Horse Pit Extension Project
EPBC Act Referral

Project Overview

FIGURE 2
Horse Pit Extension Project
EPBC Act Referral

FIGURE 3

MORANBAH ACCESS
PEAK DOWNS HIGHWAY

Existing Road
EPBC Act Approved Pit (2008/4417)
BHP Tenements
Cadastre
Proposed Disturbance Footprint
Referral Area

ML70462
ML70403
ML1775

0
0.5
1

km

Projection: GDA 1994 MGA Zone 55
Scale: 1:42,500 at A4
Project No.: 620.13593
Date: 23-Jun-2021
Drawn by: PM

Date:
23-Jun-2021
Horse Pit Extension Project
EPBC Act Referral
Dichanthium queenslandicum Habitat

Dichanthium queenslandicum
(King Bluegrass) record (CVM EIS, 2008)
Dichanthium queenslandicum
(King Bluegrass) habitat
Essential Habitat DNRME

FIGURE 5
FIGURE 6

Horse Pit Extension Project
EPBC Act Referral
Ornamental snake Habitat

ML70462
ML70403
ML1775

Existing Road
Watercourses (Water Act 2000)
Drainage features
Proposed Disturbance Footprint
Referral Area
BHP Tenements
Ornamental Snake Record (E2M 2020)
Ornamental Snake Preferred Habitat
Ornamental Snake Essential Habitat v9.13 (DNRME 2020)

Projection: GDA 1994 MGA Zone 55
Scale: 1:42,500 at A4
Project No.: 620.13593
Date: 22-Jul-2021
Drawn by: PM

Drawn by: PM

0 0.5 1 km

Ornamental snake Habitat
Horse Pit Extension Project
EPBC Act Referral
Ornamental snake Habitat

ML70462
ML70403
ML1775

Existing Road
Watercourses (Water Act 2000)
Drainage features
Proposed Disturbance Footprint
Referral Area
BHP Tenements
Ornamental Snake Record (E2M 2020)
Ornamental Snake Preferred Habitat
Ornamental Snake Essential Habitat v9.13 (DNRME 2020)

Projection: GDA 1994 MGA Zone 55
Scale: 1:42,500 at A4
Project No.: 620.13593
Date: 22-Jul-2021
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0 0.5 1 km

Ornamental snake Habitat
Horse Pit Extension Project
EPBC Act Referral

Squatter pigeon (southern-subspecies) Habitat

FIGURE 7
FIGURE 8

Horse Pit Extension Project
EPBC Act Referral

Australian painted snipe Habitat

Projection: GDA 1994 MGA Zone 55
Scale: 1:42,500 at A4
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FIGURE 9

Horse Pit Extension Project
EPBC Act Referral

Existing Scenario - Flood Extent
Peak Flood Depths - 0.1% AEP

Depth (m)
- Below 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- Above 3.0

Existing Road
Watercourses (Water Act 2000)
Drainage features
Proposed Disturbance Footprint
Referral Area
BHP Tenements

ML70462
ML70403
ML70402
ML70436
ML70403
ML1775

Projection: GDA 1994 MGA Zone 55
Scale: 1:42,500 at A4
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FIGURE 10

Horse Pit Extension Project
EPBC Act Referral

Life of Mine - Flood Extent
Peak Flood Afflux - 0.1% AEP

Scale: 1:42,500 at A4
Projection: GDA 1994 MGA Zone 55
Date: 24-Jun-2021
Drawn by: PM

Existing Road
Watercourses (Water Act 2000)
Drainage features
Proposed Disturbance Footprint
Referral Area
BHP Tenements
Proposed Bridge over Horse Creek
Proposed Drain
Proposed Levee
Was wet now dry
Was dry now wet

Afflux (mm)
Below -50
-50 - -10
-10 - 10
10 - 50
50 - 100
100 - 200
200 - 500
Above 500

ML70462
ML70403
ML1775
Caval Creek
Horse Creek
Cherwell Creek
MORABAN ACCESS
EA HIGHWAY
Horse Pit Extension Project
EPBC Act Referral

Conceptual Final Landform - Flood Extent
Peak Flood Levels - 0.1% AEP

ML70462
ML70403
ML1775

Existing Road
Referral Area
BHP Tenements

Conceptual Final Void
Conceptual Final Landform
Elevation (mAHD)
High : 390
Low : 95

Level (mAHD)
Below 220
220 - 225
225 - 230
230 - 235
235 - 240
240 - 245
245 - 250
Above 250

FIGURE 11

Projection: GDA 1994 MGA Zone 55
Scale: 1:42,500 at A4
Project No.: 620.13593
Date: 24-Jun-2021
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Horse Pit Extension Project
EPBC Act Referral
Maximum Incremental Drawdown in Regolith

FIGURE 13

Maximum Drawdown

- Model Grid
- Groundwater Model Boundary
- Referral Area
- Surrounding Mines
- BHP Tenements

Proportion: GDA 1994 MGA Zone 55
Scale: 1:450,000 at A4
Project No.: 620.13593
Date: 23-Jun-2021
Drawn by: PM

0 5 10 km

INSET (1:150,000)
FIGURE 14

Water Level Contours (mAHD)
Outline
Surrounding Mines
BHP Tenements
Groundwater Model Boundary
Referral Area

Maximum Incremental Drawdown
in Moranbah Coal Measures (Q Seam)

Maximum Drawdown

- 1 - 2
- 2 - 5
- 5 - 10
- 10 - 20
- 20 - 50
- 50 - 100
- 100 - 200

Surrounding Mines and BHP Tenements

- Horse Pit Extension Project
- EPBC Act Referral

Solid Geology
- Anakie Metamorphic Group (PLEa)
- Back Creek Group (Pb)
- Blackwater Group (Pw)
- Blenheim Subgroup (Pbe)
- Bundarra Granodiorite (Kgb)
- Burngrove Formation (Pwg)
- Clematis Group (Re)
- Du-BBG (Du)
- Fair Hill Formation, Fort Cooper Coal Measures (Pwf)
- German Creek Formation (Pbd)
- K-CQ (Ki)

- Lizzie Creek Volcanic Group (Pvg)
- MacMillan Formation (Pbn)
- Moolayember Formation (Rm)
- Moranbah Coal Measures (Pwb)
- Mount Rankin Formation (Ca)
- Peak Range Volcanics (Tp)
- Rangal Coal Measures, Bandanna Formation, Baralaba Coal Measures (Pwl)
- Retreat Supersuite (Dgr)
- Rewan Group (Rr)
- Silver Hills Volcanics (DCs)

INSET (1:300,000)

Projection: GDA 1994 MGA Zone 55
Scale: 1:500,000 at A4
Project No.: 620.13593
Date: 23-Jun-2021
Drawn by: PM
FIGURE 15

Horse Pit Extension Project
EPBC Act Referral

Maximum Cumulative Drawdown in Quaternary Alluvium

Projection: GDA 1994 MGA Zone 55
Scale: 1:450,000 at A4
Project No.: 620.13593
Date: 23-Jun-2021
Drawn by: PM

Water Level Contours (mAHD)
- Major Drainage
- Model Grid
- Groundwater Model Boundary

Maximum Drawdown
- 1 - 2
- 2 - 5
- 5 - 10
- 10 - 20
- 20 - 50
- 50 - 100
- 100 - 200

Referral Area
Surrounding Mines
BHP Tenements
Inferred Alluvium Extent
Alluvium Extent

INSET (1:300,000)
FIGURE 17

Water Level Contours (mAHD)
- Major Drainage
- Model Grid
- Groundwater Model Boundary

Solid Geology
- Anakie Metamorphic Group (PLEa)
- Back Creek Group (Pb)
- Blackwater Group (Pw)
- Blenheim Subgroup (Pbe)
- Bundarra Granodiorite (Kgb)
- Burngrove Formation (Pwg)
- Clematis Group (Re)
- Du-BBG (Du)
- Fair Hill Formation, Fort Cooper Coal Measures (Pwt)
- German Creek Formation (Pbd)
- K-CQ (Ki)
- MacMillan Formation (Pbn)
- Moolayember Formation (Rm)
- Moranbah Coal Measures (Pwb)
- Mount Rankin Formation (Ca)
- Peak Range Volcanics (Tp)
- Rangal Coal Measures, Bandanna Formation, Baralaba Coal Measures (Pwj)
- Retreat Supersuite (Dgr)
- Rewan Group (Rr)
- Silver Hills Volcanics (DCs)

Horse Pit Extension Project
EPBC Act Referral

Maximum Cumulative Drawdown
Moranbah Coal Measures (Q Seam)

Maximum Drawdown
- 1 - 2
- 2 - 5
- 5 - 10
- 10 - 20
- 20 - 50
- 50 - 100
- 100 - 200

Projection: GDA 1994 MGA Zone 55
Scale: 1:450,000 at A4
Project No.: 620.13593
Date: 23-Jun-2021
Drawn by: PM

Solid Geology
- Anakie Metamorphic Group (PLEa)
- Back Creek Group (Pb)
- Blackwater Group (Pw)
- Blenheim Subgroup (Pbe)
- Bundarra Granodiorite (Kgb)
- Burngrove Formation (Pwg)
- Clematis Group (Re)
- Du-BBG (Du)
- Fair Hill Formation, Fort Cooper Coal Measures (Pwt)
- German Creek Formation (Pbd)
- K-CQ (Ki)
- MacMillan Formation (Pbn)
- Moolayember Formation (Rm)
- Moranbah Coal Measures (Pwb)
- Mount Rankin Formation (Ca)
- Peak Range Volcanics (Tp)
- Rangal Coal Measures, Bandanna Formation, Baralaba Coal Measures (Pwj)
- Retreat Supersuite (Dgr)
- Rewan Group (Rr)
- Silver Hills Volcanics (DCs)

Horse Pit Extension Project
EPBC Act Referral

Maximum Cumulative Drawdown
Moranbah Coal Measures (Q Seam)

Maximum Drawdown
- 1 - 2
- 2 - 5
- 5 - 10
- 10 - 20
- 20 - 50
- 50 - 100
- 100 - 200

Projection: GDA 1994 MGA Zone 55
Scale: 1:450,000 at A4
Project No.: 620.13593
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Drawn by: PM