Figure 1: Regional Location Map
Figure 2: Local Project Setting
Figure 3: Project Layout Plan
LEGEND:
- MMS - Live Mineral Tenements
- Mount Manning Nature Reserve
- Mining Reserve
- Ularring Hematite Project:
  - Internal Haul Roads
  - Mine Infrastructure Areas
- Project Development Area
- Open Cut Pits
- Waste Dumps
- Existing Major Roads
- Haulage Route

Date: 05.12.2012

Figure 4: Snark Project Layout Plan
Figure 5: Central Area Layout Plan
Figure 6: Banjo Area Layout Plan

LEGEND:
- MMS - Live Mineral Tenements
- MMS - Pending Mineral Tenements
- Mount Manning Nature Reserve
- Mining Reserve
- Existing Major Roads
- Open Cut Pits
- Waste Dumps
- Project Development Area
- Internal Haul Road
- Mine Infrastructure Area
- Ularring Hematite Project:

GDA94, MGA Zone 50J Date: 05.12.2012
Figure 7: Rail Siding Area Layout Plan
Figure 8: Regional Priority Flora Records

Legend:
- Crown Land Tenure:
  - Nature Reserve
  - Conservation Park
  - Former Leasehold
- MMS - Live Mineral Tenements
- MMS - Pending Mineral Tenements

Priority Flora Records:
- Banksia arborea
- Grevillea erectiloba
- Grevillea georgeana
- Hibbertia lepidocalyx subsp. tuberculata
- Mirbelia ferricola
- Spartothamnella sp. Helena & Aurora Range

Date: 12.06.2013

GDA94
MGA Zone 50J
**Priority Flora Locations:**
- Banksia arborea
- Grevillea erectiloba
- Grevillea georgeana
- Hibbertia lepidocalyx subsp. tuberculata
- Mirbelia ferricola
- Spartothamnella sp. Helena & Aurora Range

**Ularring Hematite Project:**
- Project Development Area
- Mining Reserve
- Existing Major Roads
- Haulage Route
- Internal Haul Roads
- Mine Infrastructure Areas
- Open Cut Pits
- Waste Dumps

**Legend:**
- MMS - Live Mineral Tenements
- MMS - Pending Mineral Tenements
- Mount Manning Nature Reserve

**DATE:**
Date: 28.11.2012

**Figure 9:** Priority Flora of the Snark Deposit Area and surrounds
Figure 10: Priority Flora of the Central Deposit and surrounds

- Banksia arborea
- Grevillea erectiloba
- Grevillea georgeana
- Hibbertia lepidocalyx subsp. tuberculata
- Mirbelia ferricola
- Spartothamnella sp. Helena & Aurora Range
Figure 11: Priority Flora of the Banjo Deposit area and surrounds

Priority Flora Records:
- Banksia arborea
- Grevillea erectiloba
- Grevillea georgeana
- Hibbertia lepidocalyx subsp. tuberculata
- Mirbelia ferricola
- Spartothamnella sp. Helena & Aurora Range

LEGEND:
- Ularring Hematite Project:
  - Existing Major Roads
  - Mining Reserve
  - Project Development Area
  - Internal Haul Roads
  - Mine Infrastructure Area
  - Open Cut Pits
  - Waste Dumps

- MMS - Live Mineral Tenements
- MMS - Pending Mineral Tenements

Date: 12.06.2013

GDA94, MGA Zone 50J
Figure 12: Notable Taxa surrounding the Project Area

Notable Taxa Records:
- Acacia aff. balsamea
- Acacia aff. sibirica
- Sida petrophila
Figure 13: Regional Notable Taxa Records

Notable Taxa Records:
- Acacia aff. balsamea
- Acacia aff. sibirica
- Sida petrophila

Legend:
- MMS - Live Mineral Tenements
- Ularring Hematite Project Haulage Route
- Ularring Hematite Project

GDA94, MGA Zone 50J
Date: 28.11.2012
Figure 14: Extent of Vegetation Mapping of the Project Area
Figure 15: Vegetation mapping of the Snark area and surrounds
Figure 16: Vegetation mapping of the Central area and surrounds

Vegetation Communities:
- S1
- S2
- S3
- S4
- S5
- S6
- S7
- S8
- S9
- S10
- S11
- S12
- S13
- S14
- S15
- W1
- W2
- W3
- W4
- W5
- W6
- W7
- W8
- W9
- W10
- W11
- W12
- W13
- W14
- W15

Proposed Disturbance Areas:
- Internal Haul Road
- Open Cut Pits
- Waste Dumps
- Infrastructure Areas

LEGEND:
- MMS Live Mineral Tenements
- MMS Pending Mineral Tenements
- Ularring Hematite Project: Open Cut Pits
- Waste Dumps
- Infrastructure Areas
- Mount Manning Nature Reserve
- Project Development Area

Projection: GDA94, MGA Zone 50J
Date: 03.05.2013
Figure 17: Vegetation mapping of the Banjo area and surrounds
Figure 18: Priority Ecological Communities in relation to the Project

DEC Managed Lands:
- Conservation Park
- Former Leasehold
- Nature Reserve

LEGEND:
- MMS - Pending Mineral Tenements
- MMS - Live Mineral Tenements
- Major Existing Roads
- Haulage Route
- Project Development Area

Ularring Hematite Project:
- Banksia arborea on BIF
- Lake Giles

Date: 06.12.2012

Figure 18: Priority Ecological Communities in relation to the Project
Figure 19: Location of previous and existing Lake Giles PEC in relation to DEC survey quadrats

LEGEND:
- MMS Live Mineral Tenements
- MMS Pending Mineral Tenements
- Mining Reserve
- Major Existing Roads
- Existing Lake Giles PEC (June 2012 onwards)
- Previous Lake Giles PEC (pre June 2012)
- DEC BIF Survey quadrats of Nth Yerilgee Hills (Markey & Dillon 2011)

Ularring Hematite Project:
- Haulage Route
- Project Development Area

Date: 17.12.2012

GDA94, MGA Zone 50J
Figure 20: Malleefowl Ground Survey Areas of the Snark Deposit
Figure 21: Malleefowl Survey Areas of the Central Deposit
Figure 22: Malleefowl Survey Areas of the Banjo Deposit

Legend:
- MMS Live Tenements
- MMS Pending Tenements
- Mount Manning Nature Reserve
- Mining Reserve
- Ularring Hematite Project: Project Development Area
- Proposed Disturbance Areas
- Malleefowl Survey Areas
- Terrestrial Ecosystems (2011)
- MMS Pre-drilling Clearance Inspections
- MMS (2013)

Projection: MGA94 Zone 50J
Created by: MMS
Date: 15.02.2013
Figure 23: Malleefowl Mounds by Survey in the Snark Deposit
Figure 24: Malleefowl Mounds by Survey in the Central Deposit
Figure 25: Malleefowl Mounds by Survey in the Banjo Deposit
Figure 26: Malleefowl Mounds by Status in the Snark Deposit
Figure 27: MalleeFowl Mounds by Status in the Central Deposit
Figure 28: Malleefowl Mounds by Status in the Banjo Deposit
Figure 29: Malleefowl Mounds by Height

MMS Malleefowl Mound Records

Height Ranges:
-0.3 - 0.0
0.0 - 0.2
0.2 - 0.4
0.4 - 0.6
0.6 - 0.8
0.8 - 1.0
1.0 - 1.2
1.2 - 2.0

Malleefowl Records:
-0.3 - 0.0
0.0 - 0.2
0.2 - 0.4
0.4 - 0.6
0.6 - 0.8
0.8 - 1.0
1.0 - 1.2
1.2 - 2.0

LEGEND:
- MMS - Live Mineral Tenements
- MMS - Pending Mineral Tenements
- Mount Manning Nature Reserve
- Mining Reserve
- Ularring Hematite Project:
  - Project Development Area
  - Existing Major Roads
- Haulage Route
- MMS Malleefowl Mound Survey Area (MMS 2011)

GDA94, MGA Zone 50J Date: 05.12.2012
Figure 30: LiDAR Malleefowl Mound Records

LiDAR Malleefowl Mound Survey Results:

LEGEND:
- MMS - Live Mineral Tenements
- MMS - Pending Mineral Tenements
- Mount Manning Nature Reserve
- Existing Major Roads
- Ularring Hematite Project: Project Development Area
- LiDAR Survey Area
- Malleefowl Mound Record

GDA94, MGA Zone 50J
Date: 29.11.2012
Figure 31: Fauna Habitats of the Snark Deposit and surrounding areas
Figure 32: Fauna Habitats of the Central Deposit and surrounding areas
Figure 34: Troglofauna Records at the Snark Deposit

Troglofauna Records:
- Troglofauna recorded in Reference Sites
- Troglofauna recorded in Impact Sites

LEGEND:
- MMS - Live Mineral Tenements
- MMS - Pending Mineral Tenements
- Mount Manning Nature Reserve
- Mining Reserve
- Existing Major Roads
- Haulage Route
- Open Cut Pits
- Waste Dumps
- Project Development Area
- Internal Haul Roads
- Mine Infrastructure Areas

Date: 30.11.2012

GDA94, MGA Zone 50J
Figure 35: Troglofauna Records of the Central and Banjo Deposits
Figure 36: Prospective Troglofauna Habitat of the Project Area and surrounds

Prospective Troglofauna Habitat:
- Altered, enriched hematite / goethite BIF
- Un-altered silica rich BIF magnetite

Legend:
- MMS - Live Mineral Tenements
- MMS - Pending Mineral Tenements
- Mount Manning Nature Reserve
- Mining Reserve
- Project Development Area
- Haulage Route
- Existing Major Roads
- Troglofauna Records

GDA94, MGA Zone 50J Date: 30.11.2012
Figure 38: SRE Study Area and Habitats
Figure 39: SRE Sampling Locations
Figure 40: Soil Characterisation Sample Points of the Snark Deposit

LEGEND:
- MMS - Live Mineral Tenements
- MMS - Pending Mineral Tenements
- Mount Manning Nature Reserve
- Existing Major Roads
- Ularring Hematite Project
- Haulage Route
- Internal Haul Roads
- Mine Infrastructure Areas
- Project Development Area
- Open Cut Pits
- Waste Dumps
- Inspection Point
- Sample Point

Soil Characterisation Study:

Date: 30.11.2012

GDA94, MGA Zone 50J
Figure 41: Soil Characterisation Sample Points of the Central and Banjo Deposits

LEGEND:
- MMS - Live Mineral Tenements
- MMS - Pending Mineral Tenements
- Mount Manning Nature Reserve
- Mining Reserve
- Internal Haul Roads
- Existing Major Roads
- Mine Infrastructure Areas
- Project Development Area
- Open Cut Pits
- Waste Dumps
- Ularring Hematite Project
- Inspection Point
- Sample Point

Date: 30.11.2012
Figure 42: Project Groundwater Options

LEGEND:
- Crown Land Tenure:
  - MMS - Live Mineral Tenements
  - MMS - Pending Mineral Tenements
  - Vector Resources - Live Mineral Tenements for the Gwedolyn Project
- DEC Managed Lands:
  - Project Development Area
  - Conservation Park
  - Former Leasehold
  - Nature Reserve
- Groundwater Option Locations
- Potential Groundwater Pipeline Route

GDA94, MGA Zone 50J Date: 30.11.2012

Insert A: Vector Resources Bore Location
P77/3976

Insert B: Moonshine Bore Location

Helena and Aurora Ranges Conservation Park
ex Mt Elvire Station

Mount Manning Range Nature Reserve
ex Mt Jackson Station