# Native Vegetation Clearing Permit Application

## Supporting Information

### February 2025

| Revision | Author | Reviewer | Signed |
|---|---|---|---|
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# 1 Executive Summary

The Andy Well Mine was in operation between 2012 and 2017 before it was placed into care and maintenance. During its operation, the mine had an approved clearing permit initially to disturb up to 77.5ha (CPS 5035-1), with an addendum to the permit for a further 87ha added (CPS-5035-2). Over the course of the operation of the mine a total of 119.7 ha of vegetation was removed. When the mine was placed in to care and maintenance the clearing permit was allowed to lapse and is no longer valid.

On April 18 2024 Meeka was granted a permit to clear 570ha, required to construct the Gnaweeda Mine (CPS10466/1). To date much of the clearing for the mine has occurred and there have been several areas where clearing has been far less than anticipated, and previously planned waste rock landforms have been removed from the mine plan. For this reason, Meeka is seeking to amend the existing permit to allow for additional clearing for the proposed integrated waste rock landform (IWL). This amendment would require no additional clearing, given the savings in clearing made elsewhere, but would alter the clearing envelope to allow the IWL to be constructed.

The IWL is proposed to have a footprint of 46.5ha. At total clearing of 70ha is requested to allow for the installation of the IWL along with access roads, pipelines, expanded WRLs and other associated disturbance. The area proposed for the IWL has been assessed as part of past clearing permit applications and has been approved previously. The area contains no vegetation of conservation significance and has been largely disturbed already with the installation of a landfill, topsoil storage and a scrap metal stockpile. The proposed clearing will not impact vegetation communities to any real extent.

An assessment of the clearing against the ten clearing principles was undertaken. Overall, the clearing associated with the Project will have limited impact. The clearing will not be at variance with the 10 clearing principles and can be done with no long-term impacts to the vegetation communities within the greater region.

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# 2 Introduction

The Andy Well Mine is located on M51/870. The tenement is largely disturbed and has been granted several clearing permits in the past, which have now all expired. In December 2023 a clearing permit (CPS-10466-1) was applied for which included some clearing on M51/870 to install the haul road to connect the tenement with the Gnaweeda Project. The clearing permit also allowed for the installation of a mine village on the southern boundary of the tenement, however this clearing will not take place, as the village has been relocated.

In 2024, a Mining Proposal (Reg ID 122395) was approved allowing for the implementation of the Gnaweeda Project and installing the haul road on M51/870. The mine village has been relocated to the north of the tenement, and clearing for this work will be undertaken using the 10ha exemption for clearing on mining tenure. The mine village occupies approximately 2ha on the tenement and the exemption is applicable for this purpose.

As part of the planned clearing for the Gnaweeda Project, a 50m corridor was allowed for the haul road. This equated to approximately 80ha over the 20km length of the haul road. The construction of the haul road was done in later 2024 and into 2025, with the road being constructed with a total width of 15m. this equates to approximately a 28ha disturbance. This clearing therefore did not use 42ha of allowed clearing. Further changes to the mine plan also reduced the need to expanded waste dumps which further allow for the clearing of the IWL to occur within the same clearing footprint.

This report has been developed to support a native vegetation clearing permit across the three tenements. The clearing required for the initial operation is 50ha. The report details the areas to be cleared, the vegetation type and any significance of the proposed clearing.

This report presents the following information:

- a description and map of the area of proposed clearing in regard to location, size and purpose;
- a site overview with a brief description of the existing environment including: local climate, biogeographic region, land use, land systems, geology, soil landscapes, hydrology and hydrogeology;
- a description of the area to be cleared in regard to vegetation type, condition and representation in a regional context;
- list of flora species present and their conservation status;
- identification of any Threatened (Declared Rare Flora) or Priority Flora within the Project Area;
- a description of broad fauna habitat;
- a list of conservation significant terrestrial fauna species; and
- a discussion of the proposed vegetation clearing in relation to the Ten Clearing Principles.

# 3 Site Information

## 3.1 Ownership

The Project is held by Andy Well Mining Pty Ltd, which is a fully held subsidiary of Meeka Metals (ACN 23 080 939 135). The Project is located across three tenements detailed in the table below.

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**Table 1 Project Tenure**

| Tenement | Area (ha) | Granted | Expiry | Holder |
|---|---|---|---|---|
| M51/870 | 1109.50 | 27/04/2012 | 26/04/2033 | Andy Well Mining Pty Ltd |

## 3.2 Project Description

The MGP is the name allocated to all the mining and exploration areas that form part of the granted tenure owned by Meeka in the Murchison region. Within this broader project description is the existing Andy Well Project (AW) and the new Gnaweeda Project (GP). Within each respective sites exists individual mining areas. This breakdown is shown below:

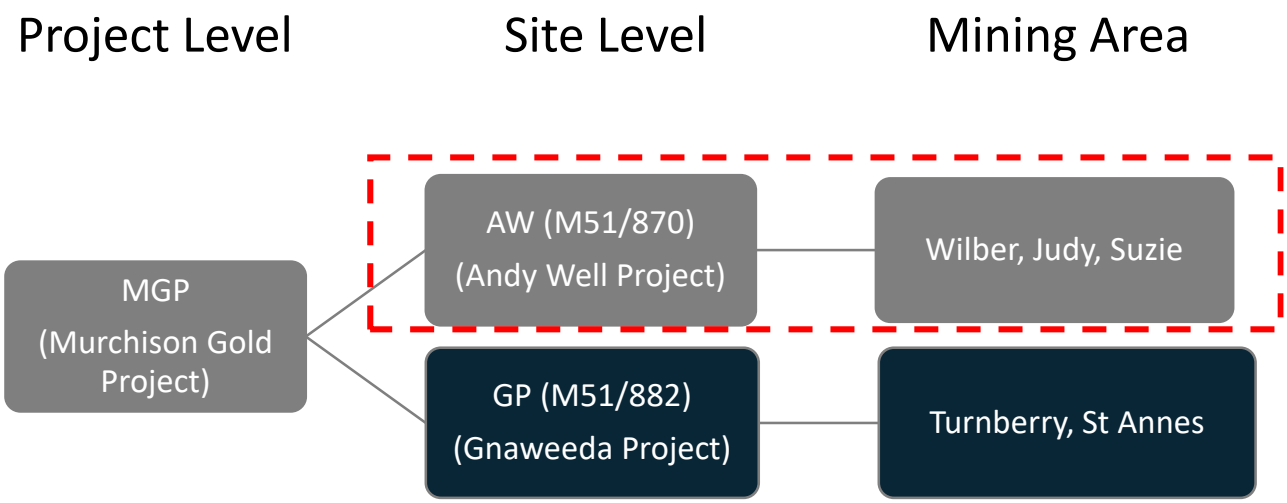


**Figure 1 Project Description**

## 3.3 Location and Site Layout

The Murchison Gold Project ("MGP" or "the Project") is located 46 km northeast of Meekatharra and 800 km northeast of Perth, Western Australia. Road access is via the Great Northern Highway which runs through the Project. The Meekatharra aerodrome, a sealed 2,181m runway, is used to commute personnel to and from the Project.

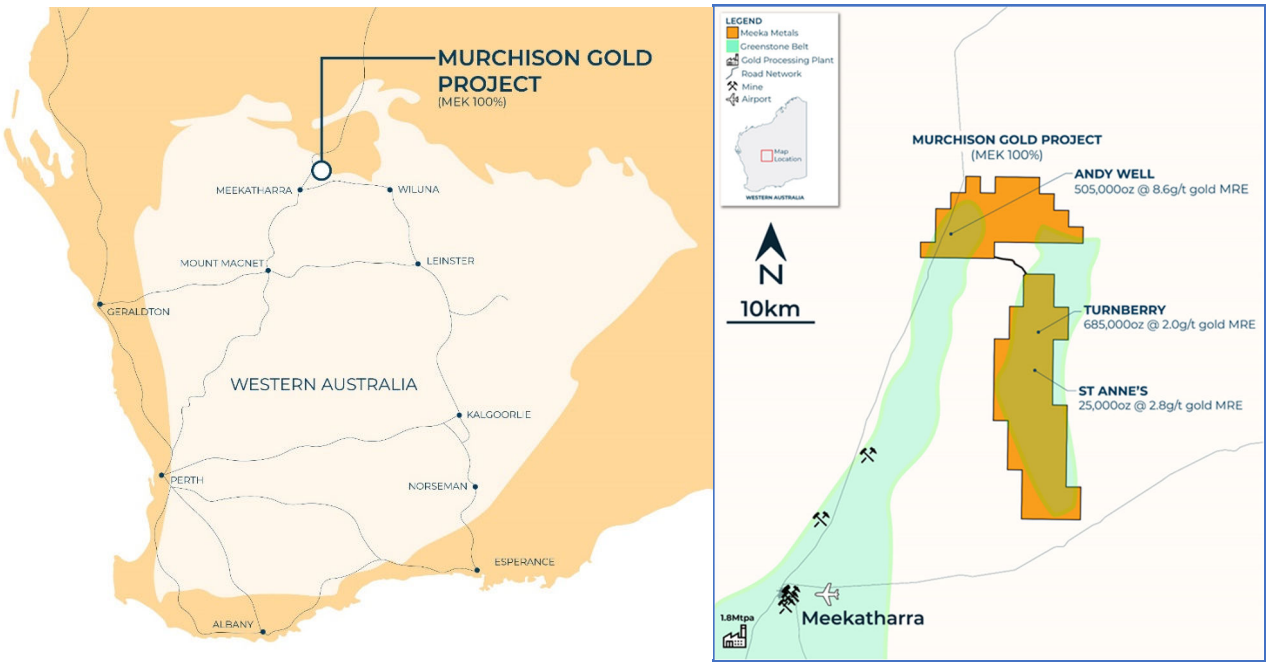


**Figure 2 Project Location**

The Murchison Gold Project is comprised of three individual mining areas, Andy Well, Turnberry and St Annes. The Andy Well area was a previous mine that was in operation between 2012 to 2017. The mine was placed into care and maintenance in 2017.

At the time the operation was placed into C&M the mine consisted of;

- Open pits and underground workings
- Waste dumps, including a PAF waste cell
- A TSF with two operational cells
- Topsoil stockpiles
- ROM pad
- Process Area
- Mine administration and workshops
- Other associated mining activities

## 3.4 Site Layout

Much of the infrastructure for mining has already been installed at the Andy Well mine. Figure 3 below, shows the current site layout. the site currently consists of the following;

- Processing infrastructure
- Open Pits and underground access
- Run of Mine (ROM) Pads
- Waste rock dumps
- PAF waste dump
- Tails Storage Facilities
- Process water ponds
- Dewatering infrastructure
- Other associated disturbance such as access and haul roads, topsoil stockpiles, administration buildings, and laydown

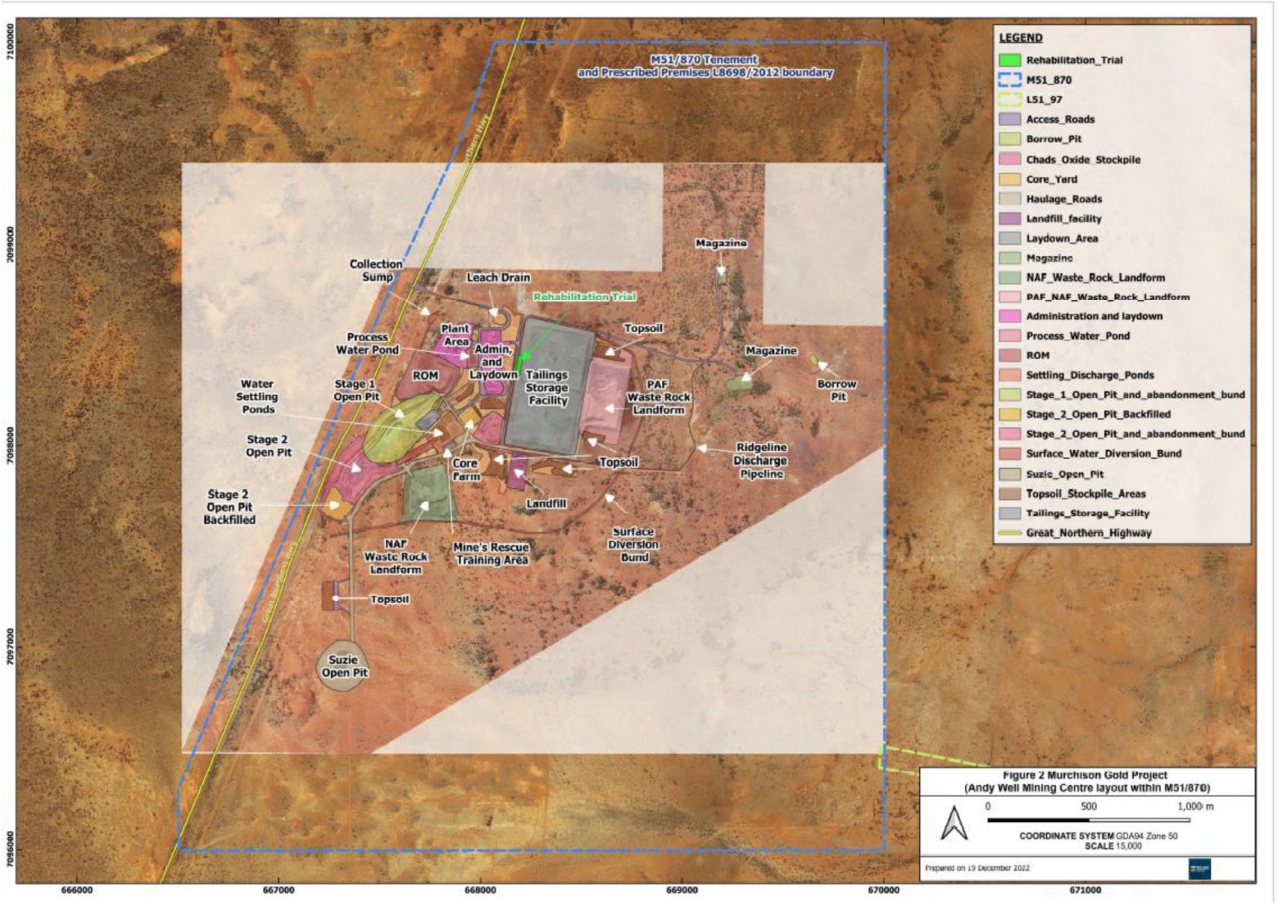


**Figure 3 Andy Well Current Site Layout**

Meeka plans to restart the Andy Well operation in 2025, to begin mining remaining underground ore reserves, undertake further exploration, and to commence treating ores from the neighbouring Gnaweeda Project. the life of mine of the proposed combined operation will exceed 9 years. To ensure mining can continue for that timeframe, further TSFs are required.

The existing TSF is comprised of two cells, a northern and southern cell. The northern cell has been constructed to its fully approved design and is considered exhausted. The southern cell has some remaining capacity and is approved for a further 3m lift. Meeka plans to excavate some of the tails from the southern cell and use these in the construction of the IWL. These tails have been subject to acid mine drainage and metals leaching studies and have been found to be totally inert. Therefore, once approval from DEMIRS is received, the tails can be removed from the TSF and treated as mine waste for the purposes of IWL construction. The removal of these tails will occur early in the restart of the operation, which will have the added benefit of providing further tails storage within the cell. The removal of the tails is estimated to provide a further one year of tails deposition.

A works approval has been submitted for the in-pit disposal of tails into the Suzie pit. The pit has a volume of approximately 400,000m3, which will allow for between 18 months to two years of deposition depending on production rate. The combined storage of the existing TSF and the Suzie pit is insufficient for the life of the mine and so the IWL is required.

Figure 4 shows the location and footprint of the IWL. The IWL has a footprint of 46.5ha and is located to the immediate south of the current TSF. The IWL will be constructed over six stages

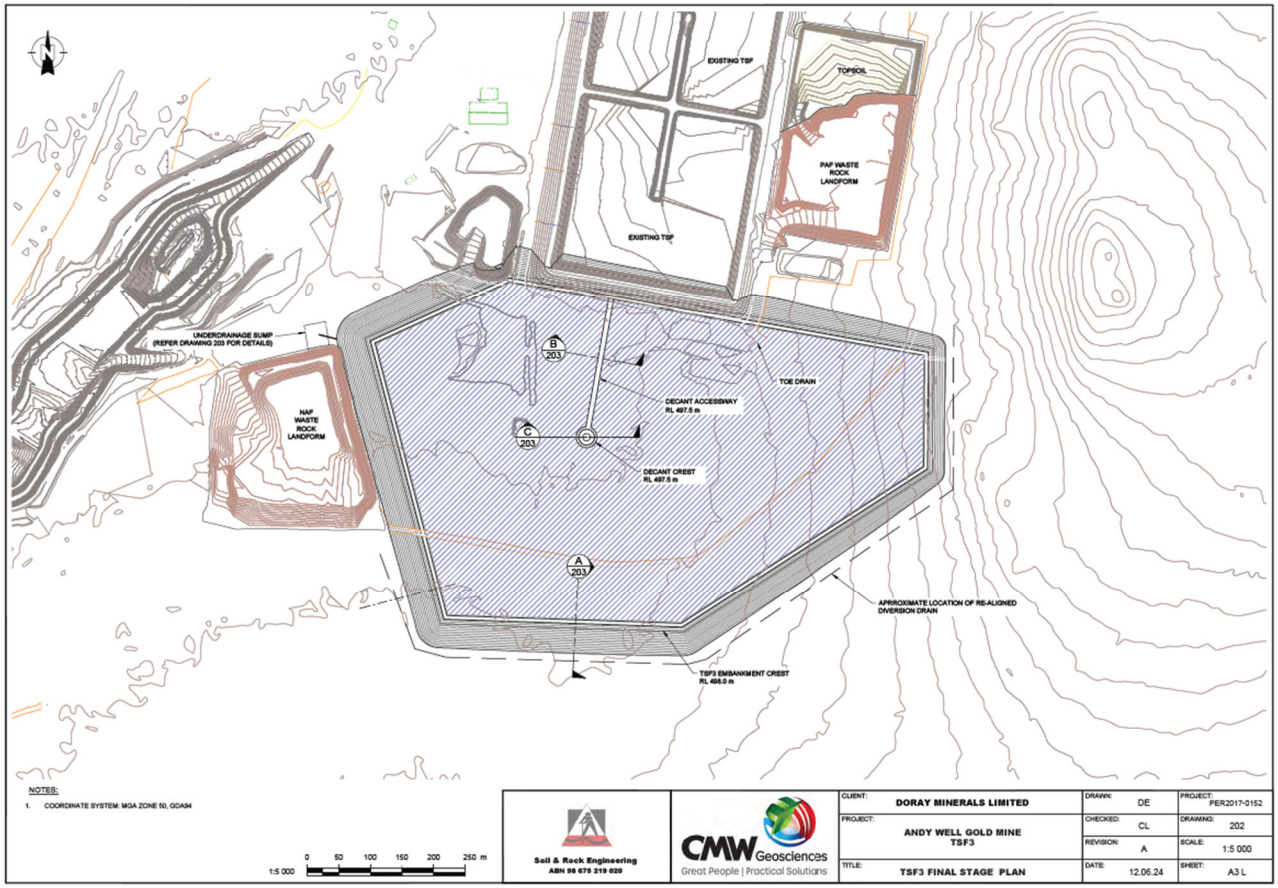


**Figure 4 Proposed IWL Layout and Location**

## 3.5 Project Objectives

The Project is seeking to clear up to 50 ha across the M51/870 to enable the construction of the IWL. The Project has minimalised the disturbance by locating the IWL in an area that is already heavily disturbed, and has utilised approved clearing elsewhere to off set the impact of the proposed IWL clearing.

## 3.6 Project Footprint

The proposed clearing associated with the operation is summarised in the table below.

**Table 2 Project Disturbance Footprint**

| Proposed Activity | Area of Disturbance (ha) |
|---|---|
| **Key Mining Activities** | |
| IWL on M51/870 | 47 |
| Associated disturbance for access, pipelines and other disturbance | 3 |
| **Total** | **50ha** |

## 3.7 Premises History

The Andy Well Mine was in operation from 2012 until it was placed in care and maintenance in 2017. While in operation the mine was located on tenement M51/870 and was a stand-alone operation that mined and processed gold ore. In 2017 the site was placed into care and maintenance and was sold shortly after.

### 3.7.1 Previous Native Vegetation Clearing Permits

The Andy Wel Site was granted CPS 5035-1 in 2012 which permitted the clearing of 77.5ha within the envelope identified within Figure 5. This area was for the commencement of the operation and included all the disturbance required for the initial processing plant, TSF, waste rock dumps, open pits and other required infrastructure.

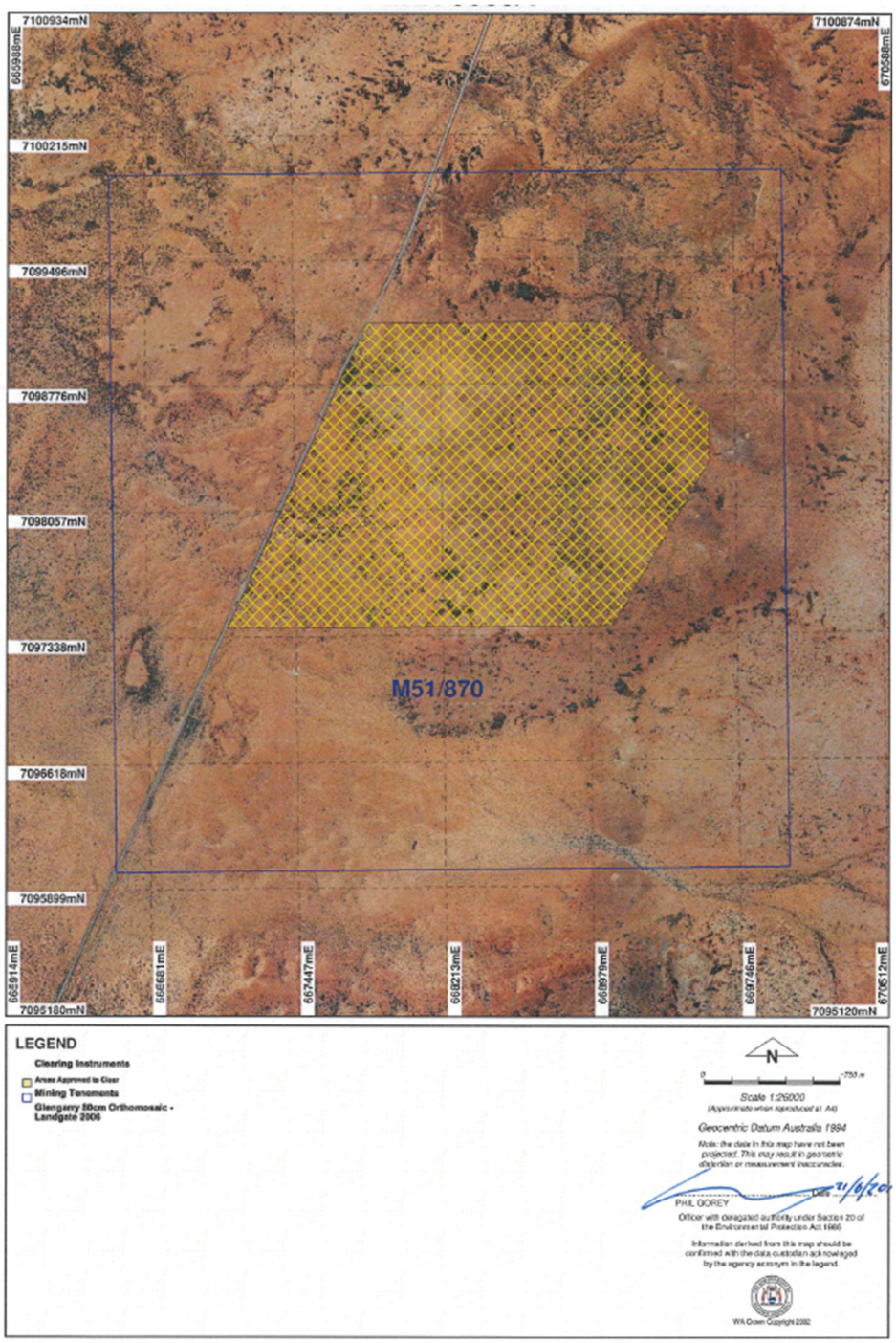


**Figure 5 Approved Clearing in CPS 5035-1**

In 2014 CPS 5035 was initially modified to add a further 9.5ha of clearing to the permit. This resulted in a total of 87ha of disturbance being allowed over the tenement.

In 2015 the permit was modified, and the disturbance area was expanded to allow for the mining of the Suzie pit and the installation of further required infrastructure. As part of the assessment for the modification of the permit, the entire tenement was put forth for assessment (Figure 6). The CPS modification was for a further 40ha, taking the total disturbance permitted across the tenement to 127ha. During the operation of the mine 119ha was disturbed before the mine was placed into care and maintenance.

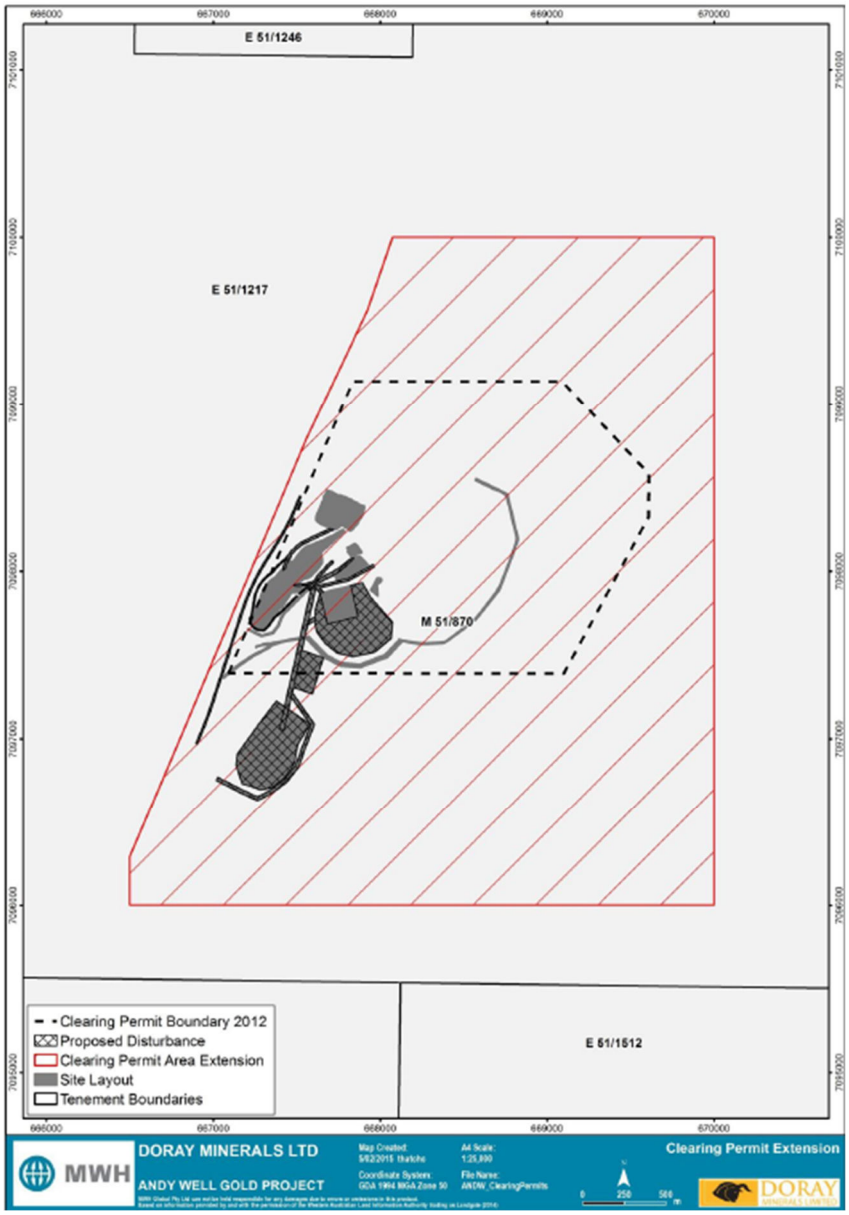


**Figure 6 CPS 5035-2 Clearing Area**

For this Clearing Permit application, the history of previous approvals is of great importance. The entire tenement has previously been assessed and approved for the requested level of disturbance. This permit application seeks a further 70ha of disturbance, within a the previously assessed envelope and would increase the current and future disturbance across the tenement from 119ha. to 176ha.

In the period between 2012 to present, none of the species found at the Andy Well mine, be it flora or fauna have been subject to elevated conservation status.

## 3.8 Existing Facilities

The Andy Well Mine on M51/870 was in operation until 2017 and consisted of all the facilities required to mine and process gold ore. Since its closure and subsequent sale, much of the infrastructure has been removed, with only limited infrastructure remaining. A like for like replacement is proposed to restart the mine.

# 4 Existing Environment

## 4.1 Climate

The Murchison region is described as an arid climate characterised by summer and winter rainfall with annual totals rarely exceeding 200 millimetres (mm) (Beard 1990, Desmond et al. 2001). The climate is typical of a semi-desert tropical climate characterised by hot summers and relatively warm, dry winters (BoM 2023).

Meekatharra Airport (station number 007045), approximately 40 km south west of the Study Area, is the nearest Bureau of Meteorology (BoM) weather station, which documents long term climate data (BoM 2023). The mean annual rainfall recorded at Meekatharra Airport is 239 mm with the majority received between January and March each year, with a secondary peak between May and July. Peak rainfall is recorded in February with a secondary peak in June (BoM 2023). The hottest maximum temperatures occur between November and March, with the coldest minimums occurring between May and August (BoM 2023).

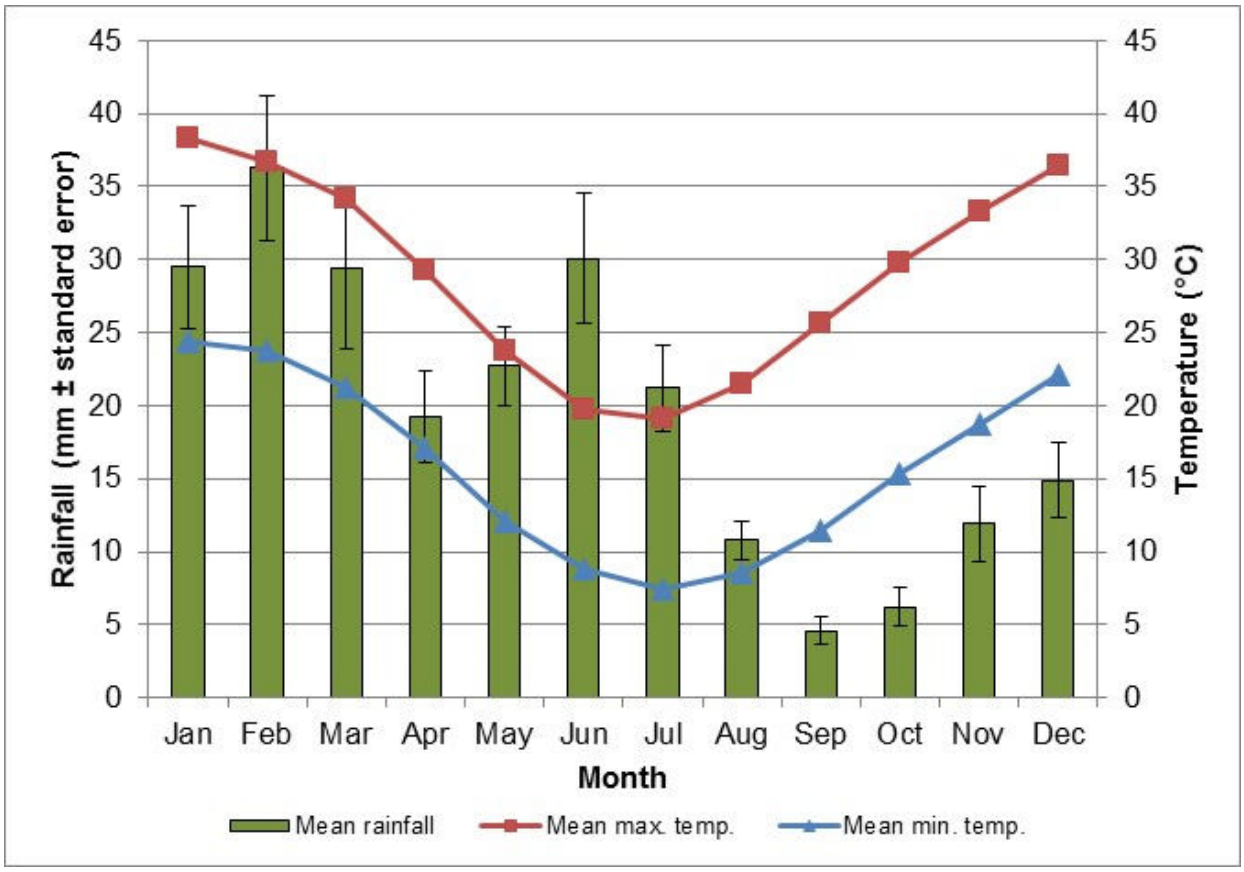


**Figure 7 Meekatharra Weather**

## 4.2 Regional Setting

The Project is located in the Murchison bioregion in WA, which covers an area of 278,360 km$^2$ with mining and grazing as the two main land uses (Desmond *et al*. 2001). The Murchison bioregion encompasses the transitional zone between the Eucalypt dominated environs of southwest WA and the Mulga/Spinifex dominated areas of central Australia (Morton *et al.* 1995). The bioregion contains several large ephemeral wetlands, providing refuge for waterbirds. The vegetation in the bioregion is closely correlated with geology, soils and climate. Areas of outcropping rock with skeletal soils

support Mulga low woodlands. Hummock grassland grows predominately on calcareous soils and samphire (*Halosarcia* sp.) low shrubland mostly on the saline alluvium areas. In the east of the bioregion, the red sand plains support Mallee-Mulga parkland over hummock grassland (Thackway and Cresswell 1995).

The Murchison bioregion includes two major components: the Murchison 1 (MUR1 East Murchison) subregion, and the Murchison 2 subregion (MUR2 – Western Murchison). The Project lies on the eastern fringe of the Western Murchison subregion. The subregion is characterised by low Mulga woodlands rich in ephemerals and bunch grasses on granitic outcrops and extensive hardpan washplains. The landscape comprises low hills and mesas of duricrust, separated by flat colluvium and alluvial plains. The region contains the headwaters of the Murchison and Wooramel Rivers which drain the subregion westwards towards the ocean (Desmond *et al.* 2001).

The Project is remote with no mine sites nearby. The Karalundi Aboriginal Education Community is located approximately 10 km to the north of the Project area and the Killara Homestead is approximately 5 km south-east of the Project.

### 4.2.1 Biogeographically Zones and Natural Features

Thackway and Cresswell (1995) describe a refined system of 85 'biogeographic regions' (bioregions) and 403 biological subregions covering the whole of Australia; resulting from a collaboration between all state conservation agencies and coordinated by the Commonwealth Department of the Environment (DoE). Bioregions are defined on the basis of climate, geology, landforms, vegetation and fauna. The Project lies on the eastern fringe of the Western Murchison subregion of the Murchison Bioregion of the Interim Biogeographical Regionalisation for Australia (IBRA) classification system (Bamford 2012).

The Murchison Bioregion falls within the Bioregion Group 2 classification of EPA (2004). Bioregions within Group 2 have "native vegetation that is largely contiguous but is used for commercial grazing (Bamford 2012)".

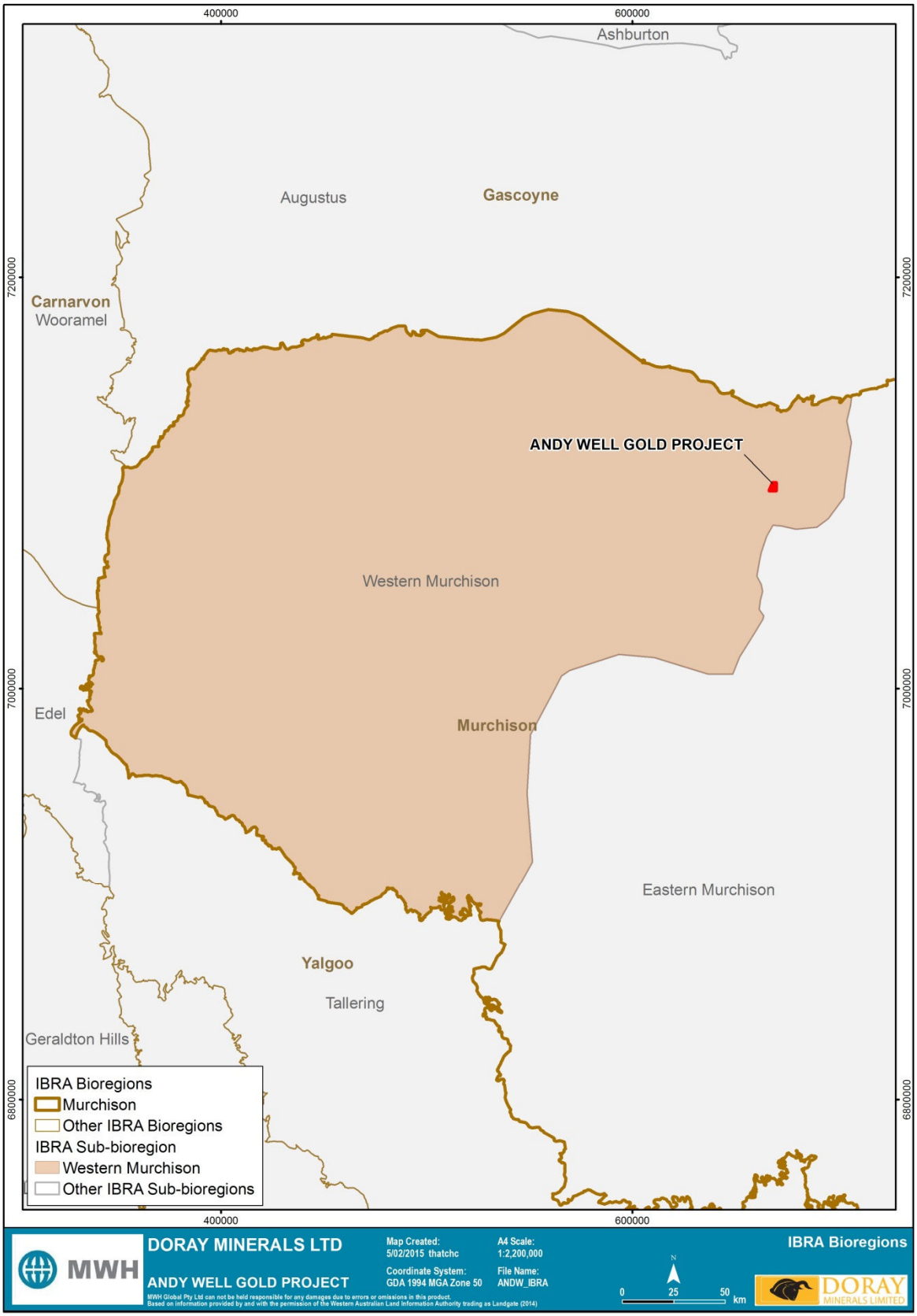


**Figure 8 Gnaweeda Project Bioregions**

The general features of the Western Murchison subregion are summarised by Desmond, Cowan and Chant (2001). The subregion is characterised by low mulga woodlands rich in ephemerals and bunch grasses on granitic outcrops and extensive hardpan washplains. It contains the headwaters of the Murchison and Wooramel Rivers. The landscape comprises low hill and mesas of duricrust, separated by flat colluvium and alluvial plains (Bamford 2012).

### 4.2.2 Land Use

The dominant land use is grazing (of native pastures) and there are several mining interests in the subregion (Bamford 2012). There are no other mining operations within 20km of the proposed operation.

### 4.2.3 Land Systems

Speck *et al*. (1963) classified and mapped the land systems of the Meekatharra region including the Project survey area. Land Systems are classified according to similarities in landform, soil, vegetation, geology and geomorphology. The survey area contains four land systems (**Table 3**).

**Table 3 Land systems underlying the Andy Well Gold Project**

| Code | Land System | Landform |
|---|---|---|
| YN | Yandil | Wash plains on hardpan with Mulga shrublands - almost flat uniform drainage plains with very occasional sandy banks and groves. |
| VI | Violet | Irregular plains on laterite and parent rock, with Mulga, Bowgada and halophytic shrublands. Stony rises - dense Mulga and shrubs, lower slopes and drainage – Mulga groves with dense shrubs and grasses. |
| Cu | Cunyu | Valley fills with non-saline alluvium. Open Mulga with abundant annuals. |
| Be | Belele | Almost flat wash plains and sandy banks on hardpan with Wanderrie and Mulga shrublands |

### 4.2.4 Beard vegetation Mapping

The Murchison region of the Eremaean Botanical Province (Beard 1976) is typified by plants from the families Fabaceae (Acacia spp.), Myrtaceae (Eucalyptus spp.), Scrophulariaceae (Eremophila spp.), Chenopodiaceae (samphires, bluebushes, saltbushes), Asteraceae (daisies) and Poaceae (grasses) (Mattiske 2011).

The region is characterised by the widespread presence of mulga (Acacia aneura) communities (Beard 1). Acacia aneura, which thrives in harsh environments, is a variable species, forming woodlands on the plains and reducing to scrub on the rises and hills (Beard 1990).

The vegetation of the convergence of the West and East Murchison subregions is dominated by Mulga woodland and Mulga shrubland, with Eremophila spp being the most abundant species of undershrub (Beard 1990). These woodlands and shrublands are often rich in ephemeral species (plants with short life cycles that are very dependent on favourable conditions such as rainfall) and may also support perennial and annual grasses. Hummock grasslands and chenopod communities associated with salt lake systems are less frequently present (Cowan 2001, Desmond et al. 2001).

## 4.3 Geology

### 4.3.5 Regional Geology

The regional geology of the area extends to the northern margin of the Yilgarn Craton. The Yilgarn Craton is composed of Archaean rocks, predominantly granitoids, which are crossed by north-northwest trending belts of greenstones. Archaean and the overlying Proterozoic strata of the Yilgarn Craton have been extensively oxidised to depths up to 120 m, possible since the pre-cretaceous during formation of the WA Plateau (Doray 2012).

The area has been subject to a wide range of climates during its history and the regolith has formed a complexly layered structure as a result of leaching of mineral components during wet cycles and precipitation of mineral matter to form ferricrete, silcrete and calcrete during dryer cycles. Carbonate deposits in the form of groundwater calcretes in ancient drainage lines are widespread throughout the Yilgarn Craton (Doray 2012).

The Yilgarn Craton comprises elongate north-northwest-south-southeast-striking belts of sedimentary and volcanic rock (i.e. greenstones) that are enclosed by large areas of granite and granitic gneiss. These rocks formed principally between c. 3.05 and 2.62 Giga annum (Ga), with a minor older component (>3.7 Ga). The Yilgarn is divided into four broad tectonic units: the Narryer Terrane, Youanmi Terrane, Southwest Terrane and Eastern Goldfields Superterrane (Doray 2012).

Exploration lease E51/1217 covers a portion of the Meekatharra-Wydgee Greenstone Belt north of Meekatharra and is contained within the Youanmi Terrane. The north-notheasterly trending Archaean Meekatharra-Wydgee Greenstone Belt, comprises a succession of metamorphosed mafic to ultramafic and felsic and sedimentary rocks belonging to the Luke Creek and Mount Farmer Groups. Over the northern extensions of the belt, sediments belonging to the Proterozioc Yerrida Basin unconformably overlie Archaean granite-greenstone terrain. Structurally, the belt takes the form of a syncline known as the Polelle syncline (Doray 2012).

Younger Archaean granitoids have intrusive contacts with the greenstone succession and haveintersected several zones. Within E51/1217, a largely concealed portion of the north-north-easterlytrending Greenstone Belt is defined, on the basis of drilling and airborne magnetic data, to

underlie the area over a maximum strike distance of some 9 km and a width of up to 4 km. At surface this area includes subcrops of weathered schistose sedimentary and felsic rocks including quartz-sericite schist cut by quartz veins and metamorphosed porphyry. Narrow northerly trending and steeply dipping banded iron formation (BIF) also crops out (Doray 2012).

Superficial cover includes degraded laterite profiles and ferruginised rubble and colluvium over areas of subdued relief which grade into sheetwash deposit five to eight metres thick and alluvium in surrounding watercourse related to north-westerly flowing tributaries to the Yalgar drainage system. Alluvial cover over the Yalgar drainage system ranges up to 30 m thick, overlying channel clays up to 100 m thick. The greenstone succession is tightly folded into a south plunging syncline and is cut by an easterly trending Proterozoic dolerite dykes (Doray 2012).

### 4.3.6 Local Geology

The Project is hosted within the Wilber Lode deposit and lies on a plateau, with elevations of approximately 470 m to 500 m above Australian Height Datum (AHD), in the Murchison River floodplain paleochannel that drains to the river, approximately 40 km north of the Project. The paleochannel features a repetitive heterogeneous geology on the scale of tens of metres to kilometres, with the strata typically comprising of colluviums with quartz and rock fragments and alluviums with unconsolidated sand, silt and gravel, interspersed with calcretes and flanked by deeply weathered later ite. Felsic volcanic rock, felsic tuff, granodiorite and tonalite calcretes exist close to the Project, including at Karalundi Mission (Karalundi calcrete), Killaloo Well (Killara North calcrete) to the north and Killara Homestead (Killara calcrete) to the southeast. However, no distinct calcretes exist within the Project (Bennelongia Environmental Consultants 2011).

The Project is located in the Murchison Mineral Field on the northern margin of the Yilgarn Craton. The area is underlain by a roughly north south trending Archaean greenstone belt, bounded to the east and west by granite/gneiss. To the north of the Project, basement lithology transitions to the Proterozoic sediments and volcanics of the Yerrida Basin.

Crystalline basement lithologies are weathered in situ to varying depths to form clay and clayey sands. A thin surface cover of aeolian and colluvial detrital deposits overlies basement in most areas. Significant detrital deposits are limited to the major drainage channels of the Yalgar River.

A narrow, north-south trending BIF ridge (Aci) runs to the east of the Project and a dolerite dyke (Pd) cross cuts the dominant structures to the north of the Project. Within the Project, mineralisation is hosted in a high-magnesium basalt flow sequence, which has locally been metamorphosed to a chloriteschist in the vicinity of a dominant north south trending shear zone (RPS Aquaterra. 2012a).

Mineralisation at the Project occurs in the Wilber Zone within the paleochannel. This quartz reef consists of a thin (two to three metres wide) north-northeast to south-southwest trending zone of steeply dipping quartz-carbonate vein(s) within moderately altered and sheared high magnesium basalts. The basalt is cross-cut in a northwest to southeast orientation by a Proterozoic dolerite (Bennelongia Environmental Consultants 2011).

### 4.4 Soils and Soil Profiles

Soils across the Project area have been mapped at the 1:250,000 scale by the Department of Agricuture diring the Murchison River catchment and surrounds survey. At this scale there are 3 major soil and land systems across the Project area;

- (272Be) - Reddish brown hardpan with shallow loams associated with hardpan wash plains and low sandy banks on flat alluvial plains of the Belele land system - this soil is typically shallow (< 1m) underlain by a red brown hardpan of cemented alluvium (Curry et al., 1994).
- (272Yn) – Reddish brown shallow loam over hardpan on flat colluvial plains of the Yandil land system – these soil types are commonly referred to as “flat hardpan wash plains” (Curry et al., 1994) consisting of a shallow loamy surface mantle of quartz or ironstone pebbles and gravels.
- red shallow loams (272Vi) occur to the east of the Project area and are typically associated with low ridgelines and gently undulating stony rises of the Violet land system. They are generally shallow (<1 m) and typically underlain by greenstone, granitoids or laterite (the erosional surface). It occupies the eastern portion of the Project area.

The hardpan material forming the principal subsoil material of subdued lower and middle slopes of the Project area (Belele and Yandil Land systems) is referred to as Wiluna Hardpan. The material varies in lithology and age (from Quaternary to recent), consisting of a colluvial / alluvial conglomerate (clays, sands, gravels, rock fragments) that have been progressively altered through clay illuviation and cementation by amorphous silica.

These conditions are thought to result from bioclimatic pedogenesis, in particular, sequential wet - dry cycles associated with episodic (cyclonic) flooding and prolonged, intense dehydration (SWC 2012).

Soil Water Consultants (SWC) undertook baseline soil characterisation for the Project area. The purpose of this assessment was to identify and characterise all surficial soil materials within the

proposed disturbance areas and suggest management strategies for handling and utilisation (SWC 2012).

## 4.5 Waste Rock Characterisation

Soil Water Consultants (SWC) was engaged to undertake a geochemical characterisation for the waste rock materials of the Wilber Lode deposit. This geochemical characterisation was undertaken to assess the potential for acid rock and metalliferous drainage to occur following disturbance of these materials, and to identify the distribution of other potential problematic waste rock materials that may impact on the success of rehabilitation (SWC, 2011a).

The major findings from this investigation were:

- The regolith materials throughout the Wilber Lode deposit are predominately alkaline, non-saline and non-acid forming (NAF). These materials can therefore be used, without restriction, to construct the outer surface of the TSF waste rock landform (WRL). Their non-saline characteristics will not restrict root exploration, and therefore they represent favourable growth medium materials. However, the low salinity is likely to result in them being highly dispersive and erosive, and subsequently they should be covered with suitable stable topsoil/subsoil materials (as identified in the surface soil characterisation study – see Section 2.7.4).

- Similar to the regolith, the various fresh rock materials to be mined within the Wilber Lode deposit are generally alkaline and non-saline. Although they are alkaline, the dominant felsic porphyry (ff), dolerite (md) and undifferentiated mafic (mm) rock types contain negligible readily available buffering capacity. These rock types also contain appreciable sulfides, and consequently they are classified as potential acid forming (PAF).

- The basalt (mb), minor chlorite schist (zcl) and feldspar porphyry (pf) lithologies to be mined are classified as NAF. The basalt lithology, which represents one of the major waste rock types to be mined, contains appreciable readily available buffering capacity, and therefore it has an excess of alkalinity. There is the potential that this material could be used on the outer surface of the WRL to assist in stabilising the surface regolith materials.

- Providing that all materials to be mined are appropriately handled and utilised, metalliferous drainage following disturbance of the waste rock materials is unlikely to occur due to the elevated metals and metalloids being strongly held with the crystal mineral structure of the material (SWC, 2011a).

Soil Water Consultants (SWC) further undertook an Acid Base Account (ABA) for all waste rock to be mined at the Wilber Lode deposit, so that appropriate management strategies can be developed to minimise any potential impacts on the environment. The following results were obtained:

- All Regolith materials, including the cover materials, saprolitic oxide and transition are classified as Non-Acid Forming (NAF) with negative Net Acid Producing Potentials (NAPP), ranging from -0.7 to -65.32kg $H_2SO_4$/t (average NAPP = -31.1kg $H_2SO_4$/t).

- The dominant rock types to be mined at the Wilber Lode Deposit, which include Basalt (mb), Dolerite (md) and Undifferentiated Mafic (mm), are classified as Potential Acid Forming (PAF), with NAPP ranging from -135.27 to 58kg $H_2SO_4$/t (average NAPP = 25.8kg $H_2SO_4$/t) (SWC, 2012c).

The materials balance calculations have identified the following volumes (BCM) of waste rock to be mined at this deposit:

- Open Pit Operations
    - Cover/Loam 141,677 nil % PAF
    - Oxide 374,672 nil % PAF
    - Transition 158,966 nil % PAF
    - Fresh 872 100% PAF
- Underground Operations
    - Fresh 127,000 80 % PAF

Assuming a bulk density of fresh rock of 3.0t/$m^3$ and 2.2t/$m^3$ for the regolith materials (cover/loam, oxide, transition) the equivalent mass of NAF (i.e. regolith) and PAF (i.e. fresh rock) is:

- Mass of NAF materials to be mined = 444,704t
- Mass of PAF fresh rock to be mined = 307,416t (SWC, 2012c)

Using the average NAPP values reported above the NAPP of the regolith materials is -13,830,294kg $H_2SO_4$4, whilst the NAPP for the fresh rock is 7,915,962kg $H_2SO_4$/t. If all of the waste rock is to be mixed together then it will likely be non-acid producing, with a NAPP of -5,914,332kg of $H_2SO_4$. If only the fresh rock from the open cut operations is stored above-ground on the NAF/PAF waste stockpile area then the waste materials will have negative NAPP of -13,762,932kg $H_2SO_4$; hence all waste rock to be stored in the NAF/PAF waste stockpile area will likely remain alkaline (SWC, 2012c).

## 4.6 Surface Hydrology

### 4.6.1 Regional Hydrology

Surface drainage features of the region can be divided into two broad groups: the external drainage provided by the catchment areas of rivers that flow into the ocean, and the internal drainage of water courses that drain into salt lakes. To the east of a line running generally north to south, located between Meekatharra and Wiluna, lays the area of the internal drainage. Here, creeks and internal rivers drain surface water into numerous salt lakes. External surface water drainage is provided by a number of intermittent rivers (RPS Aquaterra 2012b).

The Project is located within the Murchison River catchment, which supplies the second longest river in Western Australia. Other major rivers draining this area into the Murchison River include the Yalgar River, Whela Creek and the Sandford and Roderick Rivers. The catchment area of the Murchison River comprises an area of approximately 104,000 km2 as defined by the Department of Water (DoW) however, this reduces to an effective catchment of around 89,000 km2 when the Lake Austin subcatchment is excluded (inward draining catchment) (RPS Aquaterra 2012b).

Rain generally only falls in the upper basin during summer cyclones, so for much of the year, the Murchison River does not flow, having dry sandy river beds with occasional permanent pools. The eastern reaches of the catchment contain large chains of salt lakes, which flow only intermittently.

Water quality during floods is fresh, but turbid, while low flows are brackish and saline (RPS Aquaterra 2012b).

Streamflow is directly in response to rainfall and flows are ephemeral . Streamflow in the smaller creeks is typically of short duration and ceases soon after the rainfall passes. In the larger rivers, which drain the larger catchments, runoff can persist for several weeks and possibly months, following major rainfall events, such as those resulting from tropical cyclones (RPS Aquaterra 2012b).

The Project lies within a catchment of approximately 520 km2 that crosses the Great Northern Highway (GNH) at a series of floodway/culvert arrangements. Bunds constructed parallel to the GNH channel local flow towards each respective floodway/culvert. The culverts generally comprise single 400mm diameter concrete pipes, and as such only have capacity for small flows. Larger flow events cross the GNH via the floodways. The majority of the catchment flows over the southern series of floodways (RPS Aquaterra 2012b).

Average bed gradients upstream of the GNH are around 0.2%, draining in a north-westerly direction towards the mining area. There are no defined incised creek beds in the catchment draining toward the mining area, and as such, flow through the catchment is more likely to be in the form of sheet flow and with flow only during major rainfall events (RPS Aquaterra 2012b).

Once across the GNH, the general direction of flow is in a north-westerly direction towards the Yalgar River. The Yalgar River is a 120 km long tributary of the Murchison River. It arises near the GNH about 50 km north of Meekatharra, flowing about 80 km westward to a junction with its tributary, the Hope River. From there it flows north-northwesterly for about 40 km, before disgorging itself into the upper reaches of the Murchison River near the Carnarvon Meekatharra Road (RPS Aquaterra 2012b).

### 4.6.2 Local Hydrology

Local surface water drainage patterns are generally in a westerly and north-westerly direction. There are no defined flow paths of significance. Surface water flows are intercepted by existing bunding diverting flows around the outside of the Project site. Flows that reach the GNH are directed towards a series of floodways / culverts. The floodways in the Project area are labelled FW1 to FW5 (RPS Aquaterra 2012b).

At the southern end of the catchment, flowpaths in the steeper upstream sections are locally defined, but these completely disperse in the flatter sections of the Project, and form fan-like sheet flow patterns. Further north, a low north-south aligned ridge approximately 20 m higher than the surrounding area forms a local sub-catchment divide. Because of the flow dispersion, it is difficult to accurately ascertain the proportion of each catchment flowing towards each respective floodway, particularly in high rainfall events.

Consistent with surface water quality in nearby catchments following rainfall events, it is expected that surface water run-off would generally be of potable quality, though turbid (RPS Aquaterra 2012b). The interruption of surface water flow patterns has the potential to reduce and, in some cases, increase surface water run-off volumes. Surface water management infrastructure including bunding and minor diversion drains have been modified to limit the impacts on natural surface water flows. Drains and bunds have been designed based for a flood event selected with consideration to the expected life and consequences of failure. Diversion modifications have been designed to re-route flows back to their original drainage paths downstream of the development, or via minor channels and overland flow.

The construction of the IWL has limited potential to impact surface water flows. Where these are seen to be being altered, diversion bunding and drains will be installed to redirect flows and prevent sedimentation and erosion. There is an existing diversion drain to the south of the current operation which will be revised to encompass the IWL and allow surface flows to move around the mine and be reinstated down stream back into natural flow lines.

## 4.7 Groundwater

Groundwater within the mine area sits naturally at approximately 10m below surface level. During mining dewatering will be ongoing to allow for the mining of ore, and to enable the resumption of underground operations. A groundwater assessment was undertaken for the previous operation of the mine and was used to support the current mining approvals in place. The installation of the IWL will have no further impacts on groundwater given the water within the IWL will be recovered and recycled and the tails will be kept as dry as possible at all times. The design of the IWL taken unto account the potential of impacts to groundwater and has been designed to limited water loss and has underdrainage in place to recover seepage.

### 4.7.3 Groundwater Abstraction and Disposal

During the operation of the mine, Meeka has a groundwater licence for the abstraction of up to 2Gl per year. The operating mine makes use of much of the abstracted water for use within the processing. Excess dewatering will be discharged to the environment via a pipeline which discharges this water along a ridgeline to the east of the mine. The operation is permitted to dispose of up to 600,000kl per year via this mechanism. No changes to the permitted dewatering and water management are proposed as part of the resumption of mining.

### 4.7.4 Groundwater Quality

Groundwater quality within the mining area is considered to be high. The pH of water during the last operation of the mine was neutral, with values ranging between 7.6 to 7.8. the TDS values within the groundwater was between 4410 and 5500mg/L. Monitoring of groundwater quality will continue when the mine resumes operation with the monitoring bore network remaining in place and usable.

There are no significant surface water features within the mine area. The mine is not located within a Public Drinking Water Source Area and there are no mapped drainage lines, water courses or wetlands. Local surface water flows will be impacted by the mine, but these impacts have been largely assessed during the previous approvals processes, and while the IWL is a significant surface structure, a diversion drain will be constructed to redirect these flows around the mine.

## 4.8 Flora and Vegetation

**Desktop Assessment**

A desktop assessment was conducted using Department of Parks and Wildlife (DPaW) and DoE databases to identify the possible occurrence of Declared Threatened Priority Flora Species and Threatened and Priority Ecological Communities within the survey area:

- EPBC Protected Matters (DoE 2013) (20km radius);
- DPaW Priority and Threatened Flora (DPaW 2013e) (20km radius);
- DPaW Threatened and Priority Ecological Communities (DPaW 2013c) (50km radius);
- NatureMap (DPaW 2013b) (20km radius).

The desktop survey identified a total of 250 vascular plant taxa from 107 plant genera and 43 plant families as possibly occurring within the survey area. Seven of these plant taxa are listed as Priority species by the then Department of Environment and Conservation, now DPaW (2011a).

No Declared Threatened Flora species pursuant to subsection (2) of section 23F of the *Wildlife Conservation Act* (1950) [WA] and as listed by the Department of Environment and Conservation (2011a) have been recorded previously near the Andy Well Survey area.

The Priority 1 Wiluna West Vegetation Complex (banded ironstone formation) Priority Ecological Community (PEC) could also possibly occur in the Andy Well Survey area (Department of Environment and Conservation, 2011f).

**Field Investigations**

The flora and vegetation survey was conducted by four botanists from 11th to 14th April 2011. A total of 69 sampling sites were surveyed, covering the greater Doray exploration tenement to include the proposed mining areas and associated haul roads, processing and storage facilities and accommodation camp (Mattiske 2011). The survey effort after reasonable rains was considered more than adequate to meet the EPA Guidance Statement 51 standards (EPA 2004).

The flora and vegetation was described and sampled systematically at each survey site, and additional opportunistic collecting was undertaken wherever previously unrecorded plants were observed. At each site the following floristic and environmental parameters were noted: GPS location, topography, percentage litter cover, soil type and colour, percentage of bare ground, outcropping rocks and their type, gravel type and size, time since fire and the percentage cover and average height of each vegetation stratum. For each vascular plant species, the average height and percent cover (both live and dead material) were recorded (Mattiske 2011).

All plant specimens collected during the field surveys were dried and fumigated in accordance with the requirements of the Western Australian Herbarium. The plant species were identified through comparisons with pressed specimens housed at the Western Australian Herbarium. Where appropriate, plant taxonomists with specialist skills were consulted. Nomenclature of the species recorded is in accordance with the Department of Environment and Conservation (2011c, 2011d).

PRIMER (Plymouth Routines in Multivariate Ecological Research) v6 statistical analysis software was used to analyse species-by-site data and discriminate sites on the basis of their species composition (Clarke and Gorley, 2006). To down weight the relative contributions of quantitatively dominant species a presence/absence transformation was applied to the data set. Transformed data were analysed using a series of multivariate analysis routines including Hierarchical Clustering (CLUSTER), Nonmetric Multidimensional Scaling (MDS) and Similarity Percentages (SIMPER). Results were used to inform and support interpretation of aerial photography and delineation of individual plant communities (Mattiske 2011).

The survey identified a total of 172 vascular plant taxa from 77 plant genera and 29 plant families. The dominant families were Fabaceae (29 taxa) and Poaceae (22 taxa) with Scrophulariaceae (17 taxa), Chenopodiaceae (16 taxa) and Amaranthaceae (13 taxa) also contributing a large proportion of taxa identified (Mattiske 2011).

A total of ten vegetation associations were identified during the survey. The Project is dominated by the S1 and S2 shrubland communities interspersed with pockets of W1 woodland communities (Mattiske 2011).

### 4.8.1 Conservation Significant Flora

No Threatened Flora species pursuant to subsection (2) of section 23F of the *Wildlife Conservation Act* 1950 or as listed by the Department of Parks and Wildlife (DPaW) (formerly DEC) were recorded within the survey area. No plant species listed under the EPBC Act were found within the survey areas.

### 4.8.2 Conservation Significant Vegetation

There are no Threatened Ecological Communities listed as occurring in the Andy Well Survey area (Mattiske 2011). However, the desktop survey revealed that there is potential for the Priority 1 Wiluna West Vegetation Complex (banded ironstone formation) Priority Ecological Community (PEC) to be found in the Survey area (Department of Environment and Conservation 2011).

The IWL is located within an area that has previously been approved to be cleared and does not contain the PEC.

### 4.8.3 Vegetation Units

The vegetation associations and habitats recorded within the survey area were not analogous to any Threatened Ecological Communities (TECs) under the Wildlife Conservation Act (WC Act) or Environmental Protection and Biodiversity Act (EPBC Act) or any Priority Ecological Communities listed by the DPaW (Mattiske 2011).

### 4.8.4 Vegetation Condition

The condition of the vegetation ranged from degraded (in localised areas) to excellent based on the scale as defined by Keighery. The degradation was a result of previous grazing activities, mineral exploration and proximity to the GNH and associated disturbances (Mattiske 2011).

### 4.8.5 Introduced Species

Three introduced (exotic) taxa were recorded within the Andy Well area: *Portulaca oleracea* (Common Purslane), *Bidens bipinnata* (Bipinnnate Beggartick), and *Oxalis corniculata* (Yellow Wood Sorrel). None of these are Declared Plants species pursuant to section 37 of the Agricultural and Related Resources Protection Act 1976. The *P. oleracea* was widespread across the survey area and found in 40 sites; *B. bipinnata* and *O. corniculata* were more restricted within the survey area and were found at two and four sites respectively (Mattiske 2011). A recent inspection of the Andy Well area has identified that there has been a significant Ruby Dock infestation across disturbed areas that was not present during previous investigations. Meeka is currently actively managing weeds and has recently implemented a spraying programme prior to the commencement of the Gnaweeda Operation and the resumption of the Andy Well Mine.

## 4.9 Terrestrial Fauna

Based on the studies undertaken for the Andy Well Mine, there are no expected significant impacts to fauna that will occur as part of the construction and operation of the IWL (Bamford, 2012).

### 4.9.1 Terrestrial Fauna Investigations

Doray commissioned Bamford to undertake a fauna assessment incorporating a desktop review and Level 1 reconnaissance field survey for the Project (Bamford 2012). The field survey was completed in December 2011.

The main objectives of the fauna assessment involved:

- assemblage characteristics: uniqueness, completeness and richness;
- recognition of vegetation and soil associations (VSAs) that provide habitat for fauna
- species of conservation significance;
- ecological processes upon which the fauna depend; and
- a review of impacting ecological processes (Bamford 2012).

### 4.9.2 Fauna Habitat

Vegetation and substrate associations (VSA) throughout the survey area were assessed during the desktop review and as part of the field investigations. Each VSA was surveyed during the study to develop an understanding of major fauna habitat types present and to assess the likelihood of conservation significant species being present in the area. Five VSAs were identified in the survey including:

- Low Ironstone Ridge with supporting Acacia shrublands (dominated by Acacia aneura) and occasional Corymbia ferreticola
- Stony lower slopes and adjacent stony plains supporting Acacia shrublands (dominated by Acacia aneura)
- Stony plains supporting sparse Acacia shrublands with minor areas of chenopod shrublands
- Sandy / loam and clay/loam flats supporting shrublands of Acacia aneura, Acacia pteraneura and occasional Acacia tetragonophylla over mixed Eremophila species and mixed grasses
- Drainage lines supporting dense tall shrublands of Acacia aneura, Acacia tetragonophylla and Grevillea striata over mixed Eremophila species and grasses on flowlines with orange loam

### 4.9.3 Vertebrate Fauna

Results of the desktop study identified 219 fauna species as potentially occurring in the study area comprised of six frog species, 68 reptiles, 117 birds, 18 native mammals and ten introduced mammal species. A total of 72 fauna species were recorded during the field survey comprising 55 birds, seven native mammals, four introduced mammals, five reptiles and one frog species (Bamford 2012). None of the species identified are confined to the area in which he IWL is to be built, and given the long history of active mining int eh immediate vicinity, it is likely that any species that are considered residents or visitors will have moved further away to avoid exposure to mining, as the habitat within the broader region is widespread.

### 4.9.4 Conservation Significant Fauna Species

The fauna studies identified that several priority species are visitors to the mine area. These species will not be impacted by the installation of the IWL given the widespread habitat available within the greater region.

## 4.10 Subterranean Fauna

A subterranean fauna assessment involving a desktop review and field surveys was completed by Bennelongia Environmental Consultants (Bennelongia) to assess the potential impact of the Project on invertebrate animals occurring at depth underground that have morphological adaptations to subterranean life. The assessment was undertaken to determine whether the Project poses any conservation threats to troglofauna (air-breathing invertebrates living in unsaturated habitats at depth underground) and stygofauna (aquatic invertebrates living in groundwater) (Bennelongia 2011). The areas of the assessment included the entire of the mining lease area M51/870.

Information on subterranean fauna at the Project was compiled and assessment undertaken in two stages. The first stage consisted of desktop compilation of existing information on subterranean fauna and local geology, an assessment of the suitability of habitat at the Project for subterranean fauna, a preliminary assessment of the threats to subterranean fauna from mine development, and an evaluation of the need for field survey. The second stage consisted of field surveys to collect subterranean fauna, with a final assessment of the threats to subterranean fauna from mining based on the results of both the desktop work and field surveys (Bennelongia 2011).

A total of 71 stygofauna and 25 troglofauna samples were collected during the field survey. Suitable stygofauna habitat comprising aquifers of the Quaternary detritals of the Murchison palaeochannel was identified within the survey area. The survey recorded 21 stygofauna species in the survey area comprising Nematoda, Rotifera, Aphanoneura, Oligochaeta, Ostracoda, Copepoda, Syncarida and Amphipoda. Of the 21 stygofauna species, six were recorded from the impact footprint of the Project; however, none of these species are likely to be restricted to this location. None of the stygofauna species identified were restricted to the detrital aquifers of the survey area.

The survey recorded a depauperate troglofauna community of two species the amphipod Paramelitidae (nr Kruptus) sp. B9 and the syncarid Billibathynella sp. B5. As greater numbers of these species were found within the area of mine-associated dewatering than elsewhere, Bennelongia undertook further investigations to establish if the conservation status of these two species is secure (Bennelongia 2012). Both species were also found outside the area of groundwater drawdown.

The area of groundwater drawdown was predicted to be approximately 1,540 ha. Very few subterranean species have ranges this small other than some troglofauna species with ranges defined by strong geographic features (Bennelongia 2012). It has been inferred as likely that extra records of both species have been collected by the WA Museum. Paramelitidae (nr Kruptus) sp. B9 is known from at least four bores outside the Project groundwater drawdown cone, although there are some morphological differences between the Karalundi specimens and those from the Project and surrounding alluvium. Billibathynella sp. B2 is known from outside the Project groundwater drawdown cone at one well at Killara North, based on Bennelongia sampling, and probably from a second well at Killara North based on Museum sampling. These additional records extend the known range of Paramelitidae (nr Kruptus) sp. B9 by a couple of kilometres (Bennelongia 2012).

The closest Priority 1 Priority Ecological Communities (PECs) are the Karalundi and Killara North calcretes. These occur outside of the survey area and will not be threatened by the proposed operations (Bennelongia 2011).

## 4.11 Heritage

Turnberry heritage surveys were completed for exploration, mine development and haulage routes. Two heritage surveys (2016 and 2017) were undertaken Yungunga-Nya Native Title claimants in conjunction with the Yamatji Marlpa Aboriginal Corporation. The following two heritage survey reports were produced:

- 2016 Yamatji Marlpa Aboriginal Corporation – Preliminary advice of a Yugunga-Nya heritage survey with Doray Minerals Limited. For L51/97. prepared December 2016
- 2017 Yamatji Marlpa Aboriginal Corporation – Preliminary advice of a Yugunga-Nya heritage survey with Doray Minerals Limited. For sections of M51/870, E51/1217 and E51/1491. Prepared May 2017.

All sites have been identified, and the Project has been designed to avoid these. There will be no impacts to heritage as part of the proposed clearing and ground disturbance.

# 5 Assessment Against the Clearing Principles

## 5.1 Clearing Principle A

**Native vegetation should not be cleared if it comprises a high level of biological diversity.**
A total of 172 vascular plant taxa from 77 plant genera and 29 plant families were recorded in the flora survey area (Native Vegetation Solutions, 2023). No threatened flora (WC Act) or plant species listed under the EPBC Act 1999 were found within the survey area. No threatened or priority ecological communities were found within the survey area.
The flora communities in the proposed impact area are well represented outside the proposed impact area (Mattiske 2011). The fauna habitat in the proposed impact area is widespread and common outside the Project area (Bamford 2012). Given the above, **the proposed clearing associated works is not considered to be at variance to Clearing Principle A.**

## 5.2 Clearing Principle B

**Native vegetation should not be cleared if it compromises the whole or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.**
The Fauna habitat that is to be cleared as part of the IWL is considered widespread within the Mine region (Bamford, 2012). The habitat is not considered to be significant for fauna indigenous to Western Australia. Given the above, **the proposed clearing associated works is not considered to be at variance to Clearing Principle B.**

## 5.3 Clearing Principle C

**Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**
No threatened or rare flora were located within the study area. The IWL area contains no species of environmental significance or conservation significance. Therefore, **the proposed clearing associated works is not considered to be at variance to Clearing Principle C.**

## 5.4 Clearing Principle D

**Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of a threatened ecological community.**
The Project area does not contain any Threatened Ecological Communities or Priority Ecological communities as listed by DPaW and the EPBC Act 1999. Given the above, **the proposed clearing associated works is not considered to be at variance to Clearing Principle D.**

## 5.5 Clearing Principle 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.**

The vegetation within the proposed disturbance is considered common and widespread through the Murchison region, with almost 100% of the pre-European vegetation remaining (Shepherd et al. 2002). Given the above, **the proposed clearing associated works is not considered to be at variance to Clearing Principle E.**

## 5.6 Clearing Principle F

**Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

There are no water courses or wetlands within the Project area. The vegetation surveys did not identify any plant communities growing in, or in association with, an environment associated with a watercourse or wetland and therefore **the proposed Suzie Deposit and associated works is not considered to be at variance to Clearing Principle F.**

## 5.7 Clearing Principle G

**Native vegetation should not be cleared if the clearing of vegetation is likely to cause appreciable land degradation.**

The clearing for the IWL will not lead to appreciable land degradation. The area to be cleared has been disturbed and has been part of a previous active mining area. The IWL will not lead to greater impacts than what have previously been assessed. **The proposed clearing associated works is not considered to be at variance to Clearing Principle G**

## 5.8 Clearing Principle 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 areas.**

There are no conservation estates within the immediate vicinity of the Project that could be potentially negatively impacted by the proposed operation. Given the above, **the proposed clearing associated works is not considered to be at variance to Clearing Principle H.**

## 5.9 Clearing Principle 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.**

The removal of vegetation has the potential to increase erosion and therefore increase sediment loading in surface waters and turbidity. The Project has mapped surface water flows

and will install a diversion bund around the project to direct surface water flows around the disturbance areas and to reinstate flows downstream of the project.

Groundwater within the Project area is of high quality with low levels of TDS and a slight alkalinity. Groundwater levels will be reduced locally during dewatering, but modelling has shown that the low permeability of the host rocks leads to a very localised drawdown that extends mostly in a north south direction.

The depth to groundwater is generally between 10 to 15 MBGL, with no groundwater dependant ecosystems identified during the flora surveys. Flora within the project area is mostly sheet flow dependant and will therefore not be impacted by dewatering activities. Given the above, **the proposed clearing associated works is not considered to be at variance to Clearing Principle I.**

### 5.10 Clearing Principle J

**Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.**

The area to be cleared is not prone to flooding. The minor clearing associated with the Project will not increase the potential for flooding**.** Given the above, **the proposed clearing associated works is not considered to be at variance to Clearing Principle J.**

## 6 Conclusion

The proposed clearing will impact up to 70ha of native vegetation. The vegetation has been surveyed and there are no conservation significant species that will be impacted by the clearing. The clearing will not be at variance to any of the ten clearing principles and all impacts can be appropriately managed.

## 7 References

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