

# EPBC Referral Document – Wynberg Project

## Section 1 Summary of Proposed Action

### 1.1 Project Industry Type

The Proponent for the Project is Exco Resources (QLD) Pty Ltd (Exco) (ABN. 99 080 339 671). CopperChem Ltd, a subsidiary of Washington H. Soul Pattinson and Company Limited will operate and manage the Project.

Exco proposes to develop Wynberg which will target ~500,000 t of ore to produce 32,375 ounces of gold (Au). Ore will be mined from open cut pits located at the Wynberg deposit. Mining will use conventional diesel-powered earth-moving equipment. Gold ore mined on site or supplied from off lease will be leached and extracted in a CIP Plant. Mining of the Wynberg deposit will occur over approximately 13 months with an operational life of approximately two years.

### 1.2 Detailed description of the proposed action, including all proposed activities

The Wynberg site is part of a larger project, the Wallace Project. The Wallace Project area is approximately 30 km south-east of Cloncurry, accessed via the Landsborough Highway. A satellite deposit called Wynberg (this project) has been identified on EPM 12409 and will be situated on Mining Lease (Application) MLA100111. The Wynberg Deposit will target gold ore that will be mined and transported to the Wallace Gold Project for carbon in pulp (CIP) processing at the Great Australia Operation 2km south of Cloncurry. The Wynberg site is approximately 23 km south-east of Cloncurry.

The proposed mining activities at the Wynberg site include:

- Conventional mining of an open cut pit(s)
- Blasting and excavation
- Loading and hauling to the surface
- Stockpiling of ore on a Run of Mine (ROM) Pad before loading and transporting to ML90065 – Great Australia Operation

Waste rock material will be disposed through a mixture of in-pit and out-of-pit dumps. Wynberg will be serviced by mine infrastructure on ML90065 via a designated mine access linking the Wynberg ML to the Landsborough Highway; haulage is thereafter via the Landsborough Highway west to Cloncurry for processing on ML90065. There is a provision to treat the ore by heap leach on ML100077 which would be accessed via designated mine access which would traverse EPM12409 and EPM15923.

### 1.3 Extent and Location of the proposed action

The Wynberg site is primarily within the Mount Isa Inlier Sub-region of the Northwest Highlands Bioregion (see Figure 1 of NRA, 2018).

The total proposed Wynberg Project area is 300.7 ha, including associated mine infrastructure such as haul roads and waste rock dumps. The impacts of each infrastructure piece is detailed in *Table 1*.

#### **Table 1: Infrastructure and area of disturbance to State and National Matters**

Location	Description of State/National Matters	ha
Haul Road 1	NRA Field Verified ESA	2.6462
Haul Road 2	NRA Field Verified ESA	1.926114
Haul Road 2	NRA Field Verified ESA	6.823921
EPM 12409	NRA Field Verified ESA	10.64006
ML 100111	NRA Field Verified ESA	24.51579
EPM	State Mapped ESA	0.812625
EPM	State Mapped ESA	20.15042
Haul Road 1	State Mapped ESA	12.41458
Haul Road 4	State Mapped ESA	8.417984
Haul Road 3	State Mapped ESA	11.7699
Haul Road 2	State Mapped ESA	17.92975
Haul Road	Potential Julia Creek Dunnart Habitat	21.38068
EPM 12409	Potential Julia Creek Dunnart Habitat	161.2806
Total		300.7086

#### 1.4 Upload Image of proposed action area

The mine associated infrastructure is planned to be located to the central eastern area of the MLA100111 as shown in Figure 1. The Potential Julia Creek Dunnart Habitat (shown in *Figure 1*) is located to the south-east of the infrastructure and buffered by the topsoil stockpile at the northern extent.

Further shown in Figure 1 and described by NRA (2018) – reference also to *Figure 2* the potential habitat areas have been validated by field survey.

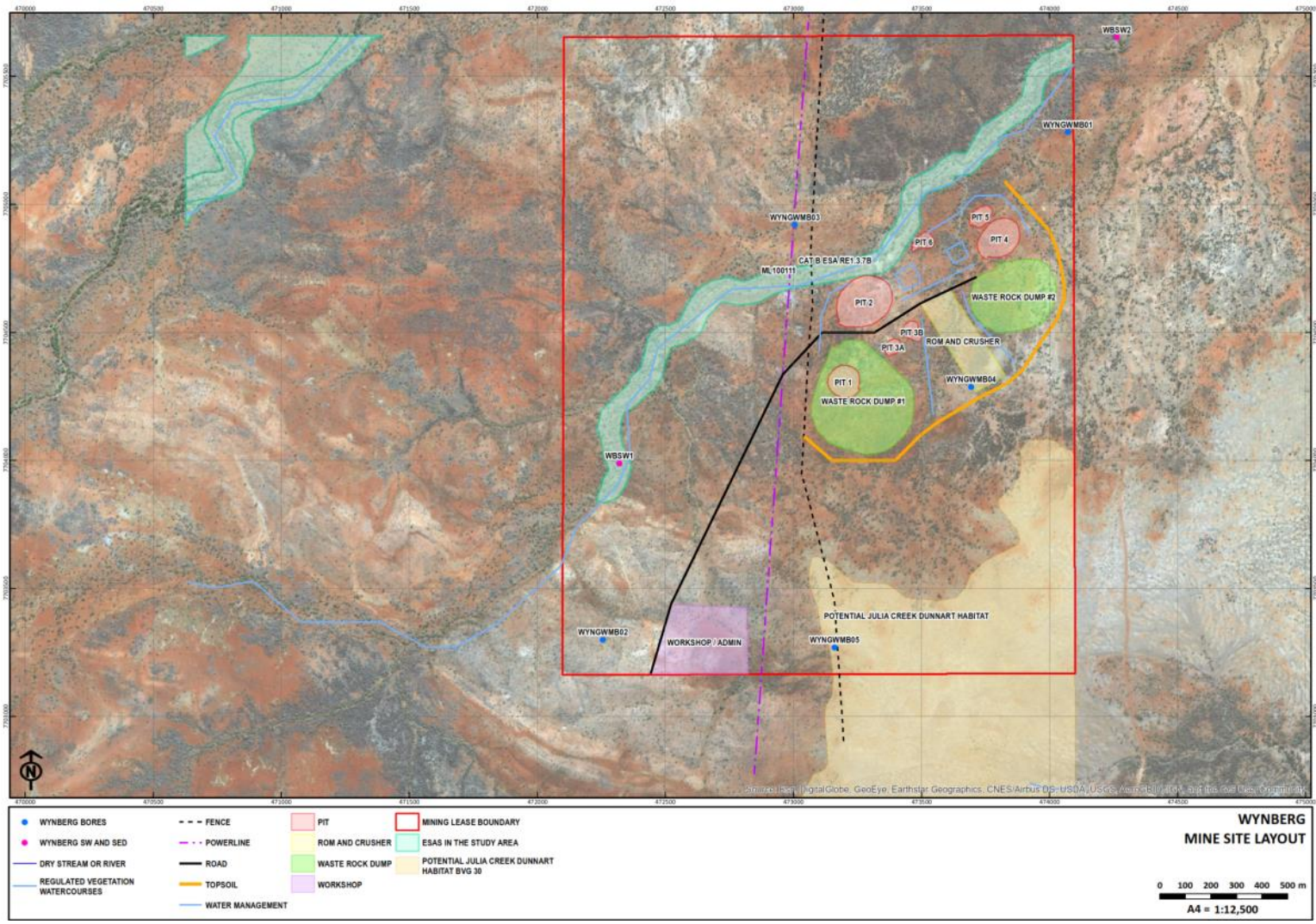


Figure 1: Wynberg Mine Site Layout and Haul Road

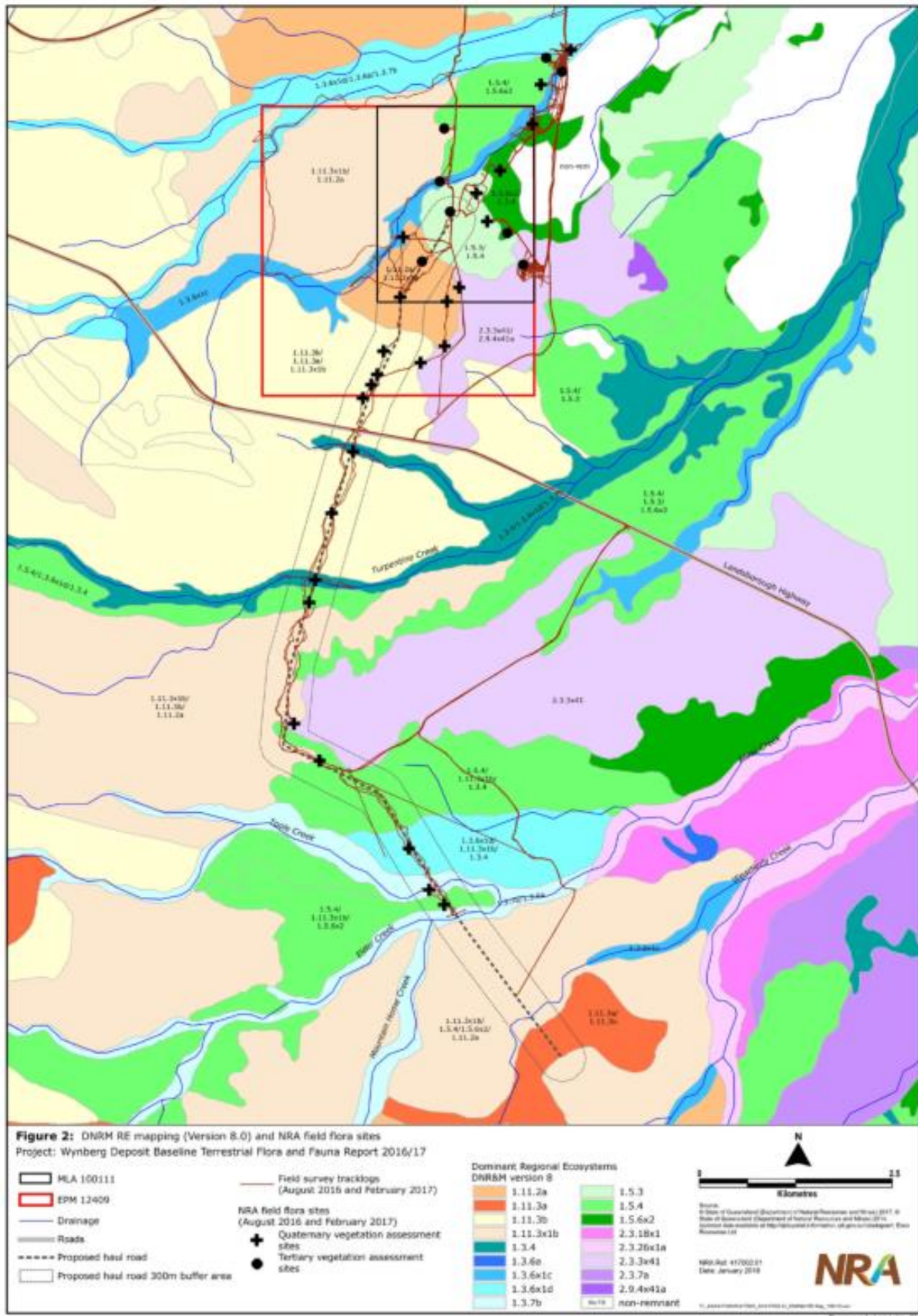


Figure 2: DNRM RE mapping (Version 8.0) and NRA field flora sites (NRA, 2018)

### **1.5 Brief physical Description of the property on which the action will be taken**

The overarching 'Wallace Project' is on ML (mining lease) 90236 and ML 100077 (Lot 3, BD52, Lot 2, BD52, Lot 1 AL31) near Cloncurry in north-west Queensland. The Wallace Project area is approximately 30 km south-east of Cloncurry, accessed via the Landsborough Highway. A satellite deposit called Wynberg (this project) has been identified on EPM 12409. The Wynberg Deposit will target gold ore that will be mined and transported to the Wallace Gold Project for heap leaching and processing. The Wynberg site is approximately 23 km south-east of Cloncurry.

The Wallace Project area is subject to Mining Lease Application (MLA) 100111 with the application progressing with the Department of Natural Resources, Mines and Energy – Mineral Assessment Hub.

### **1.6 Size of the proposed action area development footprint, including disturbance footprint and avoidance footprint**

The proposed Wynberg Project site (Mining Lease Area) covers an area of around 8,000 ha including haul roads, and other associated infrastructure. The actual proposed project footprint covers a total of 300.7 ha. Only haul road infrastructure is proposed to occur within the potential habitat of the Julia Creek Dunnart (*Sminthopsis douglasi*) and covers around 182.7 ha.

### **1.7 Lot Number and Title of the Property**

Lot 3, BD52; Lot 2, BD52; Lot 1, AL31

### **1.8 Jurisdiction**

Queensland

### **1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake the project?**

No

### **1.10 Is the proposed action subject to local government planning approval?**

The proposed action is subject to the Department of Natural Resources, Mines and Energy approval and subsequently the approval of the Department of Environment and Science.

Through the application process the administering authorities will determine if public notification is required at which time the local government would have opportunity to submit objection if applicable.

### **1.11 Provide an estimated start and estimated end date for the proposed action:**

Start Date 01/2019

End Date 01/2021

### **1.12 Provide details of the context, planning framework and State and/or Local Government requirements**

Exco Resources Ltd (Exco) is completing a major amendment to an existing Environmental Authority (EA). The EA currently covers the Wallace Copper (Wallace North) Project but will be amended to include the Wallace Gold Project (Wallace South, East and Wynberg resource deposits).

**1.13 Describe any Public Consultation that has been, is being or will be undertaken, including with indigenous stakeholders?**

Public consultation is intended prior to mining of the Wynberg deposit. As the deposit is location on grazing land much consultation has been undertaken and is continuing with the landholders including the stakeholders listed in *Table 2*.

**Table 2: Stakeholders consulted with regarding the Project**

<b>Private Landowners</b>
Andrew William Jesse Daniels & Samuel Donald James Daniels
Damien and Christine Chaplain
South 32 and associated lessee
Cloncurry Shire Council
Traditional Owners - Mitakoodi and Mayi People #5
<b>Commonwealth and State Government Agencies</b>
Queensland South Native Title Services Limited
Department of Environment and Science (DES)
Department of Natural Resources, Mines and Energy (DNRME)
Department of Communities: Aboriginal and Torres Strait Islander Partnerships (Mt Isa)
Department of Communities: Community Capacity and Service Quality
Department of Transport & Main Roads (DTMR): North West District
Queensland Rail National (QR National)
Ergon Energy (reference to Swer Line traversing the lease)
<b>Community and Industry Groups</b>
Southern Gulf Catchments
Cloncurry Justice Association
Local Council and Services
Cloncurry Shire Council
Cloncurry Police
Cloncurry Fire and Rescue Service: Northern Region
Cloncurry Disaster Management Group
Cloncurry Hospital
<b>Key Service Providers</b>
Aggreko
Telstra

**1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project.**

Exco Resources Ltd (Exco) is completing a major amendment to an existing Environmental Authority (EA). The EA currently covers the Wallace Copper (Wallace North) Project, The Wallace Gold (Wallace South) Project and will be amended to include the Wallace Gold (East) Project. The Wallace Project EA (EPML00941713) has been issued to include the Wynberg ML for the purpose of conducting Exploration related activities to the extent of 15ha. An application to include all mining related infrastructure is in progress

**1.15 Is this action part of a staged development or a component of a larger project?**

The parent 'Wallace Project' is on ML (mining lease) 90236 and ML 100077 (Lot 3, BD52, Lot 2, BD52, Lot 1 AL31) near Cloncurry in north-west Queensland. The Wallace Project area is approximately 30

km south-east of Cloncurry, accessed via the Landsborough Highway. A satellite deposit called Wynberg (this project) has been identified on EPM 12409. The Wynberg Deposit will target gold ore that will be mined and transported to the Great Australia Operation south of Cloncurry for processing via a Carbon In Pulp (CIP) Leachate process. The Wynberg site is approximately 23 km south-east of Cloncurry.

**1.16 Is the proposed action related to other actions or proposals in the region?**

No

## **Section 2 Matter of National Environmental Significance**

**2.1 Is the proposed action likely to have any direct or indirect impact on the values of any World Heritage properties?**

No

**2.2 Is the proposed action likely to have any direct or indirect impact on the values of any National Heritage places?**

No

**2.3 Is the proposed action likely to have any direct or indirect impact on the ecological character of a Ramsar wetland?**

No

**2.4 Is the proposed action likely to have any direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?**

No

*Sminthopsis douglasi* (Julia Creek dunnart)

As shown in *Figure 3*, the mine and associated infrastructure will not impact any potential Julia Creek dunnart habitat.

The Mine infrastructure is located north of the potential Julia Creek dunnart habitat and separated by a buffer of between 300 and 600m. The closest infrastructure is the workshop which is located within 350m of the potential Julia Creek dunnart habitat. Additionally, on commencement of mining, the topsoil stripped from the mine area will be stockpiled to provide a barrier between mine movements and the Julia Creek habitat. See *Figure 3*.

Groundwater monitoring bore WYNGWMB05 is located on the boundary of the potential Julia Creek dunnart habitat and was installed on the boundary of two cadastral properties in Wynberg and Fishers Creek Pastoral Holdings. The monitoring bore was installed utilising farm roads not related to the general running of the mine.

The location of the monitoring bore on the boundary of the potential Julia Creek dunnart habitat is shown in *Figure 4*.

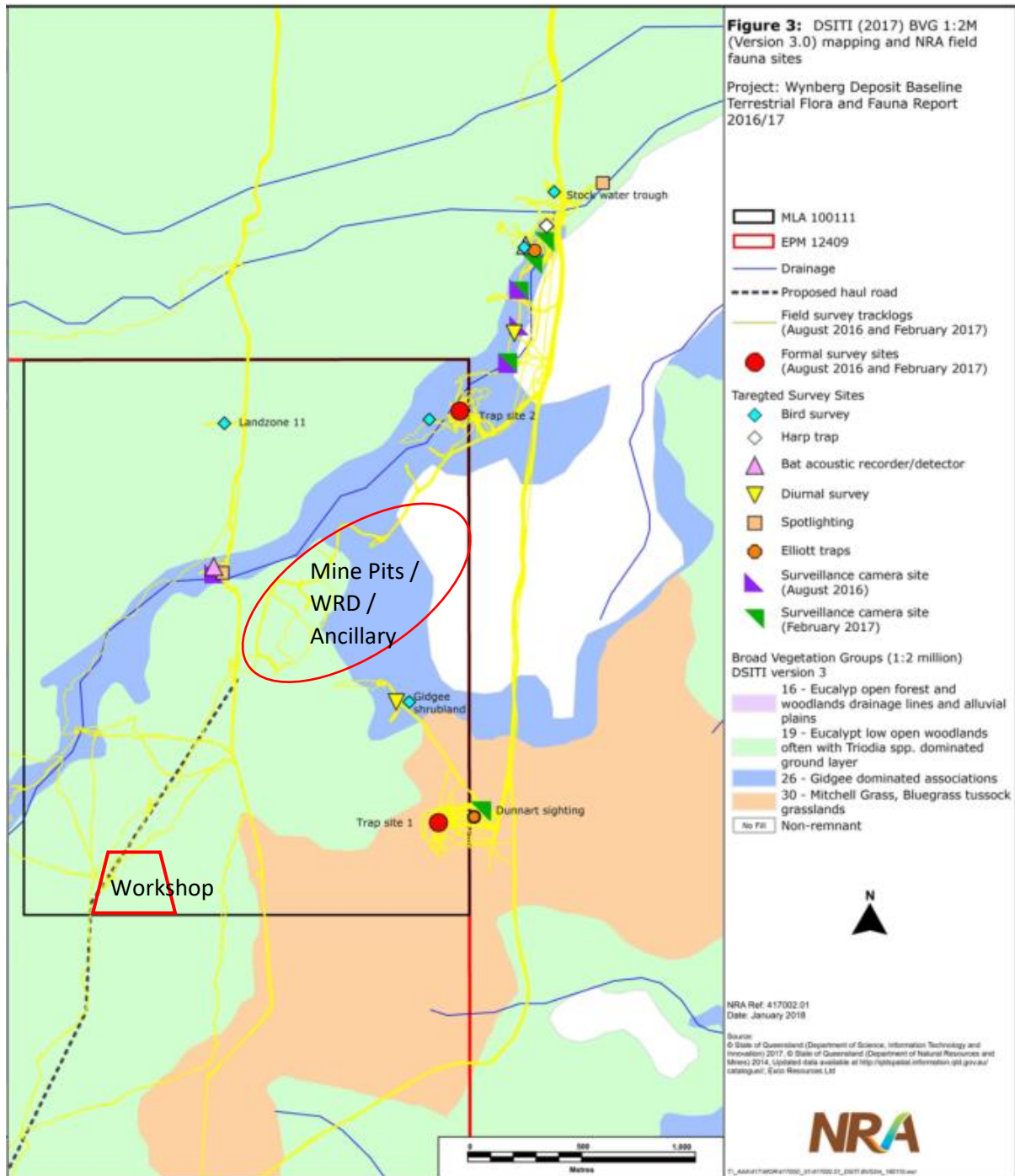
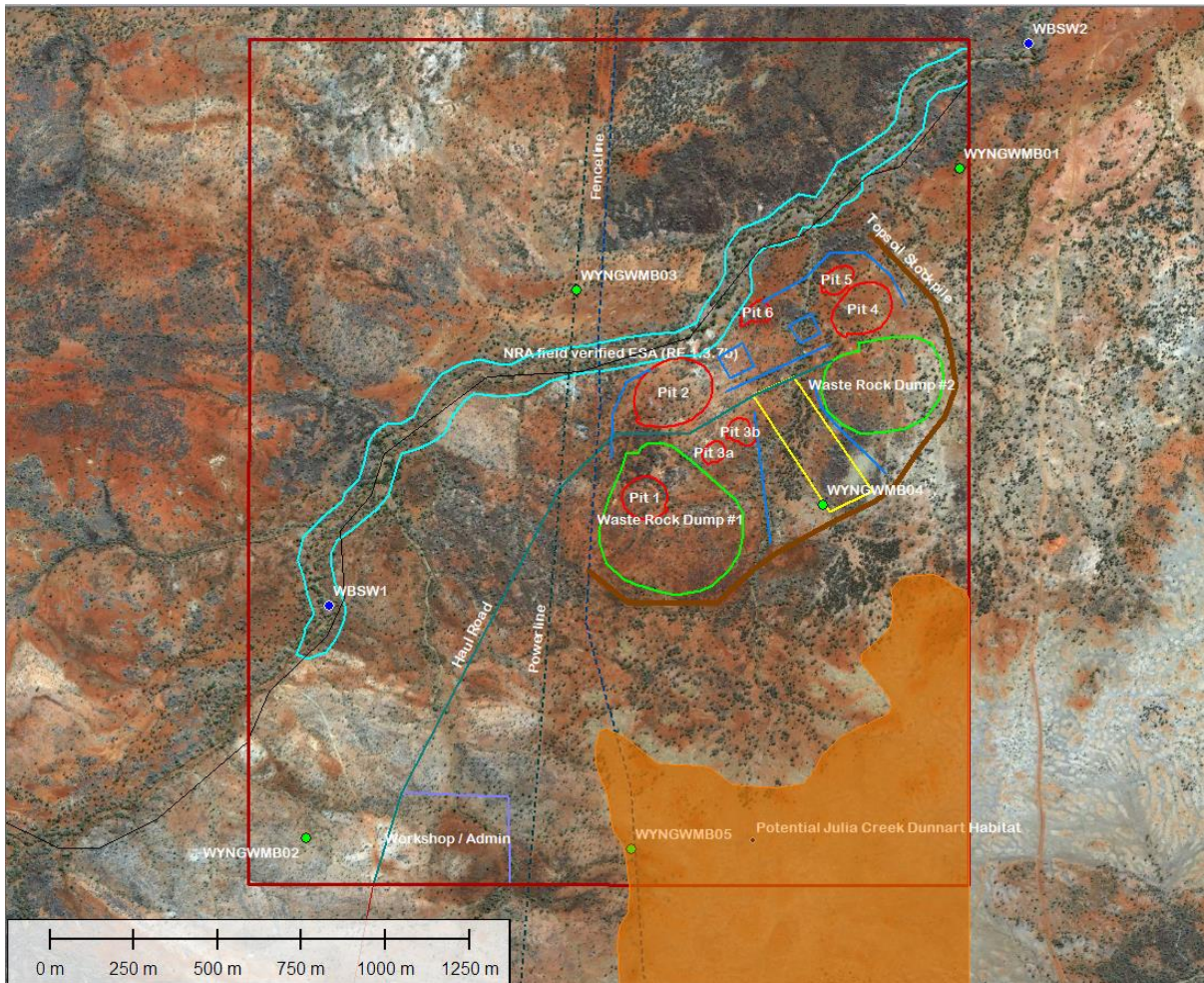


Figure 3: DSITI (2017) BVG 1:2M (Version 3.0) Mapping and NRA field fauna sites (NRA, 2018)





**Figure 4: Location of Monitoring Bore WYNGWMB05 within Julia Creek dunnart habitat**

**2.4.2 Do you consider this impact to be significant?**

No

**2.5 Is the proposed action likely to have any direct or indirect impact on the members of any listed migratory species, or their habitat?**

No

**2.6 Is this proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?**

No

**2.7 Is the proposed action to be taken on or near Commonwealth land?**

No

**2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?**

No

**2.9 Is the proposed action likely to have any direct or indirect impact on a water resource related to coal/gas mining?**

No

**2.10 Is the proposed action a nuclear action?**

No

**2.11 Is the proposed action to be taken by the Commonwealth agency?**

No

**2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place Overseas?**

No

## **Section 3 Description of the project area**

### **3.1 Describe the flora and fauna relevant to the project area**

The project area is covered by a fine scale mosaic of vegetation types and boundaries and differences between different vegetation types are subtle. Vegetation surveys (NRA, 2018) confirmed that state based Regional Ecosystem (RE) mapping is generally reliable. Approximately 21 ha (1%) of the survey study area is mapped as non-remnant vegetation.

The Broad Vegetation Group (BVG) 19 Eucalypt Low Open Woodland Over Spinifex covers over 81% of the survey study area. Within the study area, BVG 19 occurs on plains where alluvial soils are absent or limited. Soils tend to be rocky and/or gravelly, and the landform is generally low undulating hills separated by watercourse. The groundcover is dominated by Spinifex (*Triodia spp.*) and is generally sparse to mid-dense, occasionally dense. Non-native flora is uncommon in all structural layers. The tree and shrub layers are generally sparse, except where mid-dense to dense patches of *Acacia chishomii*, often dead, are present. Most trees are low in height, and hollows are small and uncommon. Very few trees with well-developed hollows were observed. Spinifex clumps were noted to provide significant habitat resources for a range of reptiles, birds and mammals.

BVG 16 Eucalypt Open Forest and Woodland on Floodplains within the study area occurs on riparian areas of the better developed streams and accounts for a small proportion of habitats within the study area. The non-native Buffel Grass and Birdwood Grass dominate where deeper more fertile alluvium is present. The tree layer density is variable, ranging from sparse to mid-dense, with the riparian zone supporting a mid-dense tree layer of River Red Gum, many with well developed hollows. The shrub layer is generally sparse in the riparian zone and includes *Melaleuca spp.* And *Flueggia virosa* subsp *Melanthesoides* (White Currant Bush).

BVG 26, Gidgee Tall Open Shrubland occupies around 8% of the study area and intersects with the proposed haul road south of the Landsborough Highway. Buffel Grass and or Birdwood Grass are occasionally present in areas featuring a more developed alluvial soil profile. Tree hollows are uncommon in pure stands of Gidgee (*Acacia cambegei* +/- *A. georginae*).

Tussock Grassland (BVG 30) is present in the south-eastern corner of the study area and intrudes slightly into the previously proposed haul road alignment south of the Landsborough Highway. This

habitat type comprises approximately 183 ha or 9% of the study area. Soils are primarily cracking clays interspersed with areas of surface gravel. Sparse trees and shrubs are present, including Mimosa Bush, Western Bloodwood and Cloncurry Box. Arboreal habitat features are sparse. Terrestrial habitat features include cracks in the clay soils.

Ten non-native flora species were identified during field surveys and up to 81 non-native species were identified via desktop surveys.

Disturbances to habitat includes the presence of cattle, primarily on the tussock grasslands and in riparian areas. Observed impacts included trampling and heavy grazing of Tussock Grasslands and erosion and fouling of waterways. Localised vegetation clearing and excavation in the mineral exploration area and proliferation of Buffel grass has also occurred, however, habitat condition was generally found to be high.

The Carpentarian Grasswren (*Amytornis dorotheae*) and Julia Creek Dunnart (*Sminthopsis douglasi*) are predicted to have a 'possible' likelihood of occurrence. The Carpentarian Grasswren requires mature, long-unburnt spinifex as habitat. This habitat type is present in patches across the study area, though is potentially insufficient to support a permanent population. The nearest Carpentarian Grasswren species records occur approximately 120 km west of the study area. The study area features a small area of crackling clays, which is potentially suitable habitat for the Julia Creek Dunnart. **Targeted surveys did not detect this species, and the nearest species records occur approximately 100 km east of the study area.**

No migratory fauna were observed during field surveys and non are expected to occur in the study area on a regular or predictable basis.

Feral Pigs, One-humped Camels, Cane Toads and Wild Dogs were the only non-native fauna species confirmed present during the field surveys. Feral Pig activity is likely to be focussed along the larger drainage lines, where signs of their presence were recorded during field surveys. It is likely that the Rock Dove, House Sparrow, Feral Goat, Red Fox, Feral Horse, Feral Cat and House Mouse are present in and around the study area at low densities.

### **3.2 Describe the hydrology relevant to the project area (including water flows)**

Watercourses are present in the north-western corner of the study area and another intersects the proposed haul road, south of the Landsborough Highway. Streams located nearby support ephemeral flows and retain pools for short periods following sustained or heavy rainfall and primarily drain to the north-east to merge with Terpetine Creek. These streams are mostly 1<sup>st</sup> and 2<sup>nd</sup> order streams. The proposed haul road crosses five streams, the largest of which are Toole Creek and Elder Creek, which are 2<sup>nd</sup> and 3<sup>rd</sup> order streams respectively. All streams are ephemeral and due to their position high in the catchment, may only hold water for short periods immediately following rainfall. Some stream pools may persist further into the dry season.

### **3.3 Describe Soil and Vegetation characteristics relevant to the project area**

Described in detail in section 1.1.2 of the flora and fauna survey, the proposed project site contains heavily folded sediments, with small areas of alluvium. The dominant vegetation type across the site and the surrounding landscape is Eucalypt low open woodland over a spinifex ground layer. A section of the proposed haul road intersects the Gulf Plains Bioregion, which is characterised by extensive alluvial plains, but includes gently sloping sandstone tablelands along its eastern margin.

### **3.4 Describe any outstanding features**

The project area is not considered to have any outstanding natural features or any other unique values.

### **3.5 Describe the status of native vegetation relevant to the project area**

No EPBC Act Threatened Ecological Communities were identified during desktop surveys or during field surveys.

### **3.6 Describe the gradient relevant to the project area.**

The study area occurs on low undulating hills and plains with elevations between approximately 180 m and 200 m above Above Sea Level (ASL).

### **3.7 Describe the current condition of the environment relevant to the project area**

The study area and surrounds are primarily used for cattle grazing. The effects of grazing (e.g. reduced vegetation cover and/or disturbed soil surface) were noticed during field surveys, on the Mitchell Grass tussock grassland and riparian zones. Historic impacts from mining exploration are present though generally localised in extent.

### **3.8 Describe any Commonwealth Heritage Places or other places recognised as having heritage values relevant to the project area**

Not applicable.

### **3.9 Describe any Indigenous heritage values relevant to the project area.**

Not applicable.

### **3.10 Describe the tenure of the action area relevant to the project area.**

Freehold Lot 3, BD52, Lot 2, BD52, Lot 1 AL31

### **3.11 Describe any existing or any proposed uses relevant to the project area.**

Not applicable.

## **Section 4 Measures to avoid or reduce impacts**

### **4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action.**

The project applicant has in locating the infrastructure ensured that aspects are located in close proximity to avoid unnecessary disturbance to land. Further the topography has been taken into account with regards to stormwater, sediment and erosion control where the topsoil stockpile is located at the most elevated section of the disturbed area providing a buffer and allowing non mine affected water to be diverted about the project. This effect further ensures that mine affected waters (MAW) are minimised. Water management within the project location is being designed to limit releases to land and promote reuse of runoff waters by the project. The Haul Road has been redesigned to avoid impacts to potential habitat for the Julia Creek dunnart. See *Figure 3*.

### **4.2 For the matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved.**

No significant impacts are proposed.

## Section 5 Conclusion on the likelihood of significant impacts

### 5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action.

As identified in NRA, 2018, no EPBC Act listed Threatened fauna species were found during targeted field surveys. Patches of potential habitat for the Carpentarian Grasswren occur in the area however direct impacts to habitat will be mitigated and the habitat affected is described as insufficient to support a permanent population. Targeted surveys did not detect the Julia Creek Dunnart (*Sminthopsis douglasi*) and the nearest species records occur approximately 100km east of the study area. However, suitable habitat may be present in the cracking clays in BVG 30 (Figure 7; NRA, 2018). Subsequent to the receipt of the field report, the Haul Road has been redesigned and the area will be avoided. See Figure 3. While its presence cannot be discounted, the main threats to the Julia Creek Dunnart are predation by feral cats (*Felis catus*), predation by foxes (*Vulpes vulpes*), habitat degradation and resource depletion due to livestock and feral herbivores, habitat change due to weed invasion and interactive effects of fire and predators. Haul road infrastructure is not likely to lead to a significant impact to the Julia Creek Dunnart. Much of the Julia Creek Dunnart habitat is grazed by cattle.

The species is not considered severely fragmented and new knowledge has extended the extent of occurrence. On 7 December 2016, the Minister approved a new conservation advice for *Sminthopsis douglasi* and transferred the species from the Endangered to the Vulnerable category. A self-assessment based on the vulnerable category of the Julia Creek Dunnart (*Sminthopsis douglasi*) identifies that the proposed project footprint will not have a significant impact on the species (see table below).

Significant Impact Criteria	Significant Impact?	Evidence
lead to a long-term decrease in the size of an important population of a species	No	No important population identified. Conservation advice states that the population is not fragmented and the area of occupancy is likely one continuous habitat.
reduce the area of occupancy of an important population	No	No important population identified. Conservation advice states that the population is not fragmented and the area of occupancy is likely one continuous habitat.
fragment an existing important population into two or more populations	No	No important population identified. Conservation advice states that the population is not fragmented and the area of occupancy is likely one continuous habitat.
adversely affect habitat critical to the survival of a species	No	No critical habitat identified.
disrupt the breeding cycle of an important population	No	No significant population identified.

		Conservation advice states that the population is not fragmented and the area of occupancy is likely one continuous habitat. Infrastructure proposed will not disrupt the breeding cycle of the Julia Creek Dunnart.
modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No	Removal or decrease in quality of habitat will not lead to the species decline. Major threats to the Dunnart include feral cats ( <i>Felis catus</i> ), predation by foxes ( <i>Vulpes vulpes</i> ), habitat degradation and resource depletion due to livestock and feral herbivores, habitat change due to weed invasion and interactive effects of fire and predators. Subsequent to the receipt of the field report, the Haul Road has been redesigned and the area will be avoided.
result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	Potential	Feral cats are considered the main threat to the Julia Creek Dunnart. Due to the sparse nature of vegetation in the proposed project area, the development of the haul road is not likely to significantly increase the occurrence of feral cats.
introduce disease that may cause the species to decline	No	No diseases are known to affect the Julia Creek Dunnart species.
interfere substantially with the recovery of the species	No	Habitat fragmentation of significant habitat loss are not considered threats to the Julia Creek Dunnart therefore this project is not likely to increase pressure on the species. Therefore, the proposed project is not likely to interfere substantially with the recovery of the Julia Creek Dunnart.

## Section 6 Environmental record of the person proposing to take the action

### 6.1 Does the person taking the action have a satisfactory record of responsible environmental management?

The applicant has a satisfactory record of responsible environmental management evidenced by a lack of enforcement action by the state environmental regulatory authority. Further the applicant ensures suitable environmental management prior to, during and after activity by careful planning evidenced in the environmental impact statement, and associated action plan. The applicant ensures that environmental representatives are on site at all times and that a relationship is developed with the landholders that regional potential impacts are addressed prior to activities.

### 6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application.

Nil applicable.

**6.3 If it a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and planning framework?**

Yes

**6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?**

Yes

**6.4.1 EPBC Act No and/or Name of Proposal?**

Exco currently hold an Approval Not Required - particular manner project EPBC 2013/6958 for their Mount Colin mine.

## **References**

NRA, 2018, Wynberg Deposit Baseline Terrestrial Flora and Fauna Report 2016/17, R02 (Final), prepared by NRA Environmental Consultants for Exco Resources Ltd, 10 January 2018.