

DALGARANGA GOLD PROJECT

SUPPORTING DOCUMENT FOR
NEW PURPOSE PERMIT APPLICATION

August 2023

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1. INTRODUCTION

1.1. BACKGROUND

Gascoyne Resources Limited ('Gascoyne') was listed on the ASX in December 2009 following the amalgamation of the gold assets of Helix Resources Limited and Giralia Resources NL in the Murchison Region of Western Australia. In late August 2023, Gascoyne began its name change transition to Spartan Resources Limited.

Dalgaranga is located in the Murchison Region of Western Australia, about 77 km northwest of Mount Magnet. The project consists of five mine pits, two being active, a processing plant, an in-pit tailings storage facility, a borefield and supporting infrastructure (including power plant, airport and accommodation village).

After discovery in the early 1990's, the Project was developed and from 1996 to 2000 produced 229,000 ounces of gold from predominantly the Gilbey's deposit and previous mining of gold rich laterite in a shallow pit at Golden Wings deposit. Gilbey's deposit had previously been mined to a depth of approximately 120 metres. Mining was completed in 2001 and the processing plant and associated infrastructure subsequently relocated off site.

Current mining began at Golden Wings, Gilbey's and Sly Fox in the March quarter of 2018, with the process plant commissioned in June 2018. In November 2022 Dalgaranga Gold Project began transitioning into Care and Maintenance for an estimated two year duration.

In early 2023 GNT applied for an amendment to its CPS 7240/4 to increase the clearing area by 450ha and to include the majority of its tenements in the approved area. The increased clearing area is required for future mining activities some of which are already approved under a mining proposal (Reg ID

DMIRS Office replied that this change is too large for an amendment application and recommended that a new Clearing Permit application be submitted.

GNT is applying for a new Clearing Permit to include 779 ha from CPS 7240/4 plus 421 ha additional area for a total of 1200 hectares. Also the clearing permit areas will increase from 3 tenements to 7 tenements. GNT will subsequently relinquish CPS 7240/4 on receipt of a replacement clearing permit for 1200 ha.

1.2. PURPOSE

This document provides supporting information for the application for a new purpose permit for the clearing of a total of 1200 ha of native vegetation to allow for construction of additional mine infrastructure.

The ten clearing principles and background information has been provided in this document relating to the site location, ownership, hydrology, vegetation, fauna and land degradation issues.

To assist in the DMIRS's assessment of this clearing permit application, a summary of the relevant environmental information for the overall Project area has been included in this document in addition to the biological survey reports.

1.3. LOCATION

The Project is located approximately 77 km northeast of Mt Magnet within the Shire of Mt Magnet, in the Murchison Region of Western Australia (**Figure 1**).

The proposed clearing area is located within the Murrum Pastoral Lease.

1.4. OWNERSHIP AND LAND TENURE

The Project lies on Mining Lease M59/749 and Miscellaneous Licences L59/141, L59/142, L59/151, L53/152, L59/153, L59/168 and L59/214 which are 100% owned by GNT Resources Pty Ltd, a wholly owned subsidiary of Gascoyne (**Figure 2**).

The approved areas of clearing for previous CPS 7240/4 are located on Mining Lease M59/749 and miscellaneous leases L59/152 & L59/168 (**Figure 4**).

The new Purpose Permit proposed areas of clearing are located on miscellaneous leases L59/141, L59/142, L59/151, L59/153, L59/167, L59/169 & L59/170 (**Figure 5**).

The Dalgaranga and Noongal Pastoral Leases owned by the Department of Biodiversity Conservation and Attractions (DBCA) are located adjacent to and within the overall Project area.

2. PROPOSED CLEARING

Gascoyne has an existing clearing permit (CPS 7240/4) for 779 ha of native vegetation within the nominated clearing area as shown in Figure 4.

Gascoyne will relinquish this permit upon approval of a new purpose permit that achieves the following:

- Clearing of 1200 ha of native vegetation to align the permitted area of clearing to the activities contained within the May 2022 submitted Mining Proposal #9.
- Move away from describing the specific areas to be cleared to an 'area to be cleared' approach that is supported by flora and fauna surveys for the entire site.
- Includes all previously assessed and surveyed Miscellaneous Leases into the Clearing Permit - L59/141, L59/142, L59/151, L59/153, L59/167, L59/169 & L59/170.

Following completion of a targeted survey and assessment of the remaining area of the site, Ecotec (2022) found the proposed disturbance is not considered likely to impact any flora or fauna species of conservation significance.

3. BASELINE INFORMATION

3.1. CLIMATE

The climate of the region is arid with bimodal rainfall that usually falls in winter.

The Project is located approximately 270 km northeast of Geraldton and 77 km northwest of Mt Magnet. Mt Magnet Airport is the nearest official meteorological station and has ongoing records to the present day.

The following data is taken from the records from Mt Magnet Airport (Station Number 7600) (BOM 2023).

Mean annual maximum temperature is 28.7°C and mean annual minimum 15.2°C. Daily maxima above 30°C are common from October to March.

The mean annual rainfall is 246.6 mm and around 80% of the rainfall occurs between December and July. More than 1 mm is received on an average 34.5 days per year.

Wind direction is predominantly easterly in the mornings with an increase in westerly and north westerly winds in winter. Afternoon wind directions are more evenly distributed with monthly peaks varying between the centres. Northerly winds are least frequent throughout, especially for Cue and Yalgoo in the afternoons. At Mt Magnet airport the average wind speeds vary throughout the year from 14.5 – 21.1 km/h in the morning to 16.1 – 20.3 km/h in the afternoon.

There are no evaporation records for the Mt Magnet Airport recording station. There are evaporation rates recorded at the Meekatharra Airport station located 185 km north of Mt Magnet Airport. Meekatharra Airport has an average daily evaporation rate of 9.7 mm (approximately 3,541 mm/year).

Humidity levels vary both daily and yearly. The mean monthly 9 am relative humidity varies from a low of 34% in December to a high of 68% in July. The mean monthly 3.00 pm relative humidity varies from a low of 19% in November, December, and January to a high of 43% in July.

Table 1: Climate Statistics for Mt Magnet (Station 7600)

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Temperature													
Mean maximum temperature (°C)	38.1	37	33.3	29	23.9	20	19.1	21.3	24.8	29.5	32.8	36.1	28.7
Mean minimum temperature (°C)	23.5	23.2	20.4	16.4	11.6	8.3	7.2	8.1	10.5	14.5	18	21.3	15.2
Rainfall													
Mean rainfall (mm)	25.0	36.7	36.8	17.4	16.9	21.2	25.5	16.8	11.1	7.4	10.8	17.8	243.7
Decile 5 (median) rainfall (mm)	22.0	32.8	17.3	9.4	6.8	18.2	16.2	14.0	6.5	2.9	7.1	8.4	243.1
Mean number of days of rain ≥ 1 mm	3.1	3.6	3.1	2.3	2.6	3.5	4.5	3.4	2	1.4	2	2.3	33.8

3.2. REGIONAL SETTING

The Interim Biogeographic Regionalisation for Australia (IBRA) classifies the Australian continent into regions or bioregions on the basis of similar geology, landform, vegetation, fauna and climate characteristics. The project area is situated within the Murchison Region according to IBRA 7, which is further divided into two subregions: Eastern Murchison and Western Murchison (DAWE 2019). The study area is situated within the Western Murchison subregion (MUR2).

The West Murchison subregion is in the northern end of the Yilgarn Craton, which experiences an arid climate with bimodal rainfall that usually falls in the winter months. The Western Murchison subregion is characterised by Mulga low woodlands on outcrop and fine textured Quaternary alluvial and eluvial surfaces mantling granitic and greenstone strata. Quaternary plains contain hummock grasslands, saltbush shrublands on calcareous soils and Halosarcia low shrublands on saline alluvia (DAWE 2019).

The MUR2 subregion is described by Desmond et. al. (in DAWE 2019) as follows:

“Mulga low woodlands, often rich in ephemerals (usually with bunch grasses), on outcrop and fine textured Quaternary alluvial and eluvial surfaces (extensive hardpan wash plains that dominate and characterise the subregion) mantling granitic and greenstone strata of the northern part of the Yilgarn Craton. Surfaces associated with the occluded drainage occur throughout with hummock grasslands on Quaternary sandplains, saltbush shrublands on calcareous soils and Halosarcia low shrublands on saline alluvia. Contains the headwaters of the Murchison and Wooramel Rivers, which drain the subregion westwards to the coast. Arid climate with bimodal rainfall that usually falls in winter. The subregional area is 7,847,996 ha.” (DAWE 2019).

3.3. LAND SYSTEMS

The Project area is broadly mapped as being contained within the Jundee, Violet, Yanganoo, Cunyu, Challenge and Kalli land systems according to Curry *et al.*, (1994) (Figure 5):

- Jundee land system is described as hardpan wash plains with minor sandy banks, supporting scattered mulga shrublands and is generally not susceptible to erosion.
- Violet land system is described as gently undulating gravelly plains, with low stony rises and minor saline plains, supporting mulga and bowgada-dominated shrublands, with dense mulga groves and patchy halophytic shrublands. The land surfaces are largely protected by stony mantles, however some land units may be susceptible to erosion if the soil surface is disturbed or vegetation cover is removed.
- Yanganoo land system consists of broad flat hardpan wash plains, supporting extensive mulga shrublands and minor grassy shrublands. This land system may be locally susceptible to erosion if disturbed.
- Cunyu land system consists of calcrete platforms, intervening drainage floors and channels and minor alluvial plains, supporting acacia shrublands, occasional casuarina woodlands and minor halophytic shrublands.
- Challenge land system comprises gently undulating gritty and sandy surfaced plains, occasional granite hills, tors and low breakaways, supporting acacia shrublands and occasional halophytic shrublands.
- Kalli land system consists of elevated gently undulating red sandplains edged by stripped surfaces on laterite and granite, supporting acacia tall shrublands with wanderrie grass understoreys.

3.4. LANDFORM AND SOILS

The Project is located within Yalgoo Plains soil-landscape zone of the Murchison Province (Figure 6).

The Yalgoo Plains zone is described as hardpan wash plains (with some sandplains, stony plains, mesas and granite outcrops) on granitic rocks (with some greenstone) of the Yilgarn Craton (Murchison Domain). Red loamy earths and red shallow loams with hardpans supporting Mulga shrublands with bowgada shrublands occur (Tille 2006).

The area is covered by a gently sloping Quaternary alluvium. The soils are thin (10-30 mm) and largely transported red/yellow sandy clay/loam with quartz and pisolitic scree overlying a mixed hardpan pisolitic laterite horizon which is between 2 and 5 m thick.

Sampling of topsoils from the proposed clearing areas has been undertaken. The sampling indicates that the surface soils are non-saline and low in nutrients. At some sites, gravels or pisolites make up to 30% of the soil fraction.

3.5. HYDROLOGY

In the Project area the topography is subdued. Broad stony hills with breakaways such as the ranges containing Dalgara Hill, Mt Charles and Mt Farmer rise to approximately 640 m elevation.

Drainage from the hills is along shallow sandy creeks and washes that disperse in alluvial fans, generally in a south, south-east direction. Outcrop is rare and cover comprises soil and colluvial/alluvial deposits. The regolith cover around the Golden Wings and Gilbey's pits ranges from 60-100 m thick.

The climate is semi-arid and combined with slow runoff characteristics leads to an influent regime. Limited effluent flow properties have possibly developed around clay pans and on some paleo river drainages where the potential for manifestation of surface flow is reduced by high rates of evaporation.

The drainage in the area is broad sheetwash with a low slope gradient (approximately 1:500, 0.5% or 0.005) with the principal direction of flow from northeast to southwest.

There are three catchment areas upstream of the Project (East, Southeast and South – Figure 7) and drainage from these catchments reports to several poorly defined soaks and small playas near Jim King Well and Chulcan Well about 12 km southeast of the Project (GRM 2020). These catchments do not comprise clearly defined watercourse channels.

There are no other rivers, lakes, defined watercourses or other areas of significant surface water bodies in the Project area, or, within five kilometres of the Project.

3.6. VEGETATION AND FLORA

Survey work completed

Flora and vegetation surveys have now been completed for the entire mineral lease and associated Miscellaneous Licences, being:

1. Native Vegetation Solutions completed a Level 1 flora and vegetation assessment of the Dalgara Project area in accordance with the Environmental Protection Authority's (EPA) "Terrestrial Biological Surveys as an Element of Biodiversity Protection; Position Statement No 3" (EPA 2002) and Guidance Statement No. 51 "Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia" (EPA 2004a);
2. A targeted Priority flora survey was completed by Native Vegetation Solutions (2017) for the amendment of CPS 7240/2 that confirmed no Priority flora are located at the Project;
3. A targeted Flora and Habitat survey was completed by Ecotec in August 2021; and
4. A Vegetation and Flora survey of part mining tenement M59/749 by JBBC in July 2022 (Appendix 1).

The area of each survey is presented in Figure 3.

Vegetation

The CPS clearing envelope has been broadly mapped as the following Beard vegetation associations

- 18: Low woodland; mulga (*Acacia aneura*).
- 395: Hummock grasslands, mixed sandplain; bowgada, mallee, heath and spinifex.

Six broad vegetation types were identified by JBBC (2022) across the additional areas proposed for disturbance in this CPS 7240/4 Amendment. Vegetation in the area is generally dominated by a variety of *Acacia* species with *Eremophila* understorey and is typical of the Murchison region, refer to Table 1. The proposed additional clearing encompasses all described vegetation groups.

Ecotec (2022) state that none of the vegetation types are representative of Priority or Threatened Ecological Communities. No areas had groundwater discharge which could be potentially representative of the Priority 1 Gabyon calcrete groundwater assemblage type (invertebrates) PEC.

Table 2: Vegetation types mapped in CPS area

Vegetation Type	Description	Vegetation condition
1	<i>Acacia caesaneura</i> , <i>A. aptaneura</i> , <i>A. craspedocarpa</i> tall sparse shrubland over <i>Eremophila</i> spp., <i>Acacia</i> spp. low sparse shrubland over low open forbland.	Poor.
2	<i>Acacia caesaneura</i> , <i>A. incurvaneura</i> , <i>A. craspedocarpa</i> tall open shrubland over <i>Eremophila</i> spp., <i>Acacia</i> spp. open shrubland over sparse to open low forblands in slight depressions.	Mostly Good with minor Very Good areas.
3	<i>Acacia caesaneura</i> , <i>A. aptaneura</i> , <i>A. fuscaeneura</i> low open woodland over <i>A. craspedocarpa</i> , <i>A. tetragonophylla</i> tall open to sparse shrubland over <i>Eremophila</i> spp. low open shrubland over low forbland.	Good; lower impacts to south.
4	<i>Acacia burkittii</i> , <i>A. tetragonophylla</i> , <i>A. sibina</i> tall sparse shrubland over <i>Eremophila</i> spp. low sparse shrubland over low sparse forbland with isolated <i>Cymbopogon ambiguus</i> grass tussocks.	Moderately to highly impacted by goats; historical mining and pastoral impacts.
5	<i>Acacia craspedocarpa</i> , <i>A. tetragonophylla</i> , <i>A. caesaneura</i> , <i>A. fuscaeneura</i> tall open shrubland over <i>Eremophila</i> spp. low sparse shrubland over isolated to sparse low forbs or grass tussocks.	Degraded to good; most areas poor with moderate to high impacts from pastoral activities and feral grazing; historic mining impacts and exploration.
6	<i>Acacia aptaneura</i> low isolated trees over <i>Acacia craspedocarpa</i> , <i>A. aptaneura</i> tall sparse shrubland over <i>Eremophila punicea</i> , <i>Ptilotus obovatus</i> , <i>Eremophila fraseri</i> subsp. <i>fraseri</i> low sparse shrubland over low open forbland.	Poor; minor Good areas.

Vegetation Condition

JBBC (2022) noted that most of the vegetation in the CPS area was in Good or Poor condition. Further, JBBC (2022) add:

Pastoral activities and feral grazing have most likely had the greatest impact which is expressed

in the very sparse understoreys, presence/ dominance of non-palatable species and likely reduction of palatable species including grasses. Some signs of grazing were evident on the tussocks but was mostly restricted to new growth. There was very low recruitment of Acacia spp. with most shrubs/ trees being mature and few in the lower strata.

Goats were observed grazing on the rehabilitated areas in June 2022.

Flora and Weeds

JBBC (2022) comparison of species diversity with other surveys in the region found that Fabaceae and Asteraceae are the dominant families, followed by Chenopodiaceae and Scrophulariaceae. No Threatened species were recorded in the survey area.

The Priority 3 listed species *Calotis* sp. Perrinvale Station was recorded at one location however has not been previously recorded at Dalgara although there are known populations to the north and south of the survey area. Most other conservation significant flora in the area are associated with drainage lines, granite outcrops or breakaway systems which were not present in the survey area.

In the 2022 flora survey, Ruby Dock was commonly recorded at road edges in the northwest of the survey area and other disturbance areas outside the survey area. GNT have an active program of weed control using a combination of external and internal resources.

3.7. VERTEBRATE FAUNA

Survey Work Completed

Ecotec completed a survey of the remaining area of mining lease M59/749 in July 2022, refer to Reconnaissance Fauna and Habitat Assessment Report, August 2022, provided in Appendix 2. Ecotec concluded that the habitat present in the surveyed area, being predominately Acacia Shrubland, is well represented and widespread in the surrounding region with no expected impact to habitat considered critical for fauna of conservation significance from any future development work in the CPS Area.

Fauna survey work undertaken across the Project includes the following:

1. A Level 1 fauna survey undertaken by MB Contracting that consisted of two site visits:
 - 31 May - 1 June 2016 – M59/749, L59/151, L59/152 and L59/153
 - 10 May – 12 May 2017 – additional areas on M59/749.
2. Western Ecological completed a desktop survey on L59/168 and then completed a targeted Malleefowl survey of the Southern WRD in March 2021.
3. A survey of the areas proposed for clearing in the Amendment to CPS7240/3 was undertaken by Ecotec in August 2021.
4. A reconnaissance Fauna survey for the areas in this CPS application, completed in July 2022.

The results of the reports are summarised in the following sections.

Fauna Habitat

Ecotec (2022) found Acacia Shrubland throughout the survey area and which provides habitat for a variety of common fauna species. All six vegetation types described in the reconnaissance vegetation and flora survey report (JBBC 2022) are some form of Acacia shrubland, demonstrating the abundance of Acacia species in the region.

Fourteen taxa of Acacia were recorded during the vegetation and flora survey (JBBC 2023). While there is variation in the flora species present, the Acacia shrubland vegetation types generally provide similar habitat and are therefore likely to support a similar faunal assemblage.

The survey area is located on an active pastoral station with an existing large population of goats. As a result, there is a moderate to high degree of grazing impact evident across most of the area.

Of the 11 species of conservation significant fauna that can potentially occur in the CPS Area, 8 species across all groups were considered to have Unlikely occurrence, Peregrine Falcon was considered to have Likely occurrence, the Northern shield-backed trapdoor spider is considered to have Possible occurrence, and the Rainbow bee-eater is found on site but has suitable habitat widespread in the region - refer to Table 3.

Table 3: Likelihood of occurrence of conservation significant fauna

Species	WA Status	EPBC Act Status	Likelihood of occurrence
Black-flanked rock wallaby <i>Petrogale lateralis lateralis</i>	EN	EN	Unlikely. A single historic unconfirmed record from Mt Farmer. No suitable habitat. Outside known distribution.
Curlew sandpiper <i>Calidris ferruginea</i>	CR	CR & MI	Unlikely. No suitable habitat within the survey area. Potential vagrant visitor to salt lake systems to the south and east of the project area.
Malleefowl <i>Leipoa ocellata</i>	VU	VU	Unlikely. Suitable habitat once existed throughout the survey area, now degraded. Possible extinct mounds located in the survey area. Most recent record from the DBCA database is 2016, north of Mt Magnet.
Night parrot <i>Pezoporus occidentalis</i>	CR	EN	Unlikely. No suitable habitat within the survey area. One historic (undated) record of a dead specimen south-east of Mt Farmer.
Peregrine falcon <i>Falco peregrinus</i>	OS	-	Likely. Sightings recorded in the wider project area. No suitable nesting habitat however may overfly the area while hunting. Abandoned open pits provide nesting habitat.
Australian painted snipe <i>Rostratula australis</i>	EN	EN & M	Unlikely. No suitable habitat within the survey area. Potential vagrant visitor to salt lake systems to the south and east of the project area.
Rainbow bee-eater <i>Merops ornatus</i>	-	IA	Recorded. Calls heard and birds sighted. Suitable habitat throughout the region.
Ten additional bird species listed as Marine or Migratory species.		Refer to Ecotec 2022 Appendix 1	Unlikely. No suitable habitat. Possible short-term visitors to salt lakes in the surrounding region.
Western spiny-tailed skink <i>Egernia stokesii badia</i>	VU	EN	Unlikely. No suitable habitat in the survey area.
A fairy shrimp <i>Branchinella wellardi</i>	P3	-	Unlikely.

Species	WA Status	EPBC Act Status	Likelihood of occurrence
			No suitable habitat. Historic (1929) record from close to the Dalgara homestead.
Northern shield-backed trapdoor spider <i>Idiosoma clypeatum</i>	P3	-	Possible. Suitable habitat exists within the survey area.

Malleefowl

No malleefowl activity (sightings, tracks, scats or developed mounds) was recorded during the survey. Possible extinct malleefowl mounds were identified at five locations within the survey area that appear to not have been used in a very long time and are now so degraded it is highly unlikely they would ever be used as a mound again.

3.8. THREATENED AND PRIORITY ECOLOGICAL COMMUNITIES

Based on DBCA database searches there are no Threatened Ecological Communities (TEC) or Priority Ecological Communities (PEC) within the Project area (NVS 2016; 2020).

3.9. CONSERVATION AREAS

There are no conservation reserves in the Project area.

The bore field located on L59/152 and L59/168, approved for clearing under CPS 7240/3, is located within the Noongal Pastoral Lease, which is owned by DBCA.

4. ASSESSMENT AGAINST THE 10 CLEARING PRINCIPLES

1. Native vegetation should not be cleared if it comprises a high level of biological diversity.

Surveys have identified a total of 130 vascular plant taxa from 27 families within the approved clearing envelope (NVS 2016, 2020, Ecotec 2021, Ecotec 2022), none of which are Threatened or Priority flora. Vegetation Associations within the Project area are extensive, with large, intact areas of similar, undisturbed vegetation in the surrounding region.

None of the plant communities present resemble PECs or TECs and DBCA database searches have not identified any in the vicinity.

The proposed additional clearing of native vegetation will not reduce the biodiversity of regional vegetation, with large intact areas of similar vegetation located outside the clearing footprint.

Clearing of native vegetation within the area is not considered to be at variance to this principle.

2. Native vegetation should not be cleared if it comprises the whole, or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Assessments within the proposed clearing envelope by Ecotec (2022) did not consider the proposed area of disturbance to provide significant habitat necessary for the survival of any fauna species.

Although one species of conservation-significant fauna was recorded within the proposed clearing area (Rainbow bee-eater), the area is not considered to provide habitat necessary for the survival of this species. The fauna habitat to be impacted by the project is well represented in the surrounding area and accounts for a very small proportion of available habitat.

Clearing of native vegetation within the area is not considered to be at variance to this principle.

3. Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

The area has one recorded Priority flora taxa, (*Calotis* sp. Perrinvale Station, P3) of which there are known populations to the north and south of the survey area. Accordingly, the area is not considered necessary for the continued existence of Rare (or Priority) flora.

Clearing of native vegetation within the area is not considered to be at variance to this principle.

4. 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 (TEC).

The project area does not coincide with any threatened ecological communities listed under the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth). Accordingly, the area is not considered necessary for the maintenance of a threatened ecological community.

Clearing of native vegetation within the area is not considered to be at variance to this principle.

5. Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Six vegetation types were identified in the survey, and are representative of the broad descriptions of Pre-European vegetation mapping, being dominated by *Mulga* spp., *Acacia ramulosa* and *Eremophila* species which are not restricted in regional extent. Therefore, the vegetation proposed to be cleared cannot be considered significant remnant vegetation.

Clearing of native vegetation within the area is not considered to be at variance to this principle.

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

The project area does not contain native vegetation that is within or associated with any significant watercourse or wetland. The nearest significant surface water features are Twenty Seven Mile Creek and Gunnetharra Creek (tributaries of the Sanford River) which are located more than 12 km northwest and 32 km north of the Project area respectively. The proposed clearing will not impact these drainagelines.

There are no significant water courses, wetlands or large drainage channels within the Project area.

Clearing of native vegetation within the area is not considered to be at variance to this principle.

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

The clearing envelope is broadly mapped as located within the Jundee, Violet, Yanganoo, Cunyu, Challenge and Kalli land systems according to Curry *et al.*, (1994). Appropriate surface water drainage and containment around cleared areas will minimise the potential for surface water erosion. Land degradation resulting from clearing of vegetation is considered unlikely.

Clearing of native vegetation within the area is not considered to be at variance to this principle.

8. Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

There are no conservation or nature reserves within the Project area.

Clearing of native vegetation within the area is not considered to be at variance to this principle.

9. 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.

Surface water in the proposed clearing envelope is sourced from direct precipitation and surface runoff following rainfall events. The Murchison area often receives considerable rainfall from degenerating cyclonic depressions from the northern parts of the State. However, the mean annual rainfall is only 246.6 mm.

There is no surface water of significance, large drainage lines, lakes or swamps in, or in close proximity to the proposed clearing area.

Drainage and containment structures incorporated into the development areas will ensure surface water runoff is controlled and minimise the potential for contaminants and sediment to enter the periodic surface water flows.

Clearing of vegetation is not anticipated to have any impact on the groundwater system.

Clearing of native vegetation within the area is not considered to be at variance to this principle.

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

The project area is surrounded by native vegetation. Average annual rainfall is 257.5 mm, with little surface flow during normal seasonal rains. Flooding of the area is considered unlikely.

Runoff from cleared areas will be directed toward appropriate drainage and containment structures.

Given that there are no water bodies within the area of proposed clearing, and that there is little surface water flow during normal rains, and that surface water management measures will be implemented; the proposed additional clearing of 450 ha is not likely to cause or exacerbate the incidence or intensity of flooding.

Clearing of native vegetation within the area is not considered to be at variance to this principle.

5. FIGURES

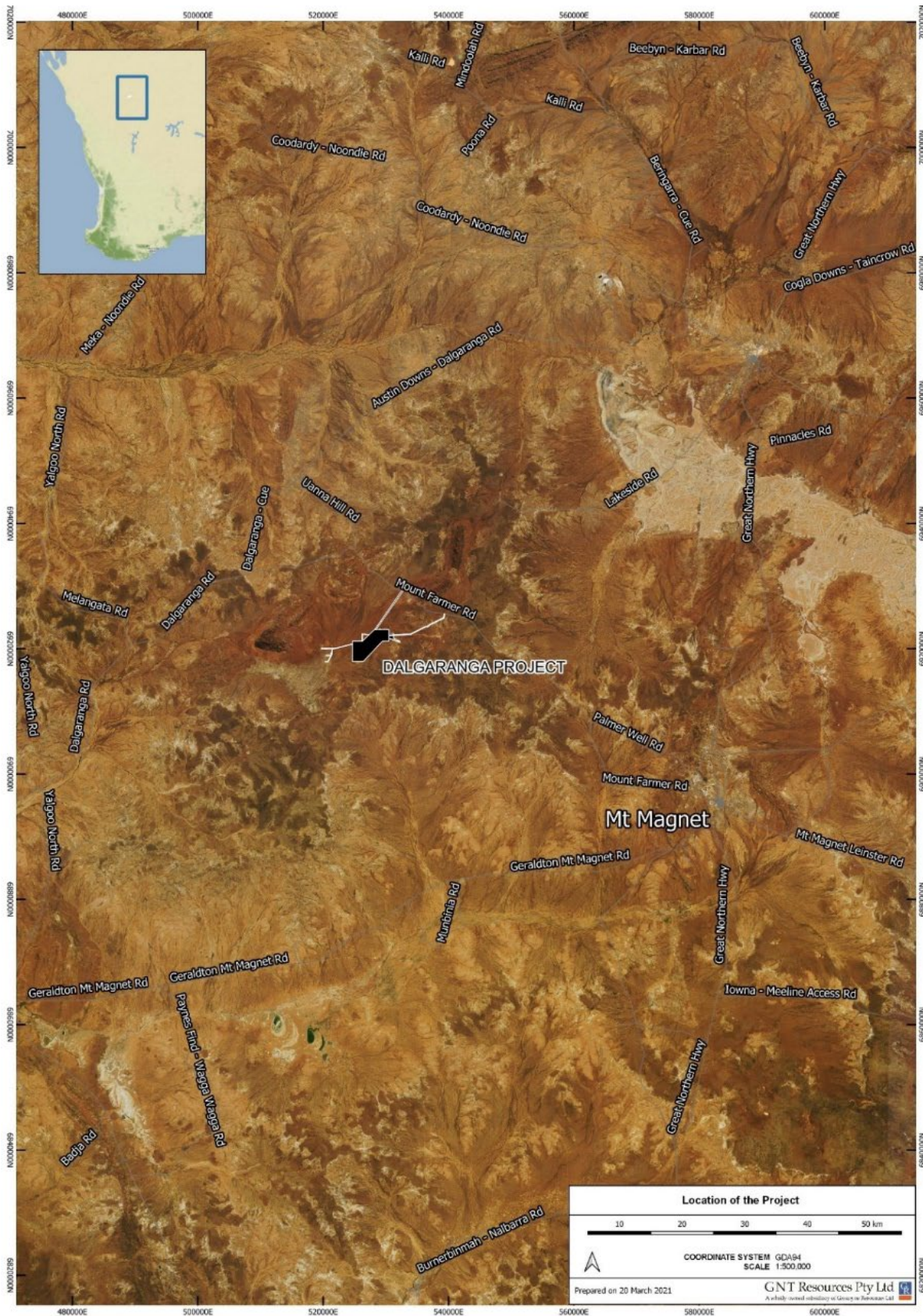


Figure 1: Location of the Dalgaranga Project

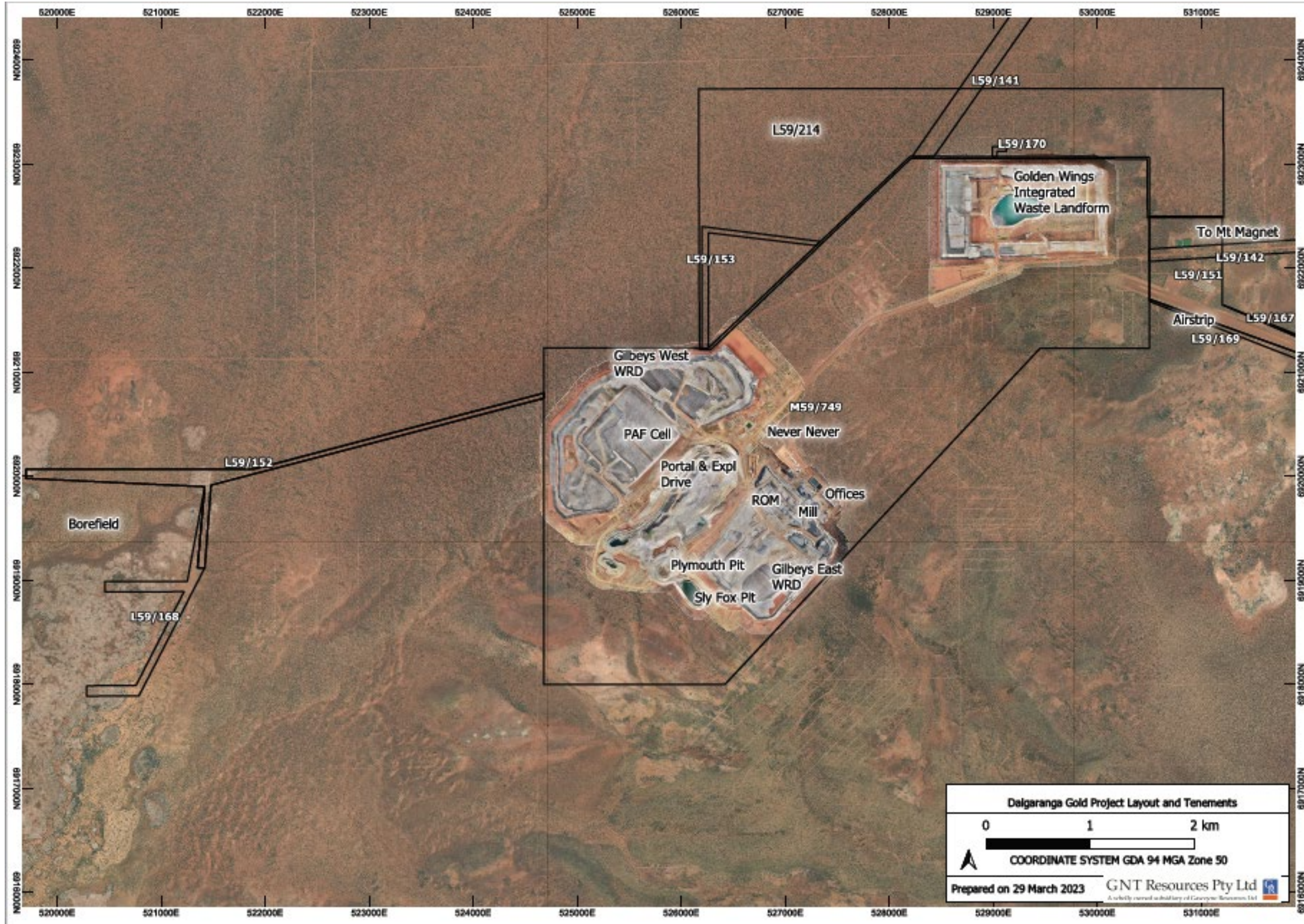


Figure 2: Tenement layout of the Dalgarranga Project

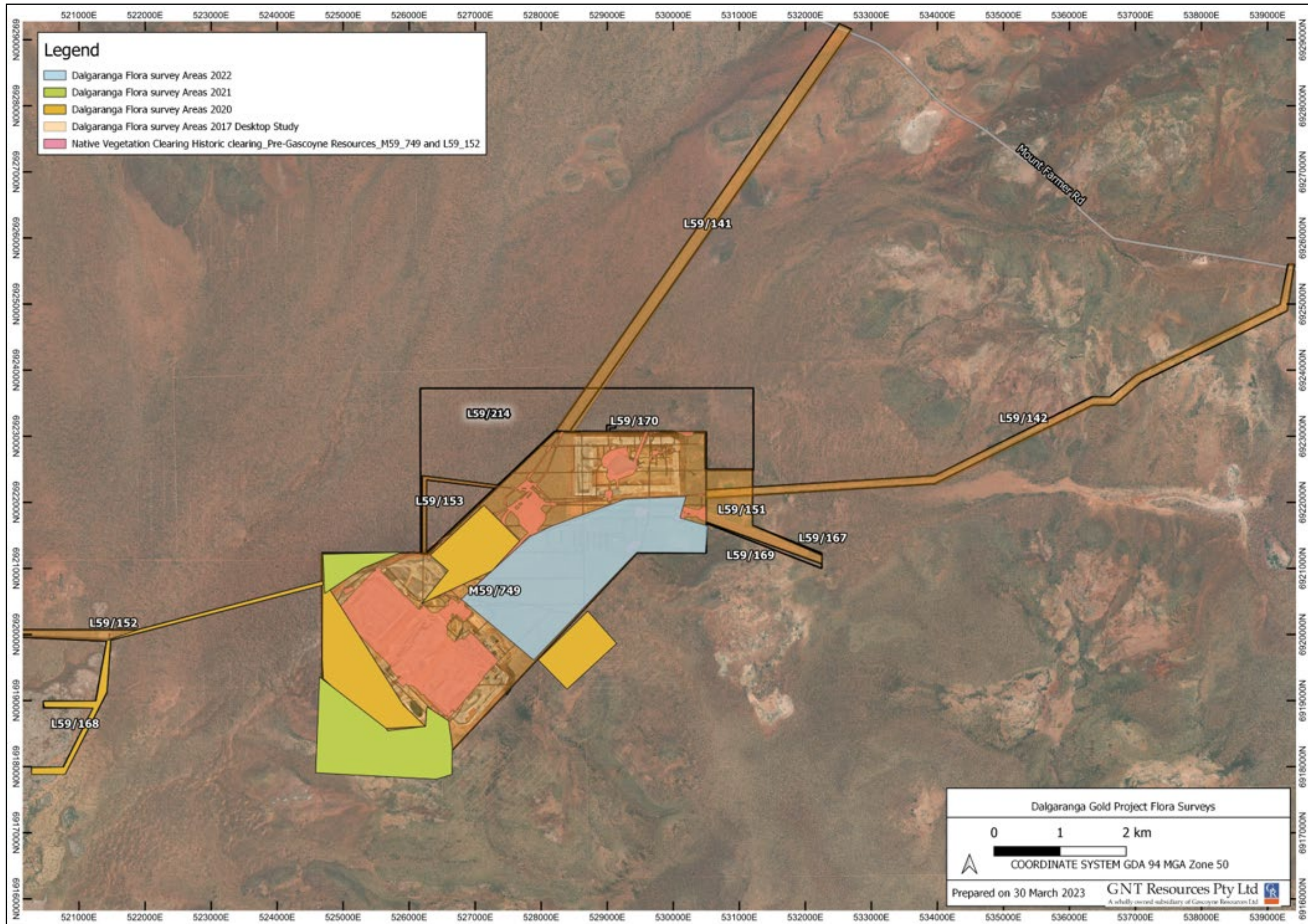


Figure 3: Flora and Vegetation surveys completed at Dalgaranga

PLAN 7240/3

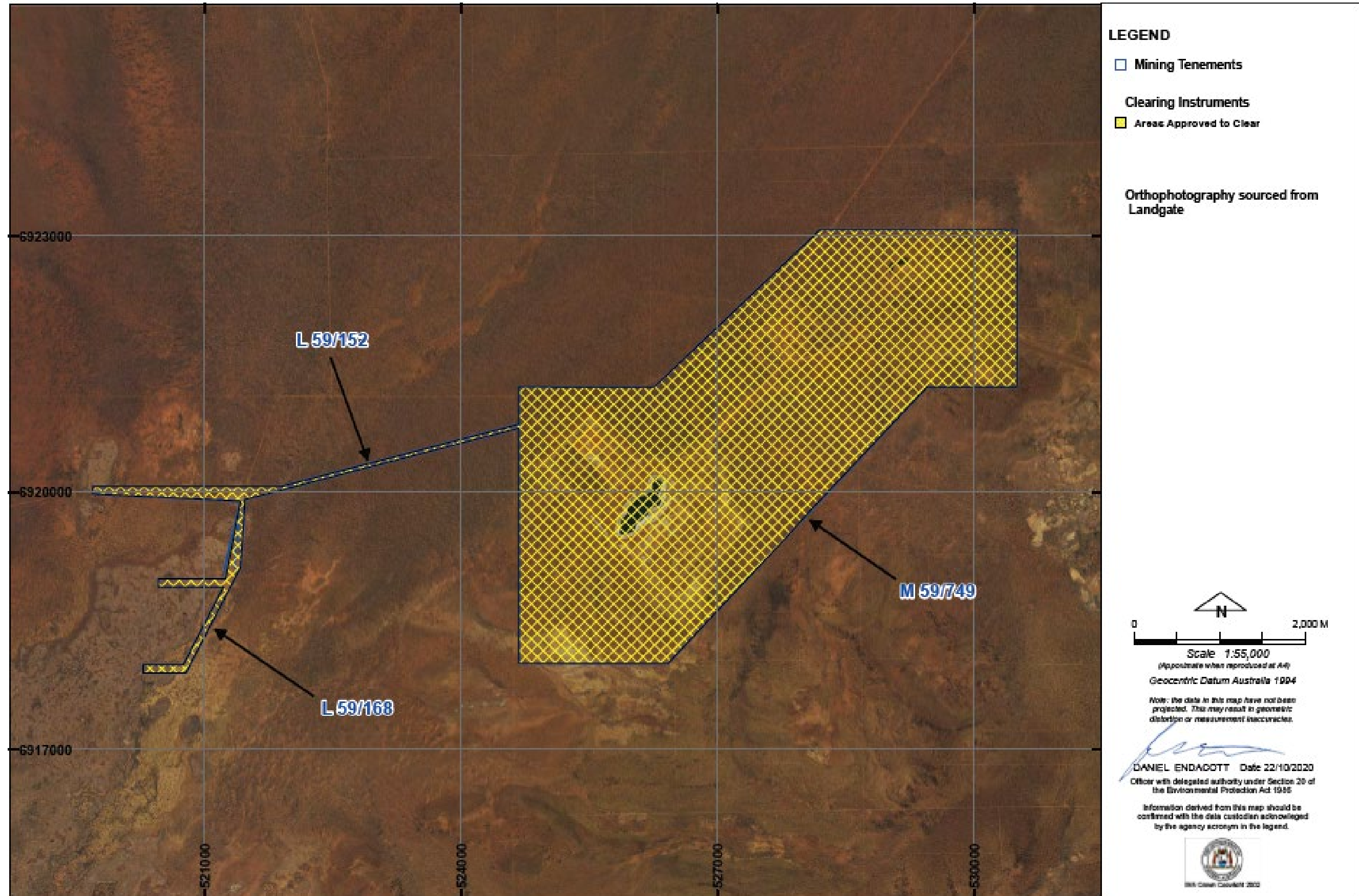


Figure 4: Approved clearing envelope under CPS 7240/4

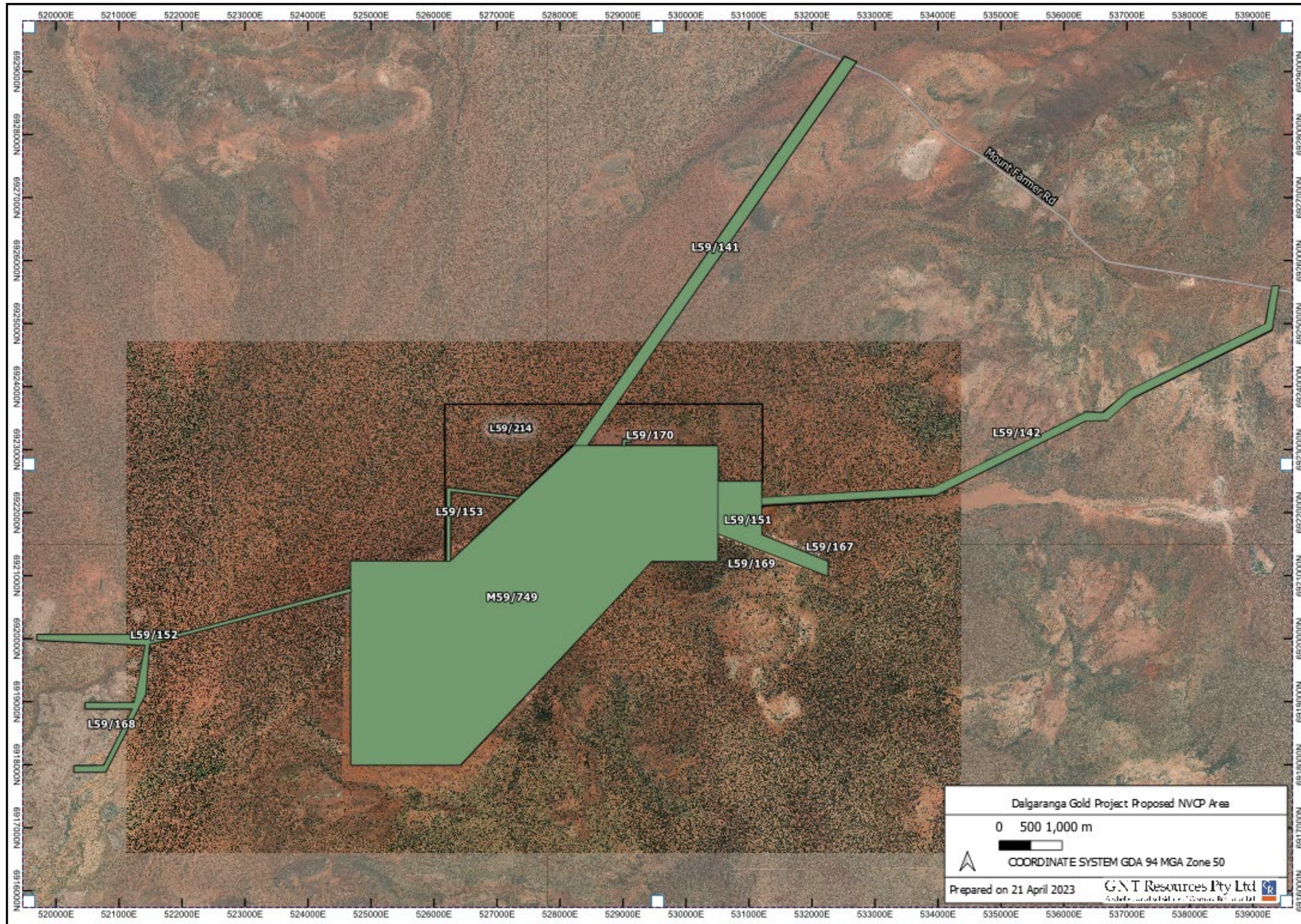


Figure 5: 2023 NVCP Proposal Areas

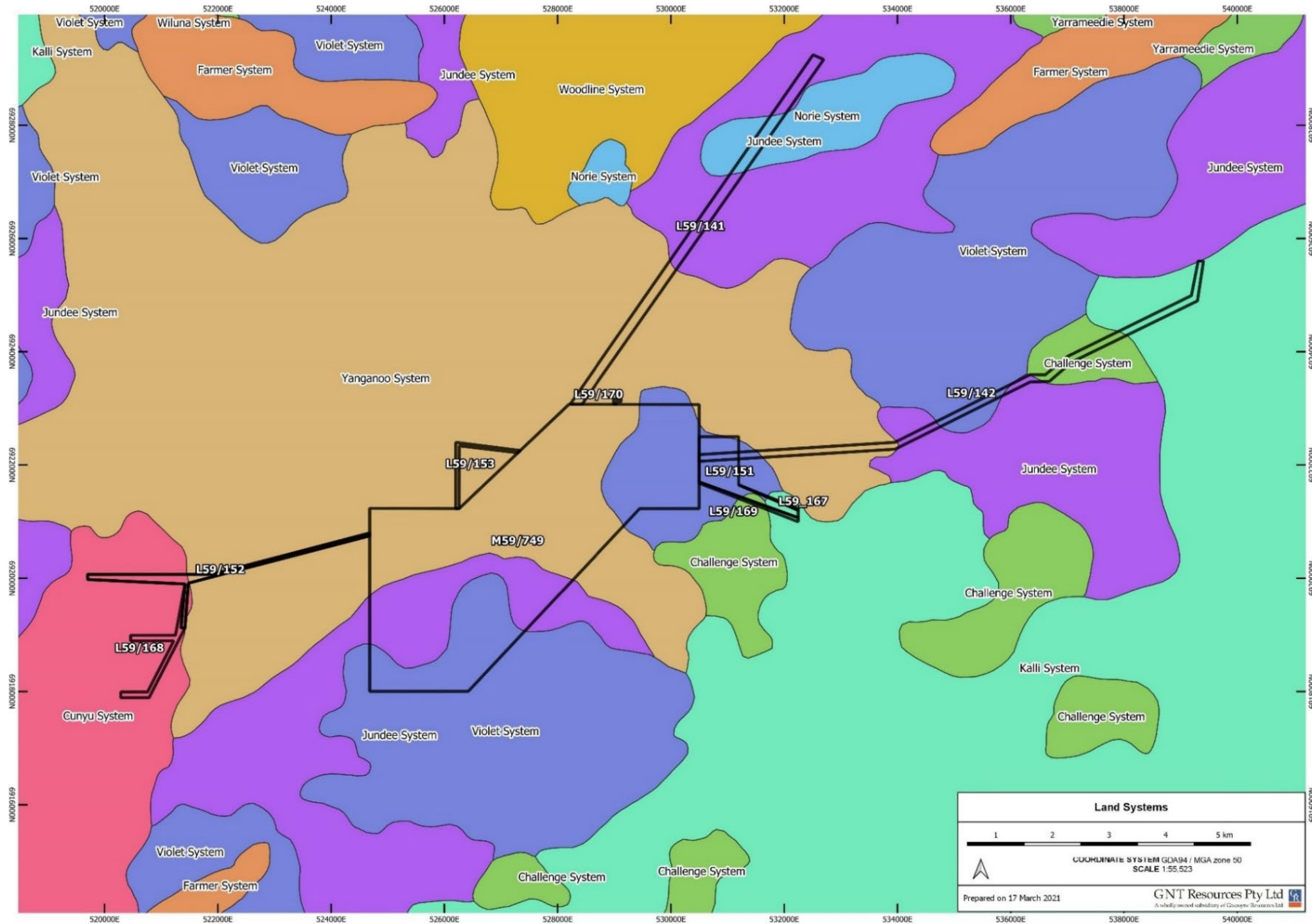


Figure 6: Land systems in Project area (from Mabbut et al. 1963)

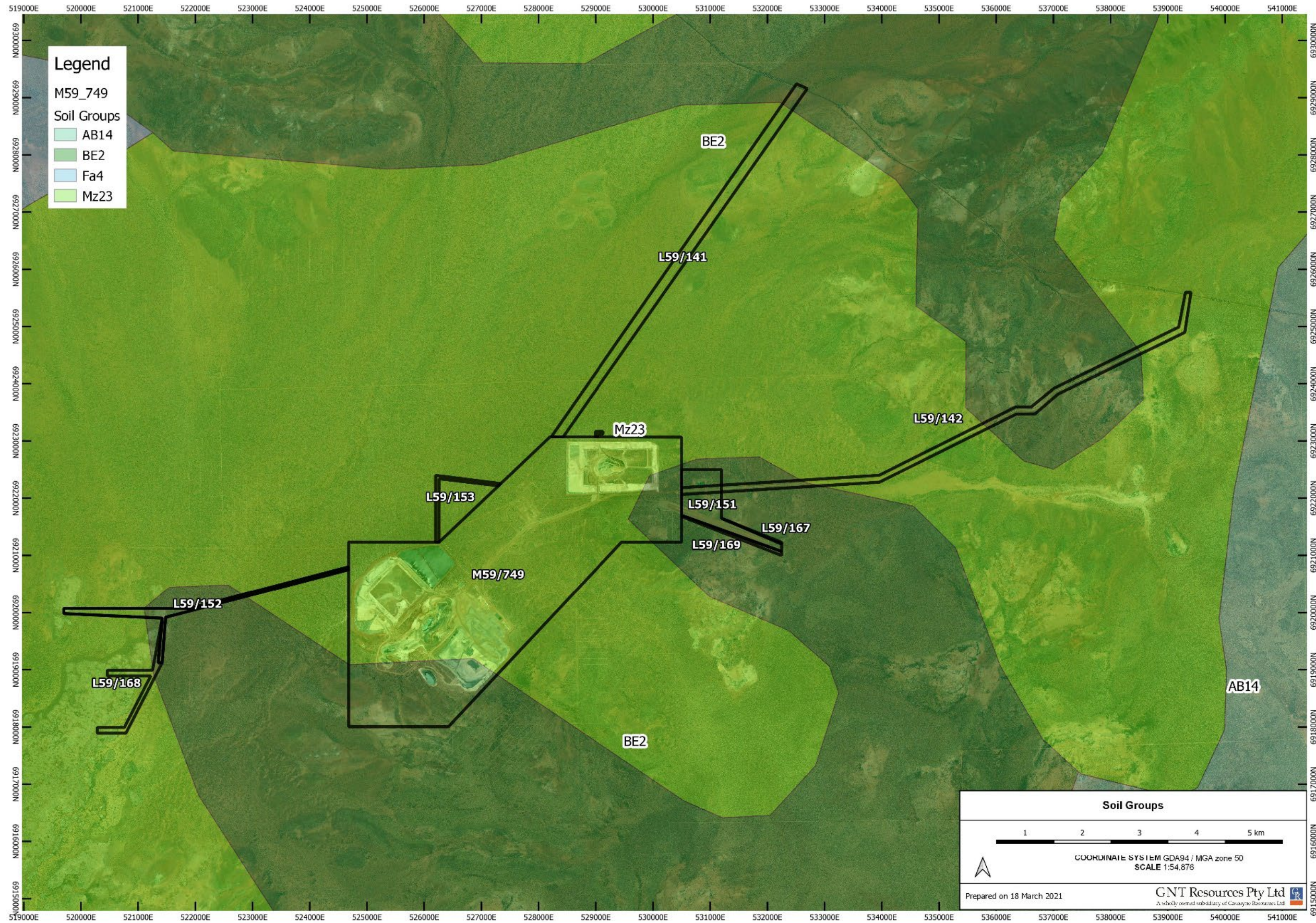
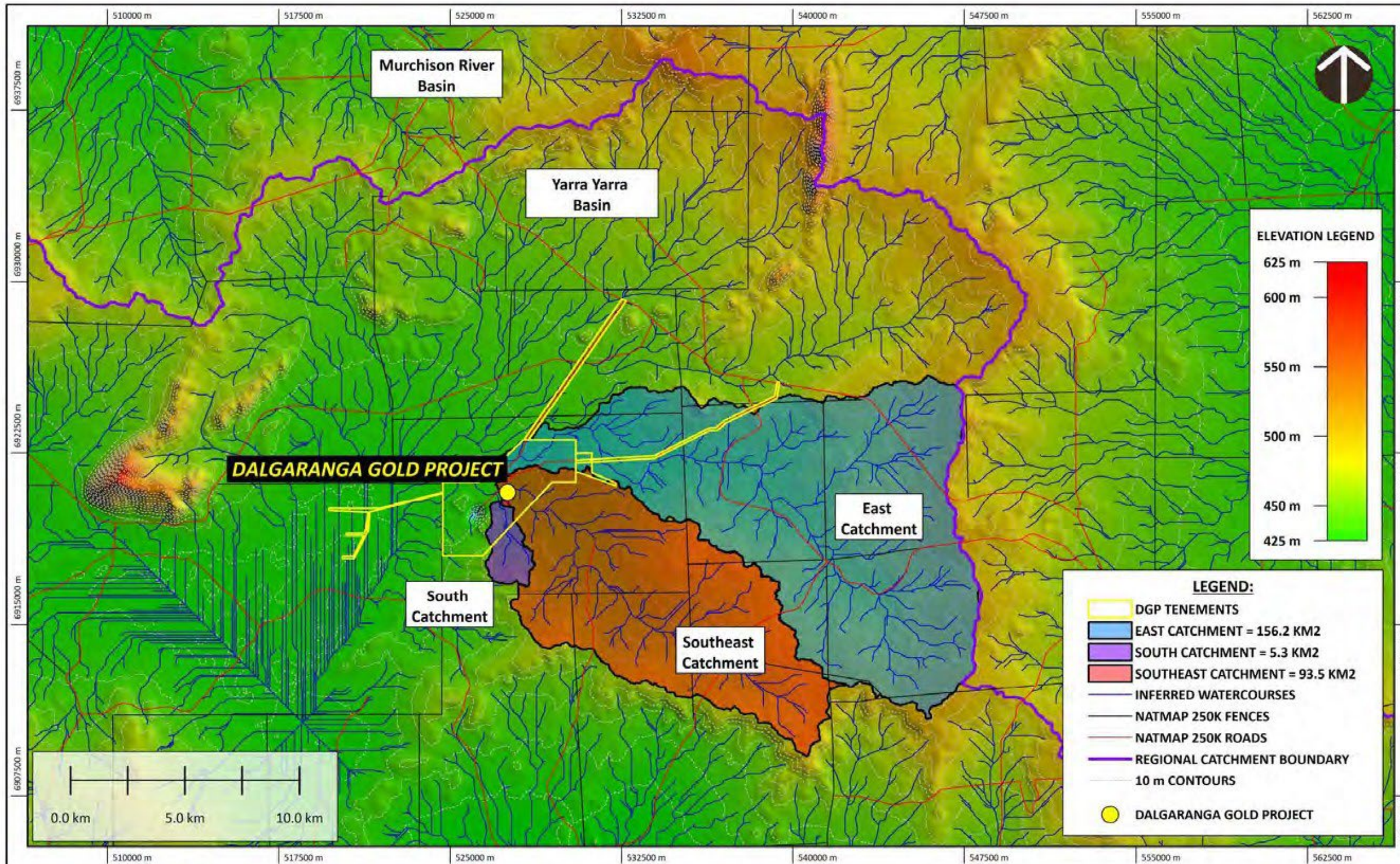


Figure 7: Soil-landscape provinces of the Murchison Province



GROUNDWATER
RESOURCE MANAGEMENT

FIGURE 4
DALGARANGA GOLD PROJECT
LOCAL CATCHMENT DELINEATION
OVER SRTM DEM TOPOGRAPHY

Date Apr 20
Client Gascoyne Resources Ltd
Project Dalgaranga Gold Project
Document J2014R01

Notes
1. Figure scale = 1:150,000 @ A3.
2. Coordinates to GDA94/MGA Zone 50.
3. Catchment delineation developed from SRTM data using GIS Spatial Analysis tools.

Sources
1. Topo mapping & SRTM elevation data from Geoscience Australia.

Figure 8: Local Catchment Delineation (from GRM 2020)

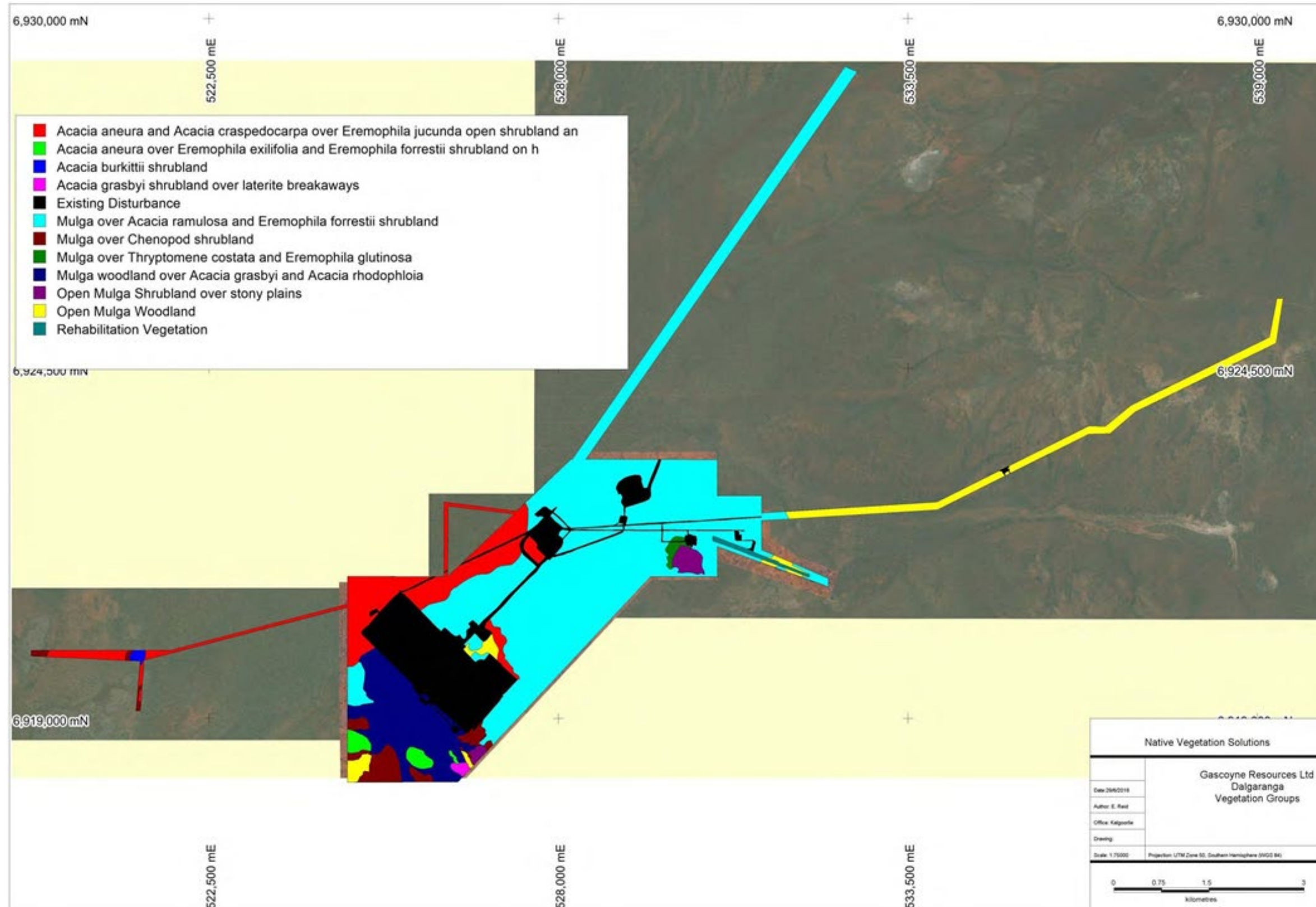


Figure 9: Vegetation groups in Project area (from NVS 2016)

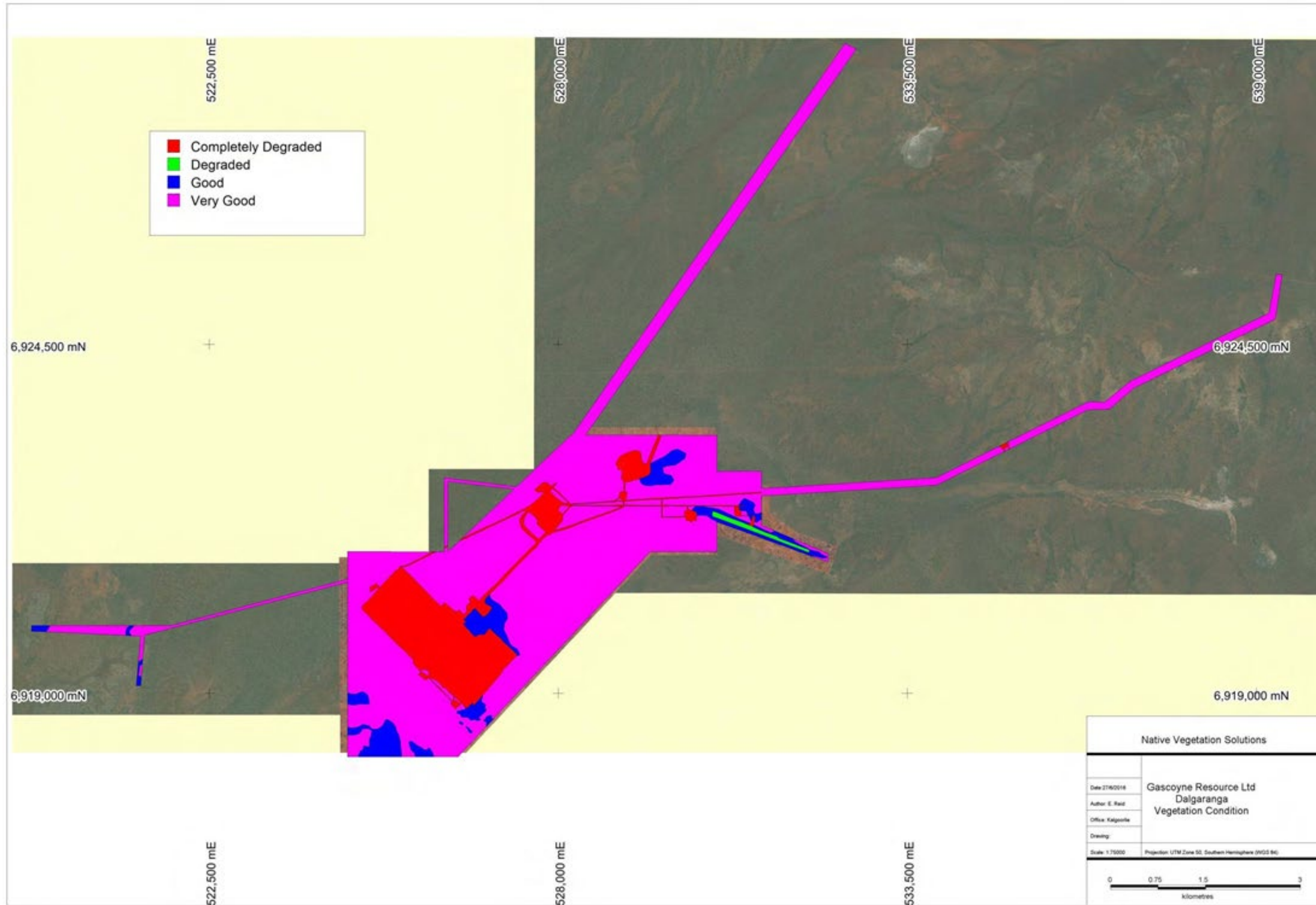


Figure 10: Vegetation condition mapped in Project area (from NVS 2016)

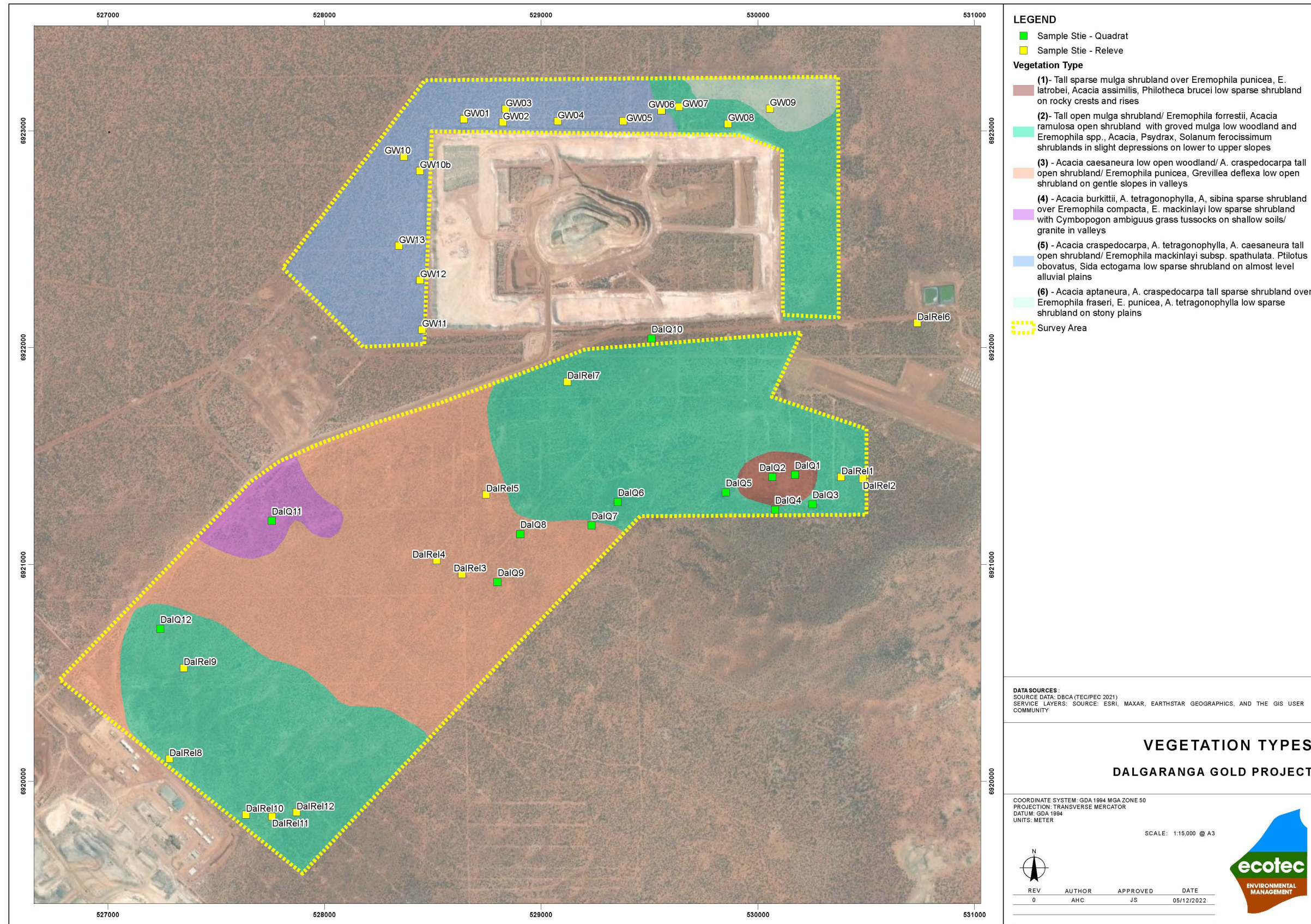


Figure 11: Broad vegetation types of the surveyed area (JBBC, 2022)



Figure 12: Fauna Habitat Mapping

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7. APPENDICES