



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4032/3  
Permit type: Purpose

### 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 246SA (AML 70/246)  
Iron Ore (Hamersley Range) Agreement Act 1963, Mineral Lease 4SA (AML 70/4)  
Local Government Area: Shire of Ashburton  
Colloquial name: Eastern Range Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
600		Mechanical Removal	Mineral Production and Associated Activities

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 22 January 2015

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

**Vegetation Description** Vegetation within the application areas has been mapped as the following Beard vegetation associations: (GIS Database).

- **82:** Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*; and
- **181:** Shrublands; mulga and snakewood scrub.

Rio Tinto (2010) defined and mapped a total of 53 vegetation associations within the original permit boundary and these are detailed in Decision Report CPS 4032/2.

Additional surveys were conducted by Rio Tinto (2014) during May, June and July 2014 of the expanded permit boundary. The following 62 intact and two disturbed vegetation units were identified in the additional area:

**NFE-1:** *Acacia aptaneura* and *Acacia tetragonophylla* scattered tall shrubs over *Acacia tetragonophylla*, *Eremophila phyllopoda* and *Scaevola acacioides* open shrubland over *Eremophila phyllopoda* and *E. cuneifolia* low open shrubland over *Triodia epactia* hummock grassland;

**NFW-1:** *Grevillea nematophylla*, *Acacia aneura* and *Acacia tetragonophylla* tall open shrubland over *Acacia tetragonophylla*, *Scaevola acacioides* and *Eremophila cryptothrix* shrubland over *Eremophila cuneifolia* and *Maireana georgei* low open shrubland over *Triodia epactia* open hummock grassland;

**NFW-2:** *Acacia pruinocarpa* and *Acacia aneura* tall open shrubland over *Acacia tetragonophylla*, *Scaevola acacioides*, *Acacia synchronicia* and *Eremophila cryptothrix* open shrubland over *Eremophila cuneifolia* low open shrubland over *Triodia epactia* hummock grassland;

**NF-Aw1:** *Acacia aptaneura* scattered low trees over *Acacia wanyu*, *A. tetragonophylla* and *A. aptaneura* tall shrubland (with scattered *Acacia fuscaneura*) over *Acacia wanyu*, *A. tetragonophylla* and *Senna stricta* open shrubland over *Eremophila cuneifolia*, *Ptilotus obovatus* var. *obovatus* and *Eremophila jucunda* scattered low shrubs over *Triodia epactia* scattered to very open hummock grassland;

**NFS-O:** *Acacia pyrifolia*, *A. pruinocarpa* and *Grevillea berryna* scattered tall shrubs over *A. pyrifolia* *Senna glutinosa* subsp. *glutinosa* and *Senna glutinosa* subsp. *pruinosa* open shrubland over *Eremophila cuneifolia*, *E. cryptothrix* and *Scaevola acacioides* scattered low shrubs over *Triodia wiseana* hummock grassland;

**NV-Eo:** *Acacia aptaneura* and *Grevillea saxicola* scattered to low open woodland over *Eremophila oppositifolia* subsp. *angustifolia* tall shrubland (with scattered *Acacia pruinocarpa*) over *Eremophila oppositifolia* subsp. *angustifolia*, *E. latrobei* subsp. *latrobei* and *Scaevola acacioides* open shrubland over *Ptilotus obovatus* var. *obovatus* and *Maireana melanocoma* scattered to low open shrubland;

**NV-SBB:** *Acacia macraneura*, *A. aptaneura*, *A. pruinocarpa* and *Grevillea saxicola* tall shrubland over *Eremophila latrobei* subsp. *latrobei*, *Dodonaea petiolaris* and *Acacia tetragonophylla* shrubland over *Dodonaea petiolaris*, *Ptilotus obovatus* var. *obovatus* and *Solanum piceum* low open shrubland (to low shrubland in places) over *Eriachne mucronata* very open tussock grassland;

**NV-M:** *Acacia aptaneura*, *A. macraneura* and *A. aneura* (with scattered *Grevillea berryana* and *Acacia rhodophloia*) tall shrubland (to tall open scrub) over *Eremophila latrobei* subsp. *latrobei* scattered shrubs over *Dodonaea petiolaris*, *Eremophila jucunda* and *Ptilotus schwartzii* scattered low shrubs (to low open shrubland in places);

**NV-MP:** *Grevillea berryana*, *Acacia macraneura* and *Corymbia ferritcola* scattered low trees over *Acacia macraneura*, *A. aptaneura* and *A. rhodophloia* tall shrubland (to tall open scrub) over *Eremophila latrobei* subsp. *latrobei*, *Prostanthera campbellii*, *Dodonaea petiolaris* and *Acacia thoma* open shrubland over *Eremophila fraseri*, *E. jucunda* and *Sida* sp. Golden calyces glabrous (H.N. Foote 32) scattered to low open shrubland;

**NFM:** *Acacia aptaneura* low woodland over *Acacia tetragonophylla* and *A. rhodophloia* tall shrubland (with scattered *Grevillea saxicola*), over *Eremophila cuneifolia*, *Scaevola acacioides* and *Senna glutinosa* subsp. *X luerssenii* scattered shrubs over *Senna stricta*, *Tribulus suberosus* and *Maireana thesioides* low open shrubland (to scattered low shrubs);

**NV-SGs:** *Acacia macraneura*, *A. aptaneura*, *A. citrinoviridis* and *Grevillea saxicola* low open woodland (to low woodland) over *Acacia pruinocarpa*, *A. tetragonophylla* and *A. rhodophloia* tall open shrubland over *Eremophila latrobei* subsp. *latrobei*, *Acacia synchronicia* and *Senna glutinosa* subsp. *glutinosa* scattered shrubs over *Ptilotus obovatus* var. *obovatus*, *Eremophila jucunda* and mixed chenopod (typically *Maireana* and *Sclerolaena* spp.) low open shrubland over *Triodia epactia* open hummock grassland;

**N/S-SIL:** *Grevillea saxicola*, *Acacia pruinocarpa* and *Acacia aptaneura* low open woodland over *Acacia pruinocarpa*, *A. pyrifolia* and *A. tetragonophylla* tall open shrubland over *Eremophila cryptothrix*, *Senna glutinosa* subsp. *glutinosa* and *Scaevola acacioides* (with scattered *Eremophila platycalyx* subsp. *pardalota*) scattered to low open shrubland over *Triodia epactia* hummock grassland;

**N/S-SIL-BRW:** *Grevillea saxicola*, *Acacia pruinocarpa* and *A. pyrifolia* scattered tall shrubs (to tall open shrubland) over *Eremophila cryptothrix*, *Acacia tetragonophylla* and *Senna glutinosa* subsp. *glutinosa* open shrubland over *Ptilotus obovatus*, *Corchorus crozophorifolius* and *Solanum horridum* low open shrubland (to low shrubland in places) over *Triodia wiseana* and *Triodia epactia* very open hummock grassland over *Cymbopogon ambiguus* scattered tussock grasses;

**P-XIP:** *Grevillea saxicola*, *Acacia aptaneura* and *A. fuscaneura* scattered low trees (to low open woodland) over *Acacia xiphophylla* tall open shrubland (to tall shrubland in places) over *Acacia tetragonophylla* and *Senna glutinosa* subsp. *X luerssenii* scattered shrubs (to open shrubland) over *Senna stricta*, *Ptilotus obovatus*, and mixed chenopods (*Maireana* and *Sclerolaena* spp.) low open shrubland (with patches of *Frankenia setosa* low open shrubland);

**P-XIP-Td:** *Acacia xiphophylla* and *A. aptaneura* tall open shrubland (to tall scattered shrubs) over *Acacia synchronicia*, *Senna glutinosa* subsp. *X luerssenii* and *Senna stricta* scattered shrubs over *Tecticornia disarticulata* low shrubland (to low open heath) over *Triodia epactia* scattered hummock grasses;

**NV-Tw:** *Acacia aptaneura*, *A. fuscaneura*, *Acacia pruinocarpa* and *A. xiphophylla* tall open shrubland over *Acacia tetragonophylla*, *A. synchronicia*, *Senna glutinosa* subsp. *glutinosa*, *Acacia pyrifolia* open shrubland over *Senna artemisioides* subsp. *oligophylla* and *Eremophila cuneifolia* scattered low shrubs (to low open shrubland) over *Triodia wiseana* hummock grassland (to open hummock grassland);

**NVD-2:** *Acacia aptaneura* and *Grevillea saxicola* scattered low trees (to low open woodland) over *Acacia xiphophylla* and *Acacia aptaneura* tall shrubland over *Acacia tetragonophylla*, *Senna artemisioides* subsp. *oligophylla* and *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013) open shrubland (to scattered shrubs) over *Senna stricta*, *Jasminum didymum* subsp. *lineare*, *Enchylaena tomentosa* and *Ptilotus obovatus* var. *obovatus* scattered low shrubs (to low open shrubland) over *Triodia epactia* scattered hummock grassland;

**NFD-1:** *Acacia aptaneura* low woodland over *A. aptaneura* and *Acacia tetragonophylla* tall open shrubland over *Acacia tetragonophylla*, *Eremophila latrobei* and *E. cryptothrix* open shrubland over *Corchorus crozophorifolius* and *Ptilotus obovatus* var. *obovatus* low open shrubland over *Triodia epactia* open hummock grassland;

**NFD-1-EL:** *Eucalyptus leucophloia* and *Acacia aneura* low woodland over *Acacia aneura* and *A. tetragonophylla* tall open shrubland over *Acacia tetragonophylla*, *Eremophila latrobei* and *E. cryptothrix* open shrubland over *Corchorus crozophorifolius* and *Ptilotus obovatus* low open shrubland over *Triodia epactia* open hummock grassland;

**NFD-3:** *Acacia citrinoviridis* and *Grevillea saxicola* low open woodland (to low woodland) over *Acacia citrinoviridis* and *A. xiphophylla* tall open shrubland over *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013), *Santalum lanceolatum*, *Dodonaea pachyneura* and *Eremophila cryptothrix* open shrubland over *Senna artemisioides* subsp. *oligophylla*, *Corchorus crozophorifolius*, *Ptilotus obovatus* var. *obovatus* and *Solanum piceum* low open shrubland (to scattered low shrubs) over *Triodia epactia* very open hummock grassland;

**NFD-3L:** *Acacia citrinoviridis* and *Grevillea saxicola* low woodland (with scattered *Eucalyptus leucophloia*) over *Acacia citrinoviridis* tall open shrubland over *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013), *Rhagodia eremaea* and *Jasminum didymum* subsp. *lineare* open shrubland over *Senna stricta*, *Corchorus crozophorifolius* and *Ptilotus obovatus* var. *obovatus* low open shrubland over *Triodia epactia* very open hummock grassland over *Eriachne mucronata* and \**Cenchrus ciliaris* very open tussock grassland;

**NVD-1:** *Acacia citrinoviridis*, *Grevillea saxicola* and *Corymbia ferritcola* low open woodland over *Acacia aptaneura*, *A. citrinoviridis* and *A. rhodophloia* tall shrubland over *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013), *Dodonaea pachyneura* and *Acacia tetragonophylla* open shrubland over *Ptilotus obovatus* var. *obovatus* and *Enchylaena tomentosa* scattered low shrubs;

**NFD-5:** *Acacia citrinoviridis*, *A. pruinocarpa* and *Grevillea berryana* scattered tall shrubs (to tall open shrubland) over *Eremophila cryptothrix*, *Acacia pyrifolia* and *Senna glutinosa* subsp. *glutinosa* open shrubland (to shrubland) over *Ptilotus obovatus*, \**Aerva javanica* and *Corchorus laniflorus* low open shrubland over *Triodia epactia* and *T.*

*wiseana* very open hummock grassland;

**NVD-Eo:** *Acacia aptaneura* and *Grevillea saxicola* scattered low trees over *Eremophila oppositifolia* subsp. *angustifolia* and *Acacia aptaneura* tall shrubland over *Acacia tetragonophylla*, *Eremophila latrobei* subsp. *latrobei* and *Santalum lanceolatum* open shrubland over *Ptilotus obovatus*, *Maireana melanocoma* and *Enchylaena tomentosa* scattered low shrubs (to low open shrubland) over *Eriachne mucronata* and *Cymbopogon ambiguus* very open tussock grassland;

**WF-1:** *Acacia pyrifolia* scattered (to isolated) tall shrubs over *Acacia pyrifolia*, *A. tetragonophylla* and mixed *Eremophila* and *Senna* spp. open shrubland (to scattered shrubs) over *Senna artemisioides* subsp. *oligophylla* scattered low shrubs over *Triodia epactia* hummock grassland;

**WF-2:** *Hakea lorea*, *Acacia pyrifolia* and *A. pruinocarpa* scattered tall shrubs over *Acacia pyrifolia*, *Eremophila fraseri* and mixed *Senna* spp. open shrubland (to scattered shrubs) over *Scaevola spinescens*, mixed *Senna* and *Eremophila* spp. scattered to low open shrubland over *Triodia epactia* open hummock grassland;

**WF-RP:** *Acacia citrinoviridis*, *A. pruinocarpa*, *A. coriacea* subsp. *pendens* and *Clerodendrum floribundum* scattered low trees over *Acacia pyrifolia*, *A. tetragonophylla* and *A. pruinocarpa* scattered tall shrubs over *Senna artemisioides* subsp. *oligophylla*, *Eremophila fraseri*, *E. longifolia* and *Jasminum didymum* subsp. *lineare* scattered to open shrubland over *Abutilon* sp. *Dioicum* (A.A. Mitchell PRP 1618), *Ptilotus obovatus* var. *obovatus* and *Corchorus laniflorus* scattered to low open shrubland over *Triodia epactia* very open hummock grassland over *Cymbopogon ambiguus* scattered to very open tussock grassland;

**WFD-1:** *Acacia pyrifolia* scattered tall shrubs (with isolated *Acacia pruinocarpa*) over *Acacia pyrifolia*, *A. tetragonophylla*, *Senna artemisioides* subsp. *oligophylla* and *Senna artemisioides* subsp. *helmsii* scattered to open shrubland over *Indigofera monophylla*, *Corchorus crozophorifolius* and *Ptilotus obovatus* low open shrubland over *Triodia epactia* open hummock grassland over *Eriachne mucronata* and *Cymbopogon ambiguus* very open tussock grassland;

**WFD-2:** *Acacia citrinoviridis* low open woodland over *Acacia citrinoviridis* and *A. pyrifolia* tall open shrubland (to tall shrubland) over *Senna artemisioides* subsp. *oligophylla*, *Eremophila fraseri* and *Acacia tetragonophylla* shrubland over *Senna artemisioides* subsp. *helmsii*, *Ptilotus obovatus* var. *obovatus*, *Scaevola acacioides* and *Hybanthus aurantiacus* low open shrubland over *Triodia epactia* very open hummock grassland over \**Cenchrus ciliaris* open tussock grassland;

**SWV-D1:** *Acacia aptaneura* low open woodland (with scattered *A. aneura*) over *Acacia wanyu* tall open shrubland (to tall shrubland) over *Acacia tetragonophylla*, *Eremophila longifolia* and *Dodonaea petiolaris* open shrubland over *Eremophila cuneifolia*, *Ptilotus obovatus* var. *obovatus* and *Abutilon lepidum* scattered low shrubs over *Triodia epactia* open hummock grassland (to hummock grassland) over \**Cenchrus ciliaris* very open tussock grassland;

**NW-VF:** *Acacia pruinocarpa* and *A. fuscaneura* isolated low trees over *Acacia citrinoviridis*, *A. tetragonophylla* and *A. pyrifolia* tall open shrubland over *Eremophila fraseri* and *Eremophila cuneifolia* open shrubland over *Senna artemisioides* subsp. *oligophylla* low open shrubland over *Triodia epactia* open hummock grassland;

**WV-Ms:** *Acacia aptaneura* and *A. pruinocarpa* scattered low trees over *Acacia wanyu* and *A. aptaneura* tall open shrubland (with *A. fuscaneura*) over *Acacia tetragonophylla*, *Senna artemisioides* subsp. *oligophylla*, and *Eremophila phyllopoda* open shrubland over *Senna stricta*, *Ptilotus obovatus* var. *obovatus* and *Eremophila cuneifolia* scattered low shrubs (to low open shrubland) over *Triodia epactia* open hummock grassland;

**SWV1:** *Acacia aptaneura* scattered low trees over *Acacia wanyu* and *A. xiphophylla* tall open shrubland over *Acacia synchronicia*, *A. tetragonophylla*, *Senna artemisioides* subsp. *helmsii*, *Senna artemisioides* subsp. *oligophylla* open shrubland (to scattered shrubs), over *Senna stricta*, *Eremophila cuneifolia* and *Ptilotus schwartzii* scattered low shrubs over *Triodia epactia* scattered (to very open) hummock grasses;

**RLow1:** *Acacia aptaneura* isolated low trees over *Acacia tetragonophylla*, *A. pruinocarpa* and *A. pyrifolia* scattered to tall open shrubland over *Senna artemisioides* subsp. *oligophylla* and *Eremophila fraseri* scattered to open shrubland over *Eremophila cuneifolia* and *E. phyllopoda* scattered low shrubs over *Triodia epactia* very open hummock grassland;

**NSHG:** *Acacia pruinocarpa*, *A. macraneura* and *Grevillea berryana* scattered tall shrubs (to tall open shrubland in places) over mixed *Eremophila* and *Senna* spp. scattered shrubs (typically dominated by *Eremophila phyllopoda*, *Senna glutinosa* subsp. *glutinosa* and *S. glutinosa* subsp. *X luerssenii*) over *Eremophila exilifolia*, *E. fraseri* and *E. jucunda* low open shrubland to low shrubland over *Triodia epactia* open hummock grassland;

**SF-AcAr:** *Grevillea berryana* and *Acacia aptaneura* low open woodland over *Acacia rhodophloia* and *A. citrinoviridis* tall shrubland over *Acacia tetragonophylla*, *A. rhodophloia* and *Eremophila phyllopoda* open shrubland over *Triodia epactia* open hummock grassland;

**SF-AmAA:** *Acacia macraneura* and *Grevillea berryana* scattered shrubs to low open woodland over *Acacia macraneura*, *A. pruinocarpa* and *A. rhodophloia* (with scattered *A. aptaneura* and *A. pteraneura*) tall open shrubland over *Acacia tetragonophylla*, *A. rhodophloia* X *sibirica*, and *Senna glutinosa* subsp. *glutinosa* scattered shrubs (to open shrubland) over *Eremophila fraseri*, *E. exilifolia* and *E. jucunda* low open shrubland (to low shrubland) over *Triodia epactia* hummock grassland;

**PC-o2:** *Acacia citrinoviridis*, *A. pyrifolia* and *A. aneura* scattered low trees over *Eremophila longifolia*, *Acacia citrinoviridis* and *Santalum lanceolatum* tall open shrubland over *Eremophila longifolia*, *Jasminum didymum* and *Corchorus crozophorifolius* shrubland over *Triodia epactia* open hummock grassland;

**BigC-2:** *Acacia citrinoviridis* and *Eucalyptus leucophloia* and *Corymbia ferritcola* open woodland (to low open woodland) over *Acacia citrinoviridis* and *A. pruinocarpa* tall shrubland over *Dodonaea pachyneura*, *Eremophila latrobei* and *Jasminum didymum* shrubland over *Ptilotus obovatus* and *Corchorus crozophorifolius* low open shrubland over *Triodia epactia* very open hummock grassland;

**ML-D:** *Acacia citrinoviridis* and *A. aptaneura* low open woodland over *Acacia citrinoviridis*, *A. aptaneura* and *A. tetragonophylla* tall shrubland over *Acacia rhodophloia*, *Eremophila latrobei* subsp. *latrobei* and *Dodonaea pachyneura* open shrubland over *Ptilotus obovatus* var. *obovatus*, *Eremophila phyllopora* and *E. cuneifolia* scattered to low open shrubland over *Triodia epactia* open hummock grassland over *Eriachne mucronata* and *Cymbopogon ambiguus* scattered tussock grasses;

**PM-HG:** *Acacia pruinocarpa* and *Grevillea berryana* scattered low trees over *Acacia aptaneura* (with scattered *A. macraneura* and *A. aneura*) and *A. rhodophloia* tall open shrubland (to tall shrubland) over *Acacia tetragonophylla* and *Eremophila latrobei* subsp. *latrobei* and *E. fraseri* open shrubland over mixed *Eremophila* spp. scattered to low open shrubland over *Triodia epactia* open hummock grassland (to hummock grassland);

**PM-HG-Te:** *Acacia aptaneura*, *A. rhodophloia*, *A. pruinocarpa* and *A. tetragonophylla* scattered to isolated shrubs (to tall shrubs) over mixed *Senna* and *Eremophila* spp. scattered low shrubs over *Triodia epactia* hummock grassland;

**PM1:** *Grevillea berryana* and *Acacia aptaneura* scattered low trees over *Acacia aptaneura*, *A. rhodophloia* (with scattered *A. macraneura* and *A. aneura*) tall shrubland over *Acacia tetragonophylla*, *Eremophila fraseri* and *E. phyllopora* open shrubland over *Tribulus suberosus* and *Ptilotus schwartzii* scattered to low open shrubland;

**BRW-2:** *Acacia aptaneura* and *Corymbia ferritcola* scattered low trees over *Acacia aptaneura*, *A. fuscaneura* and *A. rhodophloia* tall shrubland over *Acacia tetragonophylla*, *Eremophila latrobei* subsp. *latrobei* and *Dodonaea petiolaris* open shrubland over *Senna stricta*, *Eremophila exilifolia*, *E. fraseri* and *Ptilotus obovatus* var. *obovatus* scattered to low open shrubland over *Triodia epactia* scattered to very open hummock grassland;

**PC2:** *Acacia citrinoviridis* and *A. aptaneura* (with scattered *Corymbia ferritcola*) low open woodland over *Acacia aptaneura*, *A. macraneura*, *A. citrinoviridis* and *Acacia rhodophloia* tall shrubland over *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013), *Eremophila latrobei* subsp. *latrobei* and *Dodonaea pachyneura* open shrubland (to shrubland) over *Eremophila exilifolia*, *E. jucunda*, and *Ptilotus obovatus* var. *obovatus* scattered to low open shrubland over *Triodia epactia* open hummock grassland over *Cymbopogon ambiguus*, and *Eriachne mucronata* scattered tussock grasses;

**PC3:** *Acacia citrinoviridis* low woodland over *Acacia citrinoviridis* and *A. pyrifolia* tall open shrubland (to tall shrubland) over *Petalostylis labicheoides*, *Senna artemisioides* subsp. *oligophylla*, *Eremophila fraseri* and *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013) open shrubland over *Ptilotus obovatus* var. *obovatus*, *Corchorus crozophorifolius*, *Indigofera monophylla* and *Tephrosia rosea* var. *Fortescue* creeks (M.I.H. Brooker 2186) low open shrubland (to low shrubland) over *Triodia epactia* very open hummock grassland;

**Hm1:** *Acacia aptaneura* and *Grevillea berryana* scattered to low open woodland over *Acacia aptaneura*, *A. rhodophloia*, *A. pruinocarpa* and *A. thoma* tall shrubland (with scattered *A. fuscaneura*, *A. incurvaneura* and *A. pteraneura*) over *Acacia tetragonophylla*, *Eremophila fraseri* and *Psydrax latifolia* open shrubland over *Eremophila jucunda*, *Tribulus suberosus* and *Ptilotus schwartzii* scattered to low open shrubland over *Triodia epactia* very open hummock grassland;

**UR/RS-Ap:** *Acacia pruinocarpa* and *Grevillea berryana* scattered low trees over *Acacia aptaneura*, *A. rhodophloia*, *A. pruinocarpa* and *Grevillea berryana* tall open shrubland (to tall shrubland - with scattered *Acacia fuscaneura*, *A. incurvaneura* and *A. pteraneura*) over *Acacia tetragonophylla* and *A. rhodophloia* scattered to open shrubland over *Eremophila fraseri* low open shrubland (with scattered *Eremophila exilifolia* and *E. jucunda*) over *Triodia epactia* open hummock grassland;

**UR-RSSG-Aa:** *Acacia macraneura* low open woodland (to low woodland in places) over *Acacia macraneura*, *A. rhodophloia* and *Grevillea berryana* tall open shrubland (to tall shrubland including scattered *Acacia aptaneura* and *A. pteraneura*) over *Acacia tetragonophylla*, *Eremophila fraseri*, and *Senna glutinosa* subsp. *glutinosa* open shrubland over *Eremophila jucunda* low open shrubland over *Triodia epactia* scattered to very open hummock grassland;

**UR/RS-ApEI:** *Eucalyptus leucophloia* scattered low trees over *Acacia pruinocarpa*, *A. rhodophloia*, *A. citrinoviridis*, and *A. macraneura* scattered to tall open shrubland over *Senna glutinosa* subsp. *glutinosa*, *Acacia rhodophloia* X *sibirica* and *A. maitlandii* open shrubland over *Eremophila jucunda* and other mixed *Eremophila* spp. scattered to low open shrubland over *Triodia epactia* hummock grassland;

**UR/RSS-2:** *Eucalyptus leucophloia* scattered low trees over *Acacia pruinocarpa*, *A. pyrifolia* and *Petalostylis labicheoides* scattered tall shrubs over *Petalostylis labicheoides*, *Senna glutinosa* subsp. *glutinosa*, *Acacia pyrifolia* and *A. maitlandii* open shrubland (to shrubland in places) over *Eremophila fraseri*, *E. canaliculata* and *E. exilifolia* scattered to low open shrubland over *Triodia epactia* very open hummock grassland;

**BRW-1N:** *Acacia pruinocarpa* and *Grevillea berryana* scattered tall shrubs over *Acacia pruinocarpa*, *Eremophila cryptothrix*, *Astrotricha hamptonii* and *Scaevola acacioides* scattered to open shrubland over *Eremophila jucunda*, *E. exilifolia* and *Ptilotus obovatus* var. *obovatus* scattered to low open shrubland over *Triodia epactia* very open hummock grassland over *Eriachne mucronata* scattered to open tussock grassland;

**BRW-1S:** *Corymbia ferritcola* scattered low trees over *Acacia citrinoviridis* and *A. pruinocarpa* scattered to tall open shrubland over *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013), *Dodonaea pachyneura* and *Astrotricha hamptonii* open shrubland to shrubland over *Eremophila fraseri*, *Ptilotus obovatus* var. *obovatus*, *Solanum piceum* and *Sida* sp. Golden calyces glabrous (H.N. Foote 32) low open shrubland (to scattered shrubs) over *Triodia epactia* very open hummock grassland over *Eriachne mucronata* scattered to open tussock grassland;

**SCRE:** Steep scree slopes with little to negligible vegetation. Often positioned below significant breakaway features;

**SNS-HG-1:** *Acacia pruinocarpa* and *Grevillea berryana* scattered tall shrubs over *Eremophila cryptothrix*, *Scaevola acacioides* and *Acacia tetragonophylla* scattered shrubs over mixed scattered low shrubs (typically dominated by

*Eremophila fraseri*, *E. cuneifolia*, *E. phyllopoda*, *E. exilifolia*, and *Ptilotus obovatus*) over *Triodia epactia* hummock grassland over scattered *Eriachne mucronata* tussock grassland;

**CDV1:** *Eucalyptus leucophloia* isolated low trees over *Acacia pruinocarpa* and *A. citrinoviridis* tall open shrubland over *Eremophila phyllopoda*, *E. fraseri* and *Dodonaea pachyneura* open shrubland over *Eremophila phyllopoda* and *E. fraseri* scattered low shrubs over *Triodia epactia* hummock grassland;

**E/La:** *Eucalyptus leucophloia* low open woodland over *Acacia aptaneura* and *A. citrinoviridis* scattered tall shrubs over *Senna glutinosa* subsp. *glutinosa*, *Acacia tetragonophylla* and *Scaevola acacioides* scattered to open shrubland over *Eremophila fraseri*, *E. phyllopoda*, *E. cuneifolia* and *Ptilotus obovatus* low open shrubland over *Triodia epactia* hummock grassland;

**UR-DBV:** *Corymbia ferriticola*, *Grevillea berryana* and *Acacia citrinoviridis* low open woodland over *Acacia citrinoviridis* tall open shrubland over *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013), *Dodonaea pachyneura*, *Eremophila latrobei* subsp. *latrobei*, *E. fraseri*, and *Astrotricha hamptonii* shrubland (to open shrubland - often with patches of *Prostanthera campbellii* in higher altitude areas) over *Ptilotus obovatus* var. *obovatus* and *Sida* sp. Golden calyces glabrous (H.N. Foote 32) low open shrubland (with outcrops of *Prostanthera albiflora*, *Solanum piceum* and *Eremophila jucunda*) over *Triodia epactia* very open hummock grassland;

**UR-DG-o1:** *Corymbia ferriticola* and *Acacia pruinocarpa* scattered to low open woodland (with isolated *Eucalyptus leucophloia*) over *Acacia citrinoviridis* and *A. pruinocarpa* tall open shrubland over *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013), *Acacia tetragonophylla*, *Eremophila latrobei* subsp. *latrobei*, *E. cryptothrix* and *Dodonaea pachyneura* open shrubland over *Eremophila phyllopoda*, *Ptilotus obovatus* var. *obovatus* and *Eremophila jucunda* scattered to low open shrubland over *Triodia epactia* very open hummock grassland over *Eriachne mucronata* and *Cymbopogon ambiguus* scattered to very open tussock grassland;

**UR-DG-o2:** *Corymbia ferriticola* scattered to low open woodland over *Acacia citrinoviridis* tall open shrubland over *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013), *Eremophila latrobei* subsp. *latrobei*, and *Dodonaea pachyneura* open shrubland to shrubland over *Ptilotus obovatus* var. *obovatus*, *Eremophila fraseri*, *E. exilifolia*, *E. cryptothrix*, *Sida* sp. Golden calyces glabrous (H.N. Foote 32) and *Pluchea dentex* scattered to low open shrubland over *Triodia epactia* scattered to very open hummock grassland over *Aristida burbridgeae*, *Cymbopogon ambiguus*, and *Eriachne mucronata* scattered to very open tussock grassland;

**UR-DG-o2E:** *Corymbia ferriticola*, *Acacia citrinoviridis* and *Clerodendrum floribundum* low open woodland over *Acacia citrinoviridis* tall open shrubland (with scattered *Ficus brachypoda*) over *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013), *Eremophila latrobei* subsp. *latrobei*, *E. fraseri* and *Dodonaea pachyneura* open shrubland over *Ptilotus obovatus* var. *obovatus* and *Eremophila fraseri* low open shrubland (with patches of *Prostanthera campbellii*, *P. albiflora*, *Eremophila exilifolia*, *E. cryptothrix*, *Sida* sp. Golden calyces glabrous (H.N. Foote 32)), over *Triodia epactia* very open hummock grassland over *Aristida burbridgeae*, *Cymbopogon ambiguus* and *Eriachne mucronata* scattered to very open tussock grassland;

**UR-DG-E1b:** *Eucalyptus leucophloia* low open woodland (to scattered low trees) over *Acacia citrinoviridis*, *A. pruinocarpa* and *Acacia pyrifolia* tall open shrubland over *Acacia citrinoviridis*, *Hibiscus* sp. Canga (P.J.H. Hurter & J. Naaykens 11013), *Dodonaea pachyneura*, and *Santalum lanceolatum* open shrubland, over *Eremophila fraseri*, *Jasminum didymum* subsp. *lineare*, *Ptilotus obovatus* var. *obovatus* and *Corchorus crozophorifolius* scattered to low open shrubland over *Triodia epactia* very open to open hummock grassland over *Eriachne mucronata* and *Cymbopogon ambiguus* very open tussock grassland;

**HD-BG:** Essentially devoid of vegetation. Only scattered low shrubs and tussock grasses present in some places;

**HD-RE:** Rehabilitation – vegetation which has been previously cleared and is now formally in the process of rehabilitation. Consists of regrowth at various ages.

**Clearing Description** Eastern Range Project. Hamersley Iron Pty Ltd proposes to clear up to 600 hectares of native vegetation within a boundary of approximately 3,914 hectares for the purpose of mineral production. The project is located approximately 5 kilometres south of Paraburdoe within the Shire of Ashburton.

**Vegetation Condition** Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);

To

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

**Comment** The vegetation condition was converted from Trudgen (1988) to Keighery (1994).

The proposed clearing will enable the ongoing mining operations at the Eastern Range Project. Vegetation will be cleared for open pits, waste dumps, stockpiles, haul roads and other related infrastructure (Hamersley Iron, 2010). Topsoil and vegetation from cleared areas will be stockpiled for use in later rehabilitation.

The majority of the additional area appears to have not been burnt for over ten years (Rio Tinto, 2014).

Clearing permit CPS 4032/1 was granted on 17 March 2011 authorising the clearing of 450 hectares within a boundary of 1,738 hectares. This permit was amended on 24 October 2013 to change the definition of local provenance in Condition 6(c)(ii) of the permit to reflect the current standard wording of the definition. Hamersley Iron Pty Ltd has applied to increase the amount of clearing authorised to 600 hectares and increase the permit boundary to 3,914 hectares. They have also requested that the duration of clearing is extended to 31 December 2022. The permit boundary has been extended to cover the area previously covered by CPS 235/1.

### 3. Assessment of application against clearing principles

#### Comments

Hamersley Iron Pty Ltd has applied to increase the amount of clearing authorised by 150 hectares and the permit boundary by an additional 1,681 hectares. They have also requested that the permit expiry date is extended by a further six years. The increased clearing area was previously approved under clearing permit CPS 235/1.

There were 62 intact vegetation units identified within the additional area of which 36 were previously mapped within the original permit boundary (Rio Tinto, 2014). The majority of the vegetation was in 'pristine' condition with the predominant disturbances in the additional area being from exploration activities and dust from adjacent mining activities (Rio Tinto, 2014). None of the vegetation associations within the additional area are considered a Threatened or Priority Ecological Community (GIS Database; Rio Tinto, 2014). All of the vegetation units are considered to be well represented in the local region (Rio Tinto, 2014).

The flora survey of the additional area recorded a total of 238 flora taxa from 100 genera and 41 families (Rio Tinto, 2014). This number is greater than that recorded in the original permit boundary, however, compared to other surveys in the area of a similar size, the additional area contains a relatively average number of flora species (Rio Tinto, 2014). No species of Threatened flora have been recorded within the additional area (GIS Database; Rio Tinto, 2014). Suitable habitat was present for two Threatened flora species. Targeted searches were undertaken within this habitat and it was considered unlikely that those species are present in the permit boundary (Rio Tinto, 2014).

The following five Priority flora species were recorded during the flora survey of the additional area; *Hibiscus* sp. Canga (Priority 1), *Eremophila* sp. Hamersley Range (Priority 1), *Grevillea saxicola* (Priority 3), *Sida* sp. Barlee Range (Priority 3) and *Solanum octonum* (Priority 2). *Hibiscus* sp. Canga was found throughout the additional area and was recorded from 169 locations (Rio Tinto, 2014). This species was deemed to occur in such high numbers and frequencies that total numbers were not recorded during the flora survey (Rio Tinto, 2014). This species is known to occur in similar densities on similar habitat between ranges at Paraburdoo and 20 kilometres east of Channar (Rio Tinto, 2014). A targeted search for this species was also conducted within a 40 kilometre radius of the permit boundary. This search found that the species occurs in high numbers throughout the range and was commonly found within marginal, non-typical and unexpected habitats as well as in core habitat (Rio Tinto, 2014). Given this species occurs in such high numbers and appears to utilise a variety of habitats, there will still be a large population present in the local area following the proposed clearing. Therefore, the proposed clearing is not expected to have a significant impact on this species.

*Eremophila* sp. Hamersley Range was recorded from one location within a creek of the BigC-2 vegetation unit (Rio Tinto, 2014). There is a significantly sized population upstream of this location outside of the permit boundary and there is likely to be other individuals scattered within the creekline in the permit area (Rio Tinto, 2014). Apart from this area this species is believed to be restricted to deeply incised gullies in the original permit boundary. Conditions have been previously placed on the permit restricting clearing within gorge habitats.

*Grevillea saxicola* was recorded from 75 locations within the additional area (Rio Tinto, 2014). Similar to *Hibiscus* sp. Canga, numbers of individuals were not recorded as this species was present in high numbers mainly in the north of the additional area (Rio Tinto, 2014). This species is known to occur from west of Newman to the Mount Brockman and Paraburdoo localities. There is not a large amount of proposed clearing within the preferred habitat of this species in the north of the permit boundary (Rio Tinto, 2014). The proposed clearing is not expected to have a significant impact on this species in the local area.

*Sida* sp. Barlee Range was recorded at 14 locations within the additional area, although given its propensity to inhabit cliff faces and steep gullies it is likely that there are further locations that were not observed during the flora survey (Rio Tinto, 2014). It was also recorded within the original permit boundary. This species is found throughout the southern Pilbara from Newman to Mt Sheila (Western Australian Herbarium, 2014). Records also exist from the northern Gascoyne region. The proposed clearing is not likely to have a significant impact on this species.

There were six records of *Solanum octonum* within the additional area (Rio Tinto, 2014). This species was previously only known from Barlee Range in the Gascoyne but has since been found within the Hamersley Range near Channar and the records within the permit boundary (Rio Tinto, 2014). This species is similar to the species *Solanum piceum* which is common in the permit area (Rio Tinto, 2014). The two species differ by characteristics of the stellate hairs which make identification in the field difficult. Given the difficulties in identification it is likely that this species is present in higher numbers than what was recorded. The distribution of this species was from within a large gully system in the north-east corner of the additional area (Rio Tinto, 2014). Impacts to this species may be minimised by extending the current permit condition restricting clearing within gorge habitat to include similar habitat in the additional area.

A Level 1 fauna survey was conducted of the additional area from 9 to 15 June 2014 by Astron (2014). The majority of the fauna habitat in the additional area was assessed as being high quality (Astron, 2014). There were six fauna habitats mapped within the additional area; gorge, breakaway/escarpment, hill crest, undulating hills, stony plain and drainage line (Astron, 2014). Some areas were also mapped as disturbed which have little value for fauna species. Over 80% of the additional area is comprised of the hill crest and undulating hills

habitat types (Astron, 2014). Both of these habitats were rated as having a low value for fauna in the local area (Astron, 2014). The gorge habitat is of high value for fauna species as it provides refuge for fauna and contains semi-permanent water pools (Astron, 2014). This habitat contains a greater diversity of prey species and supports a number of conservation significant fauna species. The breakaway/escarpment habitat is of value to Northern Quolls (*Dasyurus hallucatus* – Schedule 1; Endangered) due to smaller caves and overhangs that could be utilised by the species (Astron, 2014).

The Pilbara Olive Python (*Liasis olivaceus barroni* - Schedule 1; Vulnerable) has been previously recorded within gorge habitat from the original permit boundary. Targeted searches during the current fauna survey did not locate this species, however, it is a cryptic species and the gorge habitat is known to support the Pilbara Olive Python in the area (Astron, 2014). Astron (2014) observed that the water pool where this species has been previously found was silty and affected by sedimentation from the mine. Significant impacts to vegetation in the gorge habitat have the potential to further degrade water pools impacting on prey availability of the Pilbara Olive Python.

The Pilbara Leaf-nosed Bat (*Rhinonictis aurantius* - Schedule 1; Vulnerable) and Ghost Bat (*Macroderma gigas* - Priority 4) were both recorded within the permit boundary (Astron, 2014). Visual assessment was undertaken of 15 caves in the permit boundary although no evidence of these bat species was identified (Astron, 2014). Calls of both bats were recorded by Astron (2014) within the permit boundary. The Ghost Bat was recorded at one location within the permit boundary and has also been previously recorded from two other locations within the permit boundary (Astron, 2014). It is likely that there is a small number of Ghost Bats using the gorge habitat for foraging and drinking (Astron, 2014). Astron (2014) observed that a pool near to where this species has been previously recorded was filled in due to sedimentation and run-off from the mine. Significant impacts to vegetation in the gorge habitat have the potential to further degrade water pools which the Ghost Bat utilises. The Pilbara Leaf-nosed Bat was recorded in greater abundance than the Ghost Bat and it utilises the gorge and drainage line habitat for foraging and drinking (Astron, 2014). No roosts have been found within the permit boundary, however, the timing of the calls suggests that there is a roosting cave within 3.5 kilometres of the permit area (Astron, 2014).

The Northern Quoll was previously recorded in the original permit boundary but the current survey was unable to detect any quolls within the additional area. The gorge habitat is highly suitable for this species as it contains caves, crevices, overhangs and rocky areas suitable for denning and shelter. The breakaway/escarpment habitat was of moderate value for the Northern Quoll as it contained overhangs, shelter and crevices that provide refugia (Astron, 2014).

The gorge habitat within the additional area is significant for all of these conservation significant species. Impacts to these species may be minimised by extending the current permit condition restricting clearing within gorge habitat to include similar habitat in the additional area.

There are numerous minor perennial watercourses within the additional area (GIS Database). There are numerous vegetation units that are associated with drainage lines in the additional area (Rio Tinto, 2014). Several of the vegetation units (UR-DG-o1, UR-DG-o2, UR-DG-o2E and UR-DG-E1b) are associated with watercourses of the upper parts of the range and are significant for the rocky riparian habitats they provide for Priority flora, riparian flora and fauna (Rio Tinto, 2014). The UR-DG-o2 and UR-DG-o2E units are of particular significance as the gullies are more deeply incised and at times form semi-gorge formations (Rio Tinto, 2014). There are two small permanent/semi-permanent waterholes in the north-east of the additional area (Rio Tinto, 2014). Extending the current permit condition restricting clearing within gorge habitat to include similar habitat in the additional area will also minimise impacts on these waterholes. Potential impacts to watercourses may be minimised by the implementation of a watercourse management condition.

The additional area is mapped as occurring on the Boolgeeda, Marandoo, Newman and Platform land systems (GIS Database). These land systems are not prone to erosion (Van Vreeswyk et al., 2004). Whilst the land systems are inherently resistant to erosion it was observed during the fauna survey of the additional area that waterholes were being adversely impacted by runoff from mining operations (Astron, 2014). Hamersley Iron Pty Ltd should ensure that measures are in place to manage impacts to water quality from minesite runoff.

The nearest conservation area is Karijini National Park which is located approximately 27 kilometres east of the permit boundary (GIS Database). The proposed clearing will not impact on any linkages into the National Park.

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*, and the proposed clearing is at variance to Principle (f), may be at variance to Principles (a), (b), (g), (i) and (j) is not likely to be at variance to Principles (c), (d) and (h) and is not at variance to Principle (e).

**Methodology** Astron (2014)  
Rio Tinto (2014)  
Van Vreeswyk et al. (2004)  
Western Australian Herbarium (2014)  
GIS Database:  
- Hydrography, linear  
- Rangeland Land System Mapping

- Threatened and Priority Flora
- Threatened Ecological Sites Buffered

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

### Comments

There are two Native Title Claims (WC2010/011 and WC2010/016) over the area under application (GIS Database). 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 numerous registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

It is noted that the proposed clearing may impact on a protected matter under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). The proponent may be required to refer the project to the (Federal) Department of the Environment for environmental impact assessment under the EPBC Act. The proponent is advised to contact the Department of the Environment for further information regarding notification and referral responsibilities under the EPBC Act.

The expansion of the Eastern Range Project has been previously referred to the EPA. On 21 December 2004 the EPA set the level of assessment as 'Not Assessed - Public Advice Given and Managed Under Part V of the EP Act'.

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 clearing permit application was advertised on 8 December 2014 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

### Methodology GIS Database:

- Aboriginal Sites of Significance
- Native Title Claims - Registered with the NNTT

## 4. References

- Astron (2014) Eastern Range Level 1 and Targeted Fauna Survey. Unpublished report prepared for Rio Tinto Iron Ore, dated June 2014.
- Hamersley Iron (2010) Application for a Clearing Permit (Purpose Permit) Mining Operations - Tenement AML70/4SA & AML 70/246.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Rio Tinto (2010) Flora and Vegetation Assessment of the Eastern Ranges LOM Study Area (ERSA): Including supporting documentation for a Native Vegetation Clearing Permit Application (SO-10-05940). Unpublished report prepared for Rio Tinto - October 2010.
- Rio Tinto (2014) Flora and Vegetation Assessment of the Eastern Ranges Study Area. Unpublished report prepared by Rio Tinto, dated November 2014.
- Trudgen, M.E. (1998) A Report on Flora and Vegetation of the Port Kennedy Area. Unpublished report prepared for Bowman Bishaw and Associates, West Perth.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A & Hennig, P. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia, Department of Agriculture, Western Australia.
- Western Australian Herbarium (2014) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <<http://florabase.dpaw.wa.gov.au/>> Accessed 2 January 2015.

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DPaW and DER)
<b>DER</b>	Department of Environment Regulation, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DRF</b>	Declared Rare Flora
<b>DotE</b>	Department of the Environment, Australian Government
<b>DoW</b>	Department of Water, Western Australia
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia



<b>DSEWPaC</b>	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>s.17</b>	Section 17 of <i>the Environment Protection Act 1986</i> , Western Australia
<b>TEC</b>	Threatened Ecological Community

## **Definitions:**

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

- T**      **Threatened species:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).  
  
Threatened Fauna and Flora are further recognised by DPaW according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorhynchus latirostris* is specially protected under the *Wildlife Conservation Act 1950* as a threatened species with a ranking of Endangered.  
  
Rankings:  
CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.  
EN: Endangered - considered to be facing a very high risk of extinction in the wild.  
VU: Vulnerable - considered to be facing a high risk of extinction in the wild.
- X**      **Presumed Extinct species:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).
- IA**      **Migratory birds protected under an international agreement:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.  
Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.
- S**      **Other specially protected fauna:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P1**      **Priority One - Poorly-known species:**  
Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.
- P2**      **Priority Two - Poorly-known species:**  
Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.
- P3**      **Priority Three - Poorly-known species:**  
Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities 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 localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.
- 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 do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.  
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

P5

**Priority Five - Conservation Dependent species:**

Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

**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.