) hummock grassland

Clearing Description

Brockman Project

Hamersley Iron Pty Ltd (Hamersley Iron) proposes to clear up to 500 hectares of native vegetation within a total boundary of approximately 9,035 hectares for the purpose of mineral exploration, hydrogeological and geotechnical investigations and associated activities. The project is located approximately 40-70 kilometres northwest of Tom Price, in the Shire of Ashburton.

Vegetation Condition

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);

To

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

Comment

The vegetation condition was based on the consolidation of several vegetation surveys by Hamersley Iron (2016a).

Clearing permit CPS 6961/1 was granted by the Department of Mines and Petroleum on 19 May 2016 and authorised the clearing of up to 500 hectares of native vegetation within several separate areas totalling approximately 9,035 hectares. CPS 6961/1 combined the areas covered by several smaller permits previously granted for exploration activities over various parts of the Brockman project area.

On 10 June 2016 the Permit Holder applied to amend CPS 6961/1 to amend the wording of the Flora Management condition on the permit, to amend the annual reporting date from 31 July to 30 June each year, and amend the annual reporting period from financial year to calendar year. There is no change to the area approved to clear or the permit boundary.

3. Assessment of application against clearing principles

Comments

Hamersley Iron Pty Ltd has applied to amend the wording of the Flora Management condition (Condition 8 on CPS 6961/1), and to amend the annual permit reporting dates.

The amendment to the flora management condition will remove the requirement for additional targeted surveys to be undertaken for Priority flora, where adequate flora and vegetation surveys have already been undertaken and Priority flora populations have been identified. A targeted flora survey will still be required in areas which have not been adequately surveyed. The changes to the Flora Management condition will make the flora management requirements imposed on this permit consistent with other similar clearing permits for mineral exploration activities currently held by this proponent.

Numerous flora and vegetation surveys have been conducted over the application areas and surrounding areas, over many years (Rio Tinto, 2016). The vegetation, landforms, and fauna habitats occurring within the application areas are well represented in the region (Hamersley Iron, 2016a; GIS Database). No Threatened flora have been recorded within or in close proximity to the application areas, and all Priority flora species recorded within the application areas are considered to be well represented in surrounding areas (Hamersley Iron, 2016a; Rio Tinto, 2016). However, advice provided by the Department of Parks and Wildlife (DPaW, 2016) in relation to CPS 6961/1 identified nine Priority flora species as being particularly significant.

The revised Flora Management condition (Condition 10 on CPS 6961/2) requires avoidance of these nine significant Priority flora species. Given that 500 hectares of clearing is proposed within a total area of approx. 9,035 hectares, and considering the flexible nature of exploration activities, disturbance to Priority flora is likely to be able to be avoided in most cases.

The proposed changes to the Flora Management condition are considered unlikely to result in any significant additional environmental impacts from the proposed clearing.

The amendment application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*. Environmental information has been reviewed, and the assessment of the proposed clearing against the clearing principles remains consistent with the assessment contained in decision report CPS 6961/1.

Methodology

DPaW (2016)
Hamersley Iron (2016a)
Rio Tinto (2016)

GIS Database:
- IBRA Australia
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities (TECPEC)

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

There are two native title claims (WC 2001/005 and WC 1997/089) over the areas under application (DAA, 2016). These claims have been registered with the National Native Title Tribunal on behalf of the claimant groups. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are multiple registered Aboriginal Sites of Significance within or in close proximity to the application areas (DAA, 2016). 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 the proponent's responsibility to liaise with the Department of Environment Regulation, Department of Parks and Wildlife and the Department of Water to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The amendment application was advertised on 27 June 2016 by the Department of Mines and Petroleum

inviting submissions from the public. No submissions were received in relation to this application.

Methodology DAA (2016)

4. References

- DAA (2016) Aboriginal Heritage Enquiry System. Department of Aboriginal Affairs. <http://maps.dia.wa.gov.au/AHIS2/> (Accessed 26 July 2016).
- DPaW (2016) Advice received in relation to Clearing Permit Application CPS 6961/1. Species and Communities Branch, Department of Parks and Wildlife, Western Australia, May 2016.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Hamersley Iron (2016a) Desktop Flora, Vegetation and Fauna Habitat Assessment at Brockman. Native Vegetation Clearing Permit – Supporting Report. Hamersley Iron Pty Ltd, March 2016.
- Hamersley Iron (2016b) Brockman Vegetation Complexes. Additional information received in relation to Clearing Permit Application CPS 6961/1. Hamersley Iron Pty Ltd, April 2016.
- Rio Tinto (2016) Amendment Application for Purpose Permit CPS 6961/1 - Greater Brockman - Mineral Exploration. Rio Tinto Iron Ore, June 2016.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DotE	Department of the Environment, Australian Government
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2015) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T **Threatened species:**
Published as Specially Protected under the *Wildlife Conservation Act 1950*, listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the Wildlife Conservation Act.

Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the Wildlife Conservation Act.

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

CR **Critically endangered species**
Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

- EN Endangered species**
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- VU Vulnerable species**
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- EX Presumed extinct species**
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.
- IA Migratory birds protected under an international agreement**
Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- CD Conservation dependent fauna**
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- OS Other specially protected fauna**
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P Priority species**
Species which are poorly known; or
Species that are adequately known, are rare but not threatened, and require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.
- P1 Priority One - Poorly-known species:**
Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
- P2 Priority Two - Poorly-known species:**
Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.
- P3 Priority Three - Poorly-known species:**
Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.
- P4 Priority Four - Rare, Near Threatened and other species in need of monitoring:**
(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.

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

Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare 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 clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.