



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6450/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

1.3. Property details

Property: Iron Ore (Goldsworthy-Nimingarra) Agreement Act 1972, Mining Lease 263SA (AM 70/263); Iron Ore (Goldsworthy-Nimingarra) Agreement Act 1972, Mineral Lease 251SA (AML 70/251); Iron Ore (Mount Goldsworthy) Agreement Act 1964, Mineral Lease 249SA (AML 70/249); Iron Ore (Mount Goldsworthy) Agreement Act 1964, Special Lease 3116/6935, Document J998594 L, Lot 42 on Deposited Plan 241586; Mining Leases 45/558, 45/573, 45/592, 45/1016, 45/1018; Exploration Licence 45/1072

Local Government Area: Shire of East Pilbara
Colloquial name: Nimingarra to Yarrarie Strategic Exploration Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
444.82		Mechanical Removal	Mineral exploration, geotechnical investigations, hydrological drilling, access tracks, rehabilitation, installation of meteorological masts and LiDAR stations and any associated activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 11 March 2021

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. Three Beard vegetation associations have been mapped within the application area (GIS Database):

93: Hummock grasslands, shrub steppe; kanji over soft spinifex;
117: Hummock grasslands, grass steppe; soft spinifex; and
171: Hummock grasslands, low tree steppe; snappy gum over soft spinifex and *Triodia brizoides*.

Eight flora and vegetation surveys have been undertaken over the application area by Onshore (2010, 2013a, 2013b), Astron (2012, 2014), ENV (2008) and Ecologia (2005a, 2005b). These surveys identified 95 vegetation associations within 28 broad floristic communities within the application area (BHP, 2015):

Astron (2012) described 10 broad floristic communities with 27 vegetation associations with the application area:

Melaleuca Low Open Forest

1: Low Open Forest of *Melaleuca argentea* and *Eucalyptus victrix* over Tall Shrubland of *Acacia colei* var. *colei* and *A. trachycarpa* over Very Open Tussock Grassland of *Echinochloa colona* and Very Open Sedgeland of *Fimbristylis littoralis* and *Cyperus conicus*.

Melaleuca Woodland

2: Woodland of *Eucalyptus victrix*, *Melaleuca argentea* and *Ficus aculeata* var. *indecora* over Scattered Tall Shrubs of *Atalaya hemiglauca* and *Ficus aculeata* var. *indecora* over Scattered Hummock Grasses of *Triodia biflora*, Very Open Tussock Grassland of *Chloris barbata*, *Digitaria ciliaris* and *Echinochloa colona* with Scattered Sedges of *Cyperus vaginatus*.

Acacia Low Closed Forest

5: Low Closed Forest of *Acacia colei* var. *colei* and *A. tumida* var. *pilbarensis* over Tall Open Scrub of *A. colei* var. *colei*, *A. tumida* var. *pilbarensis* and *A. synchronicia* over Scattered Hummock Grasses of *Triodia epactia* and *T. biflora*.

Acacia Tall Open Scrub

6a: Low Open Woodland of *Corymbia hamersleyana* and *C. flavescens* over Tall Open Scrub of *Acacia tumida* var. *pilbarensis*, *A. ancistrocarpa*, *A. colei* var. *colei* and *Petalostylis labicheoides* over Low Open Heath of *Acacia stellaticeps* over Open Hummock Grassland of *Triodia epactia* and *T. schinzii* over Very Open Tussock Grassland of *Chrysopogon fallax* and *Paraneurachne muelleri*.

6b: Scattered Low Trees of *Corymbia flavescens* and *C. hamersleyana* over Tall Open Scrub of *Acacia ancistrocarpa* and *Grevillea wickhamii* subsp. *hispidula* over Open Hummock Grassland of *Triodia epactia* with Open Tussock Grassland of *Chrysopogon fallax*.

6c: Scattered Low Trees of *Corymbia hamersleyana* over Tall Open Scrub of *Acacia tumida* var. *pilbarensis* over Low Open Shrubland of *Acacia adoxa* and *A. hilliana* over Hummock Grassland of *Triodia epactia*.

6d: Low Open Woodland of *Corymbia flavescens* and *C. hamersleyana* over Tall Open Scrub of *Acacia ancistrocarpa*, *A. tumida* var. *pilbarensis* and *Grevillea wickhamii* subsp. *hispidula* over Open Shrubland of *Tephrosia rosea* var. *clementii* over Very Open Hummock Grassland of *Triodia epactia* and *T. schinzii* and Open Hermland of *Bonamia* species.

Acacia Tall Shrubland

7a: Tall Shrubland of *Acacia tumida* var. *pilbarensis* over Open Shrubland of *Petalostylis labicheoides* over Open Hummock Grassland of *Triodia schinzii* and *T. epactia* and Very Open Herb land of *Jasminum didymum* subsp. *lineare*.

7b: Low Open Woodland of *Corymbia hamersleyana*, *C. flavescens* and *Eucalyptus victrix* over Tall Shrubland of *Acacia colei* var. *colei* and *A. tumida* var. *pilbarensis* over Low Open Shrubland of *Cajanus cinereus* over Open Hummock Grassland of *Triodia epactia*, *T. biflora* and *T. wiseana* and Very Open Tussock Grassland of *Themeda triandra*.

Acacia Low Open Heath

8a: Low Open Heath of *Acacia stellaticeps*, *A. ptychophylla* and *Indigofera monophylla* over Hummock Grassland of *Triodia wiseana*.

8b: Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia flavescens* over Scattered Tall Shrubs of *Acacia inaequilatera* and *A. ancistrocarpa* over Shrubland of *Acacia adoxa*, *A. hilliana* and *Senna symonii* over Hummock Grassland of *Triodia epactia* and *T. wiseana*.

Triodia Hummock Grassland

10a: Scattered Low Trees of *Corymbia hamersleyana* over Tall Open Shrubland of *Acacia tumida* var. *pilbarensis* and *Grevillea wickhamii* subsp. *Hispidula* over Low Open Shrubland of *Acacia adoxa* and *A. hilliana* over Hummock Grassland of *Triodia epactia* over Very Open Sedgeland of *Fimbristylis oxystachya* and Scattered Tussock Grasses of *Eriachne mucronata* and *E. lanata*.

10b: Tall Shrubland of *Grevillea wickhamii* subsp. *hispidula* over Low Open Shrubland to Open Heath of *Acacia hilliana* and *A. adoxa* over Hummock Grassland of *Triodia epactia*.

10d: Low Open Woodland of *Corymbia hamersleyana* over Tall Shrubland of *Grevillea wickhamii* subsp. *hispidula* and *Acacia tumida* var. *pilbarensis* over Low Shrubland of *Acacia hilliana*, *A. ptychophylla* and *A. adoxa* over Hummock Grassland of *Triodia epactia*.

10e: Low Open Woodland of *Corymbia hamersleyana* over Tall Open Shrubland of *Grevillea wickhamii* subsp. *hispidula* and *Acacia inaequilatera* over Low Shrubland of *Acacia adoxa* and *A. ptychophylla* over Closed Hummock Grassland of *Triodia epactia* and *T. wiseana*.

10f: Low Open Woodland of *Corymbia flavescens* over Tall Open Shrubland of *Acacia tumida* var. *pilbarensis* and *A. colei* var. *colei* over Low Shrubland of *Indigofera monophylla*, *Isotropis atropurpurea* and *Corchorus elachocarpus* over Hummock Grassland of *Triodia epactia* over Scattered Tussock Grasses of *Chrysopogon fallax* and *Sporobolus australasicus*.

10g: Scattered Shrubs of *Petalostylis labicheoides* over Low Shrubland of *Acacia bivenosa*, *A. stellaticeps* and *Corchorus sidoides* subsp. *sidoides* over Hummock Grassland of *Triodia epactia* and *T. angusta*.

10h: Low Open Woodland of *Corymbia hamersleyana* over Shrubland of *Grevillea wickhamii* subsp. *hispidula*, *Acacia tumida* var. *pilbarensis* and *A. inaequilatera* over Low Open Heath of *Acacia adoxa* and *A. hilliana* over Hummock Grassland of *Triodia epactia*.

10l: Scattered Low Trees of *Corymbia hamersleyana* over Open Shrubland of *Acacia inaequilatera*, *A. tumida* var. *pilbarensis* and *A. ancistrocarpa* over Hummock Grassland of *Triodia epactia* and *T. wiseana*.

10m: Low Open Woodland of *Corymbia hamersleyana* and *C. flavescens* over Tall Shrubland of *Acacia orthocarpa* and *A. ancistrocarpa* over Low Shrubland of *Grevillea wickhamii* subsp. *hispidula*, *Acacia adoxa* and *A. hilliana* over Hummock Grassland of *Triodia epactia* and *T. schinzii* over Scattered Sedges to Very Open Sedgeland of *Fimbristylis oxystachya* and *Cyperus conicus*.

10o: Scattered Low Trees of *Corymbia hamersleyana* over Scattered Tall Shrubs of *Acacia ancistrocarpa* over Open Shrubland of *Grevillea wickhamii* subsp. *hispidula*, *Acacia tumida* var. *pilbarensis* and *A. monticola* over Low Open Shrubland of *Acacia hilliana* and *A. adoxa* over Hummock Grassland of *Triodia epactia* with Scattered Tussock Grasses of *Eriachne lanata* over Scattered Sedges of *Fimbristylis oxystachya*.

10p: Tall Open Shrubland of *Acacia tumida* var. *pilbarensis*, *A. inaequilatera* and *A. synchronicia* over Low Open Shrubland of *Acacia hilliana* and *A. adoxa* over Hummock Grassland of *Triodia epactia* and *T. wiseana*.

10r: Low Open Woodland of *Corymbia hamersleyana* over Tall Open Scrub of *Acacia ancistrocarpa*, *A. synchronicia* and *A. tumida* var. *pilbarensis* over Open Heath of *Acacia stellaticeps* over Hummock Grassland of *Triodia epactia*.

10s: Low Open Woodland of *Grevillea pyramidalis* subsp. *leucadendron* and *Acacia inaequilatera* over Open Shrubland of *Acacia ancistrocarpa*, *A. inaequilatera* and *A. synchronicia* over Hummock Grassland of *Triodia epactia*.

Triodia Open Hummock Grassland

11: Low Woodland of *Corymbia hamersleyana* and *Acacia tumida* var. *pilbarensis* over Low Shrubland of *Tephrosia* sp. Bungaroo Creek, *Acacia adoxa* and *A. stellaticeps* over Open Hummock Grassland of *Triodia epactia* and *T. wiseana*.

Eriachne Tussock Grassland

13: Low Open Shrubland of *Acacia tumida* var. *pilbarensis*, *A. adoxa* and *A. hilliana* over Scattered Low Shrubs of *Hybanthus aurantiacus*, *Goodenia stobbsiana* and *Corchorus sidoides* subsp. *vermicularis* over Tussock Grassland of *Eriachne lanata*.

***Cenchrus Open Tussock Grassland**

14: Low Woodland of *Eucalyptus victrix*, *Corymbia flavescens* and *Atalaya hemiglauca* over Low Open Shrubland of *Indigofera monophylla*, *Corchorus tectus* and *Tephrosia* sp. D Kimberley Flora (R.D Royce 1848) over Open Tussock Grassland of **Cenchrus ciliaris* and *Chrysopogon fallax* over Very Open Hummock Grassland of *Triodia epactia*.

Onshore Environmental Consultants (2013a) mapped six broad floristic communities with 13 vegetation associations within the application area:

Eucalyptus Low Woodland

1a: Low Woodland of *Eucalyptus victrix*, *Melaleuca glomerata* and *Eucalyptus leucophloia* subsp. *leucophloia* over High Shrubland of *Melaleuca glomerata*, *Acacia trachycarpa* and *Acacia coleii* var. *coleii* over Open Hummock Grassland of *Triodia longiceps* on major drainage lines.

1b: Low Woodland of *Eucalyptus victrix* and *Acacia ampliceps* over High Shrubland of *Acacia trachycarpa* and *Acacia coleii* var. *coleii* over Open Hummock Grassland of *Triodia longiceps* on medium drainage lines.

Acacia Open Scrub

2a: Open Scrub of *Acacia tumida* subsp. *pilbarensis* and *Grevillea wickhamii* subsp. *hispidula* over Hummock Grassland of *Triodia epactia*, *Triodia wiseana* and *Triodia biflora* with Scattered Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* in minor drainage lines on mesa crests.

2b: Open Scrub of *Acacia trachycarpa* over Open Hummock Grassland of *Triodia longiceps* with Scattered Low Trees of *Eucalyptus victrix* and *Corymbia hamersleyana* on floodplains.

Acacia Low Open Heath

3: Low Open Heath of *Acacia stellaticeps* over Hummock Grassland of *Triodia epactia* and *Triodia longiceps* on plains.

Triodia Closed Hummock Grassland

4: Closed Hummock Grassland of *Triodia epactia* with Low Open Woodland of *Corymbia flavescens* and *Corymbia hamersleyana* over Low Open Shrubland of *Acacia stellaticeps* on sandy plains.

Triodia Hummock Grassland

5a: Hummock Grassland of *Triodia epactia* with High Shrubland of *Grevillea wickhamii* subsp. *hispidula* and *Acacia tumida* subsp. *pilbarensis* over Low Shrubland of *Acacia adoxa* var. *adoxo* and *Acacia ptychophylla* on mesa crests.

5b: Hummock Grassland of *Triodia epactia* and *Triodia wiseana* with High Open Shrubland of *Acacia tumida* subsp. *pilbarensis* and Scattered Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* on sandstone breakaways.

5c: Hummock Grassland of *Triodia epactia* with High Shrubland of *Acacia ancistrocarpa*, *Acacia coleii* var. *coleii* and *Acacia trachycarpa* over Low Shrubland of *Acacia stellaticeps* on a mosaic of sandy and stony plains.

5d: Hummock Grassland of *Triodia longiceps* and *Triodia epactia* over Low Open Shrubland of *Acacia stellaticeps* with Scattered Tall Shrubs of *Acacia tumida* var. *pilbarensis*, *Acacia coleii* var. *coleii* and *Acacia ancistrocarpa* on stony plains.

5e: Hummock Grassland of *Triodia epactia* with High Shrubland of *Acacia coleii* var. *coleii*, *Acacia ancistrocarpa* and *Acacia tumida* var. *pilbarensis* and Low Open Woodland of *Corymbia flavescens* and *Corymbia hamersleyana* in drainage zones on plains.

5f: Hummock Grassland of *Triodia wiseana* with High Open Shrubland of *Acacia inaequilatera* and Scattered Low Trees of *Corymbia hamersleyana* on scree slopes and footslopes.

Triodia Open Hummock Grassland

6: Open Hummock Grassland of *Triodia epactia* and *Triodia biflora* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Ficus brachypoda* over High Open Shrubland of *Acacia tumida* subsp. *pilbarensis* and *Grevillea wickhamii* subsp. *hispidula* on mesa cliffines and gullies.

ENV (2008) mapped three broad floristic communities with seven vegetation associations within the application area:

Woodlands

ChAtTe: *Corymbia hamersleyana* scattered low trees over *Acacia tumida* var. *pilbarensis* high shrubland over *Acacia pyrifolia* open shrubland over *Acacia ptychophylla* and *Acacia adoxa* var. *adoxo* low scattered shrubs over *Triodia epactia* closed hummock grassland. This vegetation community is found in drainage lines in the north-west of the supplementary survey area.

EIAiTw: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia inaequilatera* open shrubland over *Triodia wiseana* hummock grassland. Covers the slopes to the north of the ridge.

Ch/EIGwTe: *Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Grevillea wickhamii* subsp. *hispidula* and *Acacia tumida* var. *pilbarensis* high shrubland over *Triodia epactia* hummock grassland. This vegetation community dominates the slopes closest to the ridge.

Ch/EIAiEm: *Corymbia hamersleyana*, *Corymbia flavescens* and *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia tumida* var. *pilbarensis* and *Grevillea wickhamii* subsp. *hispidula* open shrubland over *Eriachne mucronata* (typical form) very open tussock grassland over *Triodia biflora*, *Triodia epactia* and *Triodia wiseana* hummock grassland. This vegetation type is located in the gorges, gullies and breakaways.

Shrublands

GwTe: *Grevillea wickhamii* subsp. *hispidula* high open shrubland over *Acacia stellaticeps* open shrubland over *Dampiera candidans* and *Leptosema anomalum* scattered low shrubs over *Triodia epactia* hummock grassland. Forms the drainage lines running to the south of the main ridge.

AoTe *Acacia orthocarpa*, *Grevillea pyramidalis* subsp. *leucadendron* and *Grevillea wickhamii* subsp. *hispidula* high shrubland over *Corchorus* aff. *parviflorus* (1)(GLD SRH67-5) and *Acacia adoxa* var. *adoxo* low open shrubland over *Triodia epactia* hummock grassland over *Cymbopogon ambiguus* scattered tussock grasses. This vegetation community is located to the south of the main range.

Grasslands

Gp/GwTe: *Grevillea pyramidalis* subsp. *leucadendron* and *Grevillea wickhamii* subsp. *hispidula* open shrubland over *Acacia ptychophylla*, *Acacia adoxa* var. *adoxo* and *Tephrosia* aff. *rosea* (HD292-37) low shrubland over *Triodia epactia* hummock grassland.

Ecologia (2005a) mapped three broad floristic communities with eight vegetation associations within the application area:

Forest

1: *Corymbia flavescens* and/or *Atalaya hemiglaucula* and/or *Ficus brachypoda* (sometimes with *Eucalyptus leucophloia* subsp. *leucophloia* moderately dense medium forest to sparse low woodland, over medium shrubs such as *Acacia tumida* var. *pilbarensis* / *Grevillea wickhamii* subsp. *hispidula* / *Grevillea pyramidalis* subsp. *leucadendron* / *Petalostylis labicheoides* / *Flueggea virosa* subsp. *melanthesoides* medium shrubs, over low shrubs such as *Solanum dioicum* and *Indigofera monophylla*, over tussock grasses such as *Cymbopogon ambiguus* / *Eriachne mucronata* (typical form), over *Triodia epactia* of *Triodia wiseana* moderately dense to sparse hummock grassland.

Woodland

2a: *Eucalyptus leucophloia* subsp. *leucophloia* (or *Corymbia hamersleyana*) open medium / low woodland or trees (sometimes with *Terminalia canescens* or *Corymbia flavescens*), over *Acacia tumida* subsp. *pilbarensis* (or *Petalostylis labicheoides*) moderately dense to scattered tall/ medium shrubland, over medium shrubs such as *Acacia pyrifolia*, over low shrubs such as *Dampiera candidans* / *Sida* sp. A Kimberley Flora (P.A. Fryxell & I.A. Craven 3900) or *Triumfetta plumigera* / *Triumfetta maconochieana*, over dwarf shrubs such as *Indigofera monophylla*, over mixed tussock grass and spinifex hummock grasses.

2b: *Eucalyptus leucophloia* subsp. *leucophloia* open low woodland, over *Hakea chordophylla* scattered tall shrubland, over *Triumfetta maconochieana* / *Senna glutinosa* subsp. *glutinosa* scattered low shrubland, over *Triodia wiseana* moderately dense hummock grassland.

Shrublands

3a: *Acacia tumida* var. *pilbarensis* (also with *Grevillea wickhamii* subsp. *hispidula* / *Acacia pyrifolia* / *Petalostylis labicheoides*) moderately dense to open tall / medium shrubland, sometimes with *Corymbia hamersleyana* open low woodland to scattered trees, or with *Eucalyptus odontocarpa* open medium / low mallee, over open to low shrubs such as *Dampiera candidans* / *Acacia ptychophylla* / *Indigofera monophylla* (small calyx form), over tussock grasses and *Triodia epactia* or *Triodia biflora* hummock grasses.

3b: *Grevillea wickhamii* subsp. *hispidula* open to sparse tall / medium shrubland (sometimes with *Corymbia hamersleyana* / *Acacia pyrifolia* / *Acacia tumida* var. *pilbarensis*), over *Acacia ptychophylla* / *Dampiera candidans* moderately dense to sparse dwarf shrubland (occasionally with *Indigofera monophylla* (small calyx form), over *Goodenia stobbsiana* herbs, over *Triodia epactia* or *Triodia wiseana* open (to moderately dense) hummock grassland.

3c: *Grevillea wickhamii* subsp. *hispidula* / *Acacia inaequilatera* open medium to tall shrubland, over *Goodenia stobbsiana* scattered herbs, over *Triodia epactia* moderately dense hummock grassland.

3d: *Petalostylis labicheoides* / *Acacia tumida* var. *pilbarensis* / *Grevillea wickhamii* subsp. *hispidula* moderately dense to sparse medium shrubland (sometimes with *Corymbia hamersleyana* or *C. aff. hamersleyana*), over *Triodia epactia* moderately dense to sparse hummock grassland.

3e: *Grevillea wickhamii* subsp. *hispidula* moderately dense to sparse medium flow shrubland (sometimes with *Eucalyptus leucophloia* subsp. *leucophloia*, *Petalostylis labicheoides* and *Acacia tumida* var. *pilbarensis* trees and shrubs), over *Acacia spondylophylla* (and sometimes *Solanum dioicum* / *Corchorus* spp.) / *Acacia*

ptychophylla moderately dense to scattered low / dwarf shrubland, over *Triodia epactia* moderately dense to sparse hummock grassland.

Astron (2014) mapped five broad floristic communities with eight vegetation associations within the application area:

Acacia Tall Open Scrub to Acacia Low Open Forest

1a: Tall Open Scrub to Low Open Forest of *Acacia tumida* var. *pilbarensis*, *A. colei* and *Terminalia canescens* over Open Hummock Grassland to Hummock Grassland of *Triodia epactia* and Very Open Tussock Grassland of **Cenchrus ciliaris*, with Tall Shrubland to Tall Open Shrubland of *Acacia trachycarpa*, *Carissa lanceolata* and *Tephrosia rosea* var. *clementii*. Occurs as a mosaic with vegetation association 2a and 5c.

1b: Low Open Forest of *Acacia tumida* var. *pilbarensis*, *Corymbia hamersleyana* and *Grevillea wickhamii* subsp. *hispidula* over Closed Hummock Grassland of *Triodia epactia* and *T. wiseana* with Open Shrubland of *Acacia ptychophylla*.

Eucalyptus Scattered Low Trees to Scattered Trees with patches of Low Open Woodland to Open Woodland

3a: Scattered Low Trees to Scattered Trees with patches of Low Open Woodland to Open Woodland of *Eucalyptus camaldulensis* subsp. *refulgens*, *E. victrix* and *Corymbia hamersleyana*.

Melaleuca Open Forest

4a: Open Forest of *Melaleuca argentea* over Open Tussock Grassland of *Cyperus vaginatus* and *Cymbopogon ambiguus*.

Triodia Hummock Grassland

5a: Hummock Grassland of *Triodia epactia* and *T. wiseana* with Low Open Heath of *Acacia ptychophylla* and *Goodenia stobbsiana* and Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia*, *Acacia inaequilatera* and *Grevillea wickhamii* subsp. *hispidula*.

5b: Hummock Grassland of *Triodia longiceps* and *T. wiseana* and Very Open Tussock Grassland of **Cenchrus ciliaris* with Very Open Shrubland to Open Shrubland of *Corchorus elachocarpus*, *Senna glutinosa* subsp. *glutinosa* and *Tephrosia rosea* var. *clementii* and Scattered Low Trees to Low Woodland of *Corymbia hamersleyana*, *Acacia inaequilatera* and *Atalaya hemiglaucula*.

5d: Very Open Hummock Grassland to Hummock Grassland of *Triodia epactia* and Very Open Tussock Grassland of *Eriachne mucronata*, *E. tenuiculmis* and *Cymbopogon ambiguus* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia*, *Atalaya hemiglaucula* and *Terminalia canescens* over Tall Open Shrubland of *Acacia monticola*, *Grevillea wickhamii* subsp. *hispidula* and *Templetonia hookeri* and Shrubland to Open Shrubland of *Acacia ptychophylla*.

5e: Hummock Grassland to Closed Hummock Grassland of *Triodia epactia* and *T. wiseana* with Low Open Woodland of *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* and *Acacia inaequilatera* over Tall Shrubland of *Grevillea wickhamii* subsp. *hispidula*, *G. pyramidalis* subsp. *leucadendron* and *Acacia colei* over Shrubland to Open Heath of *Acacia ptychophylla*.

Onshore Environmental Consultants (2010) described 10 broad floristic communities with 19 vegetation associations within the application area:

Eucalyptus Woodland

1 (Yarrie A): Woodland of *Eucalyptus victrix* over High Open Shrubland of *Petalostylis labicheoides* and *Acacia tumida* var. *pilbarensis* over Low Shrubland of *Tephrosia rosea* var. *clementii* and *Corchorus* sp.

2 (Yarrie A): Open Scrub of *Acacia colei*, *Acacia tumida* var. *pilbarensis* and *Acacia elachantha* over Hummock Grassland of *Triodia epactia* with Low Open Woodland of *Corymbia flavescens* and *Corymbia hamersleyana*.

1a (Yarrie B): Open Scrub of *Acacia tumida*, *Acacia colei* and *Acacia pyrifolia* over Open Hummock Grassland of *Triodia epactia* with Low Open Woodland of *Corymbia hamersleyana*.

1a (Yarrie B): Open Scrub of *Acacia colei*, *Acacia tumida* and *Grevillea wickhamii* over Open Hummock Grassland of *Triodia epactia* with Low Open Shrubland of *Pluchea tetranthera*.

Acacia Low Open Heath

2 (Yarrie B): Low Open Heath of *Acacia stellaticeps* over Hummock Grassland of *Triodia epactia* with Scattered Low Trees of *Corymbia hamersleyana*.

Acacia High Shrubland

3a (Yarrie A): High Shrubland of *Acacia colei* over Scattered Herbs of *Alternanthera nodiflora* and *Centipeda minima*.

3b (Yarrie A): High Shrubland of *Acacia tumida* var. *pilbarensis*, *Acacia colei* and *Acacia pyrifolia* over Low Shrubland of *Tephrosia rosea* var. *clementii*, *Pluchea tetranthera* and *Melhania oblongifolia* with Low Open Woodland of *Corymbia flavescens* and *Corymbia hamersleyana*.

3c (Yarrie A): High Shrubland of *Acacia colei*, *Grevillea wickhamii* and *Grevillea pyramidalis* over Low Open Shrubland of *Pluchea tetranthera* over Hummock Grassland of *Triodia epactia*.

Low Scattered Shrubs

3c (Yarrie B): Scattered Shrubs over Scattered Hummock Grassland.

Various species

4 (Yarrie A): Scattered Shrubs of *Acacia* spp. and *Grevillea* spp. over Low Scattered Shrubs of *Pluchea tetranthera* and Scattered Hummock Grassland of *Triodia epactia*.

Triodia Closed Hummock Grassland

6 (Yarrie A): Closed Hummock Grassland of *Triodia epactia* with High Shrubland of *Acacia colei*, *Grevillea pyramidalis* and *Acacia elachantha* over Low Open Shrubland of *Pluchea tetranthera*.

4 (Yarrie B): Closed Hummock Grassland of *Triodia epactia* with High Shrubland of *Acacia tumida*, *Acacia colei* and *Acacia inaequilatera* over Low Open Shrubland of *Pluchea tetranthera*.

Triodia Hummock Grassland

7a (Yarrie A): Hummock Grassland of *Triodia wiseana* with High Open Shrublands of *Grevillea pyramidalis*, *Acacia inaequilatera* and *Acacia colei* with Scattered Low Trees of *Corymbia hamersleyana*.

7b (Yarrie A): Hummock Grassland of *Triodia wiseana* and *Triodia epactia* with High Shrublands of *Grevillea wickhamii*.

5a (Yarrie B): Hummock Grassland of *Triodia wiseana* with High Open Shrublands of *Acacia inaequilatera*, *Grevillea pyramidalis* and *Grevillea wickhamii* with Scattered Shrubs of *Senna glutinosa* ssp. *glutinosa*.

5b (Yarrie B): Hummock Grassland of *Triodia epactia* with Low Shrubland of *Acacia ptychophylla* with Scattered High Shrubs of *Acacia colei* and *Acacia inaequilatera*.

Triodia Open Hummock Grassland

8 (Yarrie A): Open Hummock Grassland of *Triodia epactia* and *Triodia longiceps* with Low Open Shrubland of *Pluchea tetranthera* over Scattered Low Herbs of *Trianthema triquetra* and *Portulaca oleracea*.

6 (Yarrie B): Open Hummock Grassland of *Triodia epactia* with Scattered Low Trees of *Corymbia hamersleyana* over Scattered High Shrubs of *Acacia tumida*, *Grevillea wickhamii* and *Acacia inaequilatera*.

Marsilea Herbland

7 (Yarrie B): Herbland of *Marsilea hirsuta* with Scattered Sedges of *Cyperus vaginatus* with Scattered Hummock Grasses of *Triodia longiceps* and *Triodia epactia*.

Onshore Environmental Consultants (2013b) described five broad floristic communities with eight vegetation associations within the application area:

Acacia Closed Scrub

4: Closed Scrub of *Acacia tumida* var. *pilbarensis* with Low Open Woodland of *Corymbia flavescens* and *Corymbia hamersleyana* and Open Hummock Grassland of *Triodia epactia* in brown loamy sand on drainage lines and drainage flats.

Acacia Open Scrub

5b: Open Scrub of *Acacia tumida* var. *pilbarensis* and *Acacia colei* with Low Open Woodland of *Corymbia flavescens* and *Corymbia hamersleyana* and Open Sedges of *Typha domingensis* and *Cyperus vaginatus* in brown loamy sand on medium drainage lines.

Triodia Open Hummock Grassland

9: Open Hummock Grassland of *Triodia epactia* with Scattered Tall Shrubs of *Acacia synchronicia*, *Acacia inaequilatera* and *Acacia colei* and Scattered Low Shrubs of *Pluchea tetranthera* in silty loam on plains.

Triodia Hummock Grassland

8b: Hummock Grassland of *Triodia epactia* and *Triodia wiseana* with High Open Shrubland of *Acacia inaequilatera*, *Grevillea pyramidalis* and *Grevillea wickhamii* and Low Open Shrubland of *Acacia ptychophylla* in brown sandy loam on footslopes and stony rises.

8c: Hummock Grassland of *Triodia epactia* with Low Open Shrubland of *Pluchea tetranthera*, *Acacia stellaticeps* and *Pluchea rubelliflora* over Very Open Bunch Grassland of *Sporobolus actinocladus*, *Sporobolus australasicus* and *Eragrostis cumingii* in brown sand along drainage lines and floodplains.

Triodia Closed Hummock Grassland

7a: Closed Hummock Grassland of *Triodia epactia* with High Open Shrubland of *Acacia colei*, *Grevillea pyramidalis* and *Acacia inaequilatera* over Scattered Low Shrubs of *Pluchea tetranthera* in orange brown loamy sand on plains.

7b: Closed Hummock Grassland of *Triodia epactia* with Low Open Woodland of *Corymbia hamersleyana* over High Open Shrubland of *Acacia ancistrocarpa*, *Acacia elachantha* and *Acacia inaequilatera* in brown sandy loam on sand plains.

7e: Closed Hummock Grassland of *Triodia epactia* with over Low Shrubland of *Acacia stellaticeps* and High Open Shrubland of *Acacia tumida* var. *pilbarensis*, *Acacia colei* and *Acacia inaequilatera* in orange brown loam on sand plains.

Ecologia (2005b) described five broad floristic communities with five vegetation associations within the Application Area:

1. *Triodia pungens* dominated steppes;
2. *Triodia basedowii* steppes;
3. Steep rocky Slopes;
4. Open density emergent over moderately dense *Triodia pungens*; and

5. Minor drainage lines.

* Denotes weed species

Clearing Description	Nimingarra to Yarrie Strategic Exploration Project. BHP Billiton Iron Ore Pty Ltd (BHP BIO) proposes to clear up to 444.82 hectares of native vegetation within a total boundary area of approximately 8578.8 hectares for the purpose of mineral exploration, geotechnical investigations, hydrological drilling, access tracks, rehabilitation, installation of meteorological masts and LiDAR stations and any associated activities. The proposal is located approximately 80 kilometres north-east of Marble Bar in the Shire of East-Pilbara.
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 assessed by botanists from Onshore (2010, 2013a, 2013b), Astron (2012, 2014), ENV (2008) and Ecologia (2005a, 2005b). Clearing permit CPS 6450/1 was granted by the Department of Mines and Petroleum (now the Department of Mines, Industry Regulation and Safety) on 26 March 2015 and was valid from 18 April 2015 to 30 November 2024. The permit authorised the clearing of up to 444.82 hectares of native vegetation within a boundary of approximately 8,578.8 hectares, for the purpose of mineral exploration, geotechnical investigations, hydrogeological drilling, access tracks, rehabilitation, and associated activities. On 12 January 2021, the Permit Holder applied to amend CPS 6450/1 to include additional purposes for which clearing is authorised, to specify a period in which clearing is authorised and extend the permit duration.

3. Assessment of application against Clearing Principles

Comments

The permit holder has applied to add 'installation of meteorological masts and LiDAR stations and any associated activities' as purposes for which clearing is authorised. No additional clearing or changes to the permit boundary are required to accommodate these purposes (BHP Billiton, 2021).

BHP (2021) is also seeking to extend the permit duration by a further 10 years as the project is ongoing. The permit holder has requested a condition to be added to specify no clearing is authorised after 30 November 2029. The final five years of the permit duration (where no clearing is authorised) will enable sufficient time to undertake rehabilitation monitoring, as per other conditions on the clearing permit.

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 6450/1.

Methodology

BHP Billiton (2021)

GIS Database:

- DPaW Tenure
- Hydrography, Lakes
- Hydrography, Linear
- IBRA Australia
- Imagery
- Landsystem Rangelands
- Pre-European Vegetation
- Public Drinking Water Source Areas
- Soils, Statewide
- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffers
- Threatened and Priority Flora
- Threatened Fauna

Planning Instrument, Native Title, previous EPA decision or other matter.

Comments

There is one native title claim (WC1999/008) over the area under application (DPLH, 2021). This claim has been determined by the Federal Court on behalf of the claimant group. 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 several registered Aboriginal Sites of Significance within the application area (DPLH, 2021). 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 Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The amendment application was advertised on 8 February 2021 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

Methodology DPLH (2021)

4. References

- Astron (2012) Nimingarra and Shay Gap Vegetation and Flora Survey. Report prepared for BHP Billiton Iron Ore, by Astron Environmental Services, Western Australia.
- Astron (2014) Yarrie Level 2 Flora and Vegetation and Level 1 Fauna Survey. Report prepared for BHP Billiton Iron Ore, by Astron Environmental Services, Western Australia.
- BHP (2015) Nimingarra to Yarrie Strategic Exploration Project Clearing Permit Application Supporting Document for Exploration Drilling. Report Prepared by BHP Billiton Iron Ore Pty Ltd, January 2015.
- BHP Billiton (2021) Application for an amendment to a clearing permit (Form C4) – CPS 6450/2. Western Australia.
- DPLH (2021) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 9 March 2021).
- Ecologia (2005a) Cundaline Biological Assessment Survey. Report prepared for BHP Billiton Iron Ore, by Ecologia Environment, Western Australia.
- Ecologia (2005b) Goldsworthy Extension Project Biological Assessment Survey. Report prepared for BHP Billiton Iron Ore, by Ecologia Environment, Western Australia.
- ENV (2008) Goldsworthy Iron Ore Mining Operations - Cundaline and Callawa Mining Operations Flora and Vegetation Assessment. Report prepared for BHP Billiton Iron Ore, by ENV Australia, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Onshore (2010) Flora and Vegetation Survey Callawa. Report prepared for BHP Billiton Iron Ore, by Onshore Environmental Consultants and Biologic, Western Australia.
- Onshore (2013a) Cundaline Northern Ridge Flora and Vegetation Survey & Fauna Assessment. Report prepared for BHP Billiton Iron Ore, by Onshore Environmental Consultants, Western Australia.
- Onshore (2013b) Flora and Vegetation Survey Callawa. Report prepared for BHP Billiton Iron Ore, by Onshore Environmental Consultants, Western Australia.

5. Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DAWE	Department of Agriculture, Water and the Environment, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DoEE	Department of the Environment and Energy (now DAWE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia

EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPA	Environmental Protection Authority, 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:

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia):-

T Threatened species:

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

Threatened fauna is that subset of ‘Specially Protected Fauna’ listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

Threatened flora is that subset of ‘Rare Flora’ listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

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 in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

EN Endangered species

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

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

VU Vulnerable species

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

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

Extinct Species:

EX Extinct species

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

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

EW Extinct in the wild species

Species that “*is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its*

life cycle and form", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species:

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

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

MI

Migratory species

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

Includes 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 fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

CD

Species of special conservation interest (conservation dependent fauna)

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

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

OS

Other specially protected species

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

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

P

Priority species:

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

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