Ferdies Find Pty Ltd

(ABN 96168969971)

Exploration Operations Mining Management Plan and Public Report

for

Grave Yard Bore Project

EL 30256

Third Amendment

August 2018

Distribution:

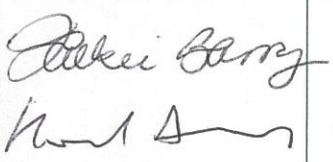
Mining Environmental Compliance – 1 x Digital

Howard Dawson – 1 x Digital

Ron Roberts – 1 x Digital

Wayne Bergmann – 1 x Digital

Endorsement

	Author	Reviewed by	Approved by
Date	9 August 2018		
Name/s	Jackie Barry Howard Dawson	Wayne Bergmann	Wayne Bergmann
Signature/s			

I, Wayne Bergmann, Sole Director Ferdies Find Pty Ltd, declare that to the best of my knowledge the information contained in this mining management plan is true and correct and commit to undertake the works detailed in this plan in accordance with all the relevant Local, Northern Territory and Commonwealth Government legislation.

SIGNATURE: 

DATE:.....9/8/18

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Amendments

Section	Amendment
1.0 Operator Details	Updated Operator Details (Key Contact Person Details), Organisation Structure and Workforce Table.
2.0 Identified Stakeholders and Consultation	Amended to reflect a Sacred Site clearance survey was undertaken for the Phase 2 area and a certificate has been received from the CLC.
3.0 Project Details	Updated Project Name
3.1.1 Exploration Activities 2017	Updated 1st paragraph concerning exploration activities in 2017.
3.2 Proposed Exploration Activities 2018	Amended Figures 3 and 4 and updated Proposed Exploration Program 2018 details and Activity Table for 2018 Program
4.0 Current Project Site Conditions	Updated Flora and Fauna, Aboriginal Heritage and Feral Animal and Weed Species sections.
5.0 Environmental Management System	Completed Environmental Audits, Inspections and Monitoring table for 2017 exploration including updated Performance Reporting details. Inserted Figure 6 on 2017 drill hole rehabilitation. Updated Exploration Rehabilitation.
	Amended text in Exploration Rehabilitation Register sub-heading section
	Costing of Closure Activities updated for 2018 exploration
Appendix 1	Signed CLC Mineral Exploration Agreement
Appendix 2	New Sacred Sites Clearance Certificate
Appendix 3	Updated – Proposed Drill Co-ordinates for Phase 2
Appendix 4	Flora and Fauna Study
Appendix 5	Updated Security Calculation Summary for Phase 2 Exploration
Appendix 6	Letter from Station Manager re request to leave tracks from Phase 1 and 2 open.
Appendix 7	Photographs of Drill hole rehabilitation 2017
Attachment A – Rehabilitation Checklist	Completed checklist
Attachment B – Rehabilitation Register	Completed checklists

1.0 Operator Details

1.1 Operator details

Operator Name:	Ferdies Find Pty Ltd
Key Contact Person/	Wayne Bergmann
Postal Address:	12 Gibson Retreat, CABLE BEACH WA 6726
Street Address:	12 Gibson Retreat, CABLE BEACH WA 6726
Phone:	0417 900 255
Mobile:	0417 900 255
Email:	wayne@kred.org.au

1.2 Organisational structure

Ferdies Find Pty Ltd is a registered Australian Proprietary Company, consisting of a small number of private equity shareholders. Wayne Bergmann is the appointed Sole Director and Secretary. Ferdies Find Pty Ltd has engaged Magnum Mining and Exploration Limited to carry out the proposed exploration project.

The field operations workforce for the Graveyard Bore Project 2018 exploration programme will consist of company shareholders and/or contractors as required. Personnel requirements are shown below.

Exploration Workforce

Description	Number of Positions	Nominee
Manager	1	Wayne Bergmann
Geologist	1	Max Nind
Access tracks and drill traverses	1	Mark Savage
Field supervisor/assistant	3	Howard Dawson Scott Matheson Eric Noyens
Driller	4	Bullion Drilling
Administration	1	Wayne Bergmann

2.0 Identified Stakeholders and Consultation

EL30256 is on Tanami Downs Station. Tanami Downs is Aboriginal Freehold Land held by the Mangkururrpa Aboriginal Land Trust which is administered by the Central Land Council (CLC).

Land Parcel	Status	Description	Survey Plan	Owner	Owner Category	Administrator
Tanami Downs Station	Freehold	NT Portion 4147	S 92/054	Mangkururrpa Aboriginal Land Trust	Aboriginal Land Scheduled under the ALRA	Central Land Council

Exploration on Aboriginal Freehold Land is subject to the *Aboriginal Land Rights (Northern Territory) Act (1976).* The dates and locations of Land Council facilitated consultation meetings with the Traditional Owners and outcomes of the meeting(s) are as follows.

Consultations with the CLC began in 2014. Various email correspondence and phone conversations between the Ferdies Find and CLC between July 2014 and January 2017. A meeting was held between Ferdies Find (W Bergman and Darren Townsend), the CLC and the Traditional Owners (TO's) on 6th May 2015 at the Granites outcamp in the Tanami Desert. A further meeting between the CLC and TO's was conducted on 24/5/2016. These meetings and further consultation between Ferdies Find Pty Ltd and CLC resulted in the following outcomes:

Date	Outcome
26/06/2016	CLC notification to Ferdies Find of consent to grant of EL30256
08/07/2016	CLC notification of partial refusal of grant of EL 30256
24/11/2016	Execution of Mineral Exploration Agreement between Ferdies Find and CLC
07/12/2016	Issue of Sacred Site Clearance Certificate for Exploration Proposal
12/12/2016	Amendment to partial refusal (spatial grid description error – no effect)

Continuing consultation and correspondence between Ferdies Find and the Department of Industry and Resources resulted in EL 30256 being granted on 29/12/2016. A Mineral Exploration Agreement with CLC is evidenced in Appendix 1.

Subsequent consultation and correspondence has continued with CLC. A second Sacred Sites Clearance survey has been completed (C2018-073, dated 18 June 2018) over the Phase 2 target area (refer Appendix 2).

3.0 Project Details

Project Name:	Graveyard Bore Project
Location:	The project is located in the Northern Territory 570km northwest from Alice Springs, 33km east of the West Australia border and 140km north of Lake MacKay (Figure 1) about 900 km SSW of Darwin in the Tanami Region of the Northern Territory, Australia and is on the Tanami Downs pastoral station, approximately 42 kms WSW of The Tanami Downs homestead and 100kms west of the Granites Mine.
Site Access:	Access is via the Tanami road turnoff 15kms SW of the town of Halls Creek on the Great Northern Highway in Western Australia. Travel the Tanami Road for approximately 420 kms to the Tanami Downs turnoff near the Rabbit Flat roadhouse (no longer operational). Take the Tanami Downs road SSW for 51 kms, then follow station tracks 2 kms south then 11 kms west on the Potato Bore track. Thence travel south and south west for 12 kms and then west for 25 kms to the project area. Alternative access is from Alice Springs north for twenty kms on the Stuart Highway, thence turn left and travel 525 kms NW on the Tanami Road to the Granites Mine. Thence 45 kms westerly to the Granites Mine open pits then NW for 10 kms to the Tanami Downs Road, thence SW for 18 kms to Tanami Downs, then continue as described above.
Mining Interests:	The project consists of one granted tenement – EL30256.
Title holder:	The tenement is held by Ferdies Find Pty Ltd.

Figure 1: Project Location

3.1 Previous Exploration Activities

Previous exploration licenses that partially encroached upon the same geographic area as EL30256 are listed in the table below.

EL NUMBER	HOLDER	DATE	REPORT NUMBER	COMMENT
1266	Otter Exploration	1978	CR19780185	Ground work confined to Muriel Range west of EL 30256 – no work on EL30256
1267	Otter Exploration	1978	CR19780161	No work done on EL 30256 area
1267	Otter Exploration	1979	CR19780194	No work done on EL 30256 area
2943	BHP Minerals	1983	CR19830109	Aeromagnetic survey over area-no ground work.
3255	BHP Minerals	1983	CR19830292	Referenced in GEMIS but not relevant to EL3255-assumed archive error.
8825	Normandy(Newmont)	1983	CR19830292	Appears to be incorrectly referenced in archives. Is possibly CR20030136. 6 lag samples taken at the western end of Muriel Range – no significant assays produced. No other groundwork.
8825	Newmont	1999	CR20000179	No work done – CLC restrictions.
8825	Newmont	2000	CR20010112	No work done – CLC restrictions.
8825	Newmont	2001	CR20020097	No work done – CLC restrictions, followed by weather restrictions
8825	Newmont	2001	CR20020169	No work done –weather restrictions
8825	Newmont	2002	CR20030136	6 lag samples taken at the western end of Muriel Range – no significant assays produced. No other groundwork.
8825	Newmont	2003	CR20040168	No work done
8825	Newmont	2003	CR20040254	No work done
8825	Newmont	2003	CR20040776	No work done

As can be seen from the table above, desk top study of all the technical reports lodged for the area in the immediate vicinity of EL30256 concludes that no previous significant groundwork has been done on the tenement area.

EL30256 was granted on 29/12/2016. This document is the third amendment MMP for exploration activities to be carried out by Ferdies Find Pty Ltd.

3.1.1 Exploration Activities 2017

Ferdies Find Pty Ltd conducted exploration activities over a targeted area in the SW portion of EL30256 during July 2107. A total of 61 vertical blade refusal aircore holes for a total 2,120m was completed on three 1km to 3km spaced NE orientated drill traverses, with some holes drilled on E-W traverses running off the NE traverses. Holes were spaced 400m apart and were designed to locate any distal dispersion of metals within the weathered zone that could reflect the location of mineralisation within the area. Drill samples were collected from the rig at 1m intervals and composited by spearing to 3m composite samples for assay at Bureau Veritas Minerals Ltd laboratories in Perth. QAQC procedures included field repeats, blanks and geochemical standards. All samples were assayed for gold, silver, nickel, copper, cobalt, iron, manganese, lead, zinc and arsenic.

All drill holes were capped approximately 1m below surface using poly drill plugs, backfilled and mounded with drill spoil 300mm high to affect runoff during rain events.

Lag samples were also collected on five east-west orientated traverses at 100m interval as an initial test of the effectiveness of the technique in this area.

Exploration activities and results were reported to the Department of Primary Industry and Resources on 28th January 2018.

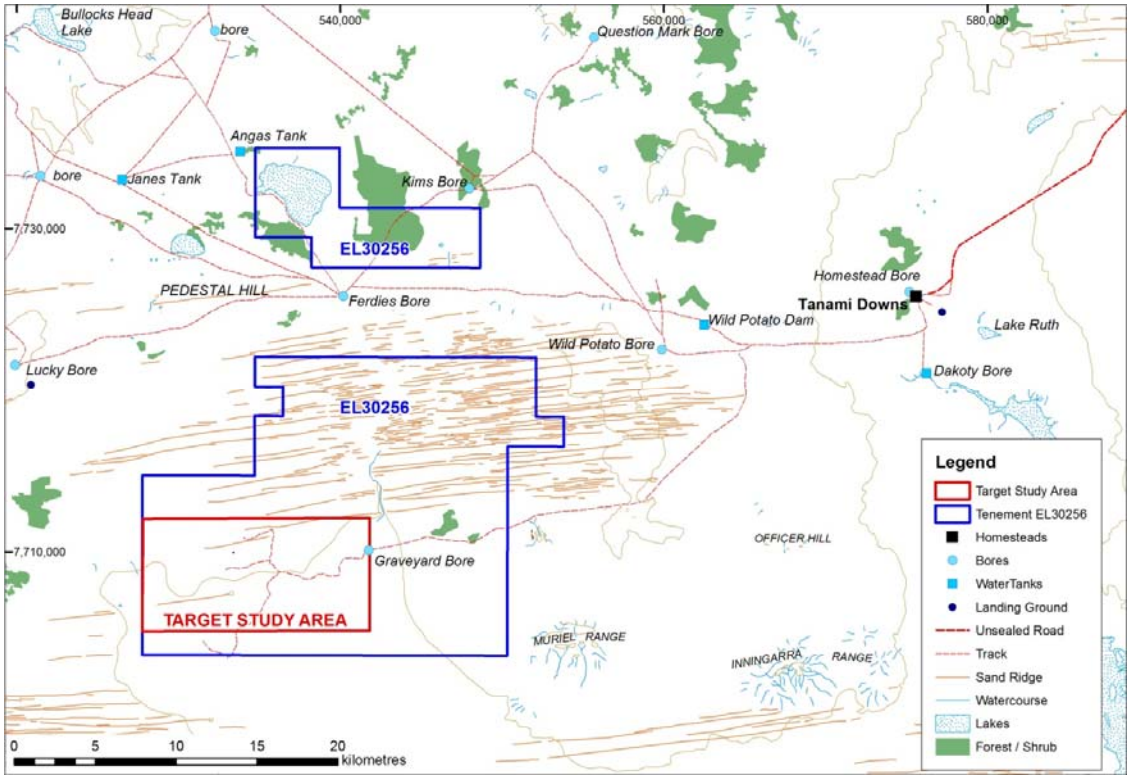


Figure 2: Target Study Area 2017 Field Programme.

3.2 Proposed Exploration Activities 2018

Overview

During 2018, Ferdies Find Pty Limited (the Company) proposes to explore for copper, gold and other metals within a defined target area of 8.4km x 6.2km (Figure 3) that has been identified in the south east of the tenement. The area is located to the east and south of Graveyard Bore on Tanami Downs Station in a largely sand covered area with spinifex grasslands, wattle shrub and isolated mulga stands.

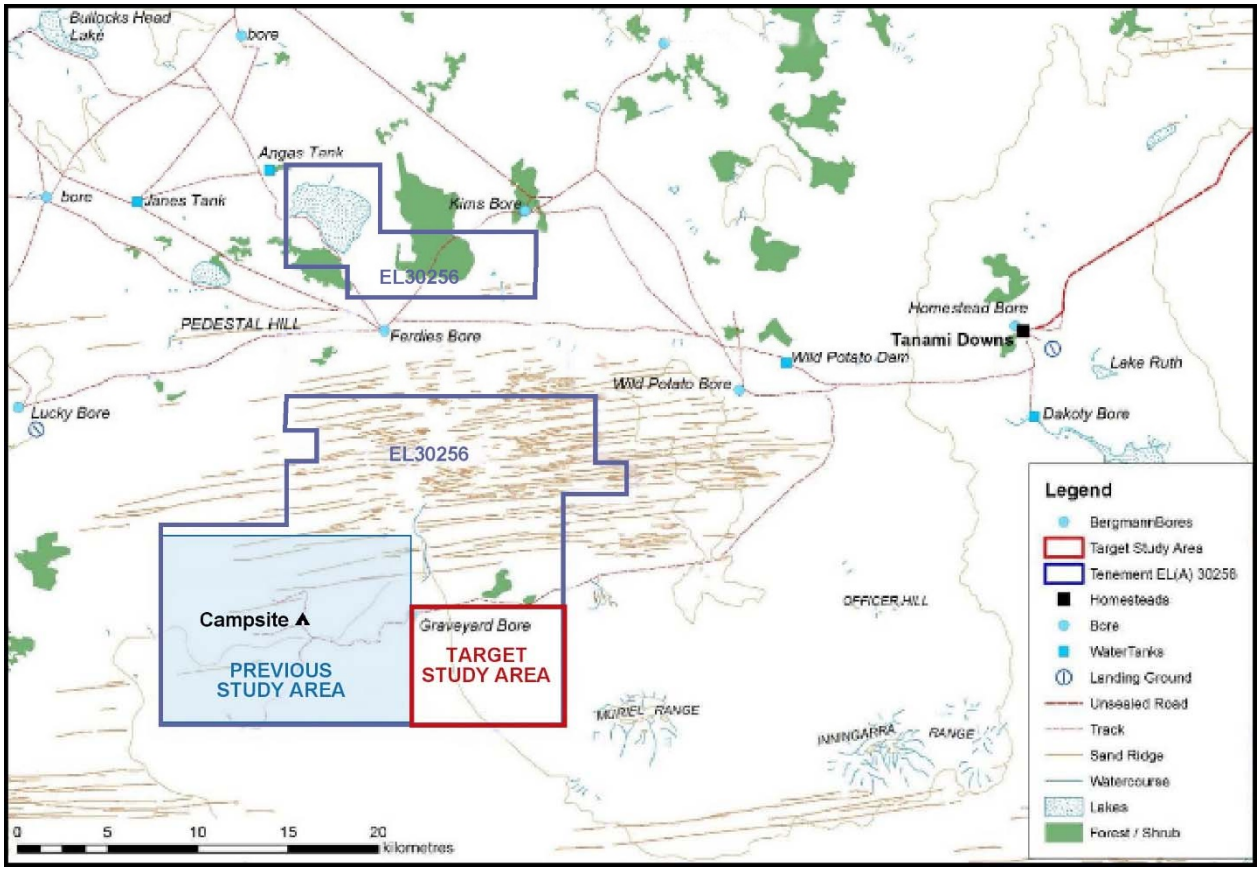


Figure 3: Target Study Area 2018 Field Programme.

Proposed Exploration Program 2018

Preparatory Work

The station access track from Tanami Downs homestead to Graveyard Bore was re-established during the July 2017 field programme and a fly camp was established near Graveyard Bore to accommodate field personnel.

The same location will be used for a fly camp during the 2018 programme.

A pit latrine will be established and camp rubbish will be incinerated on site in a drum and the refuse will be disposed of at the Tanami Downs homestead rubbish pit.

New access tracks to the 2018 programme proposed drill sites will be established with a grader with a light blade and drill traverses will also be lightly graded to allow vehicular access - see Figure 4.

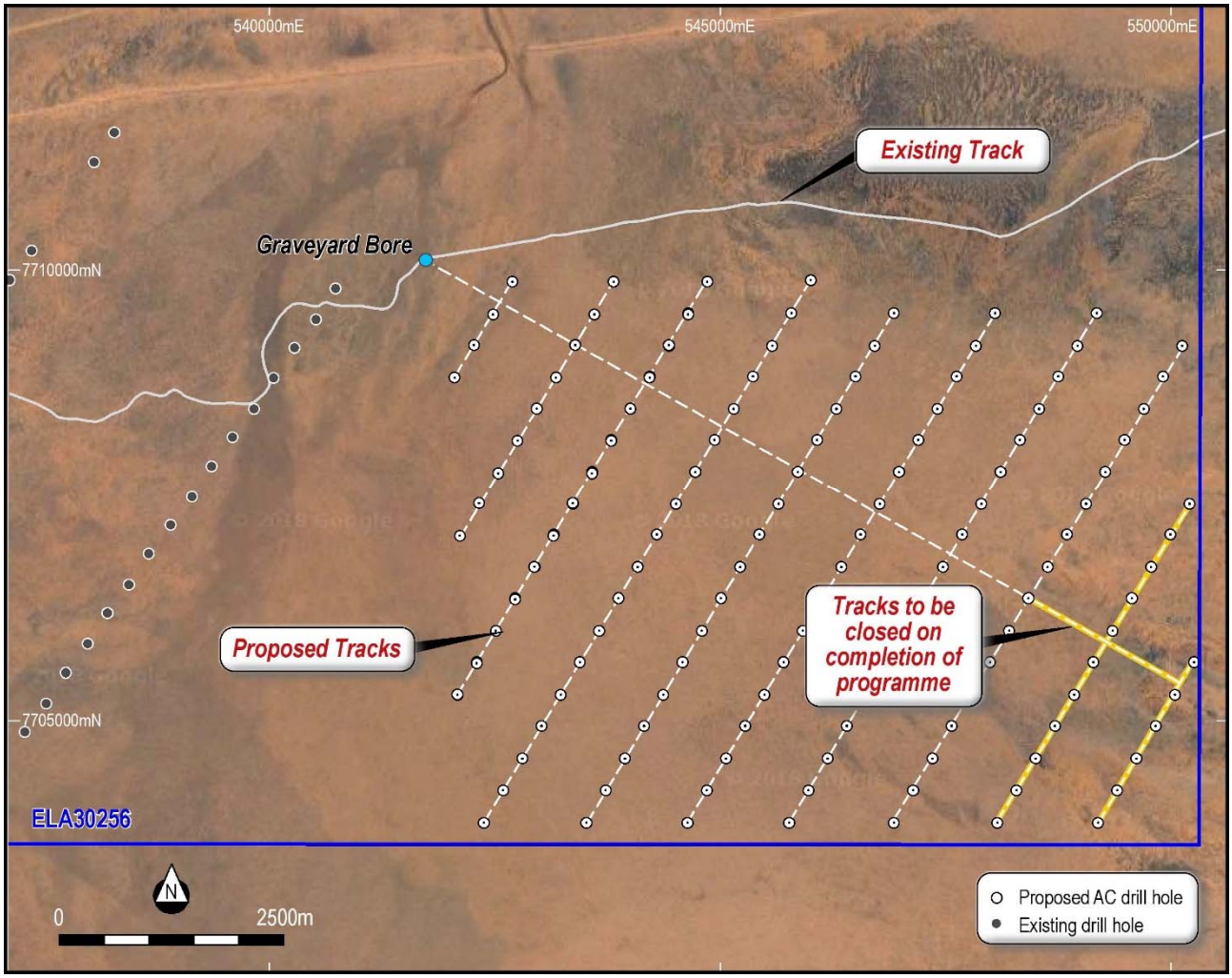


Figure 4: Access tracks to drill sites and proposed AC drill holes.

Drill Programme

The 2018 proposed Phase 2 drill programme consists of wide spaced (1km) traverses of vertical, blade refusal aircore drill holes spaced at 400m. The holes will be surveyed on foot using a hand held GPS and marked with stakes. The drill traverses will be of varying lengths up to 3.6km long. (Figure 4).

The drilling is designed to identify any low level dispersion of metals in weathered bedrock that could reflect mineralisation as well as to determine the depth of sand cover (to judge the effectiveness of surface sampling) and will also identify the bedrock geology rock type.

The drilling will be conducted by an aircore drill rig with support vehicle (Figure 5). The drill sites will be established on the drill traverses. The drill rig will carry hydrocarbon spill kits in the event of spillage.

One metre samples will be laid on the ground. After completion, holes will be plugged, the top of the hole backfilled, and then covered by a low mound of soil to prevent washout.

Drill sites will be inspected and cleared of any materials and rubbish once the rig has moved off the hole after completion. Drill coordinates are tabled in Appendix 3.

Figure 5: Aircore drilling and sampling operation.

Initial Exploration Program Review and Assessment

Following completion of Phase 2 all geological and analysis data from Phases 1 and 2 will be collated and reviewed and an informed assessment will be made on the viability of the Project.

If no encouragement in the form of geochemical anomalism is returned from these first two phases it is unlikely that further work will be conducted.

If this is the case, rehabilitation of sample sites and required tracks (because the station owner wants them left open) will be completed using a scarifier to encourage the natural bush to grow back and repair compacted areas, sample sites and camp.

In the event that geochemical anomalism to indicate the potential for mineralisation is discovered during the review and assessment period, then target areas identified from Phases 1 to 2 will be further tested with aircore drilling.

Activity Table for 2018 Programme

Activity	Number	Type	Size/Depth	Comment
Drill holes	129	Aircore	Nominal 20m depth	Depth will be blade refusal
Drill pads	Nil	N/A	N/A	Drill hole will be on traverse line.
Costeans	Nil	N/A	N/A	None planned
Tracks	Between Tanami homestead to Graveyard Bore	Existing	30kms	Refurbished 2017
Tracks	New in Activity Area	New	Approx 60kms	New Access to drill sites

4.0 Current Project Site Conditions

Climate

The general area has a semi-arid semi-monsoonal climate. The average annual rainfall for the area is about 400mm, most of which falls between December and March, during the annual "wet" season predominate in the north of the Australian continent. The amount of rain varies greatly, both in terms of intensity and occasion, seasonally and annually. Temperatures in the wet season average between 31.6 and 37.2^{O}C during the day and 20.3 and 25^{O}C overnight. Temperatures in the dry season average between 24.5 and 31.5^{O}C during the day and 12.2 and 18.3^{O}C at night.

Physiography

The tenement consists of two portions of land separated by an area that was excluded from the grant process at the request of the Traditional Owners.

The northern section is dominated by sand plains with spinifex grasslands and mulga stands. The western part of the northern section is almost entirely claypan lake playa while the eastern half is heavily vegetated with mulga shrub woodlands.

The southern portion of the tenement is almost completely covered with alluvial, eluvial and aeolian sands with an isolated lake playa in the southwest corner and subdued north-south paleochannel present in the centre. The northern part of the southern portion is dominated by a series of west-east sand dunes averaging 6 metres in height. The only known outcrop is the western end of the Muriel Ranges in the south eastern corner.

The whole area is vegetated with spinifex grasslands, wattle shrub and isolated mulga stand woodlands.

The immediate 2018 target area in the SE of the tenement is entirely sand plain country with no apparent outcrop.

There are no permanent or perennial water courses. The nearest water source is at Graveyard bore, which is designated as abandoned (salty) on topographic maps, but which was logged as suitable for stock in the original water bore log. See Figures 2 and 3.

The nearest potable water is at Tanami Downs homestead.

Geology

The tenement is located in the south west portion of the "The Granites" 1:250,000 geological sheet SF 52-03. There are no known mineral deposits within the actual tenement area.

Regionally the tenement is situated on the south western margin of the Granites-Tanami Paleoproterozoic Orogen that is host to the large gold deposits of The Granites and The Tanami and Callie gold deposits, with the Arunta Province lying to the south.

These older basement rocks are covered by a series of basin sediments and more recent sedimentary deposits in project area.

A small sedimentary basin, identified as the Neoproterozoic Murraba Basin in some geological publications, unconformably overlies over the Tanami Group basement rocks in the project area and outcrop in the sandstone Muriel Ranges 15km to the east.

Stippled textures in aeromagnetic data indicate Palaeozoic (Cambrian) Antrim Plateau flood basalt lavas uncomformably overlie the Murraba sandstone basin sediments in the project area. The Antrim Basalts are known to host small copper occurrences in the north.

The Antrim Basalt is in turn overlain by the Palaeozoic Lucas Formation, composed of calcareous and non-calcareous sandstone, siltstone, mudstone and minor limestone. The Lucas Basin Outlier is considered a sub basin to the more extensive Canning Basin of Western Australia, being separated from it by a narrow structural high. The Palaeozoic Canning Basin is host to the zinc-lead deposits of the Lennard Shelf.

Superficial Cenozoic sediments cover the older sediments in the project area, and include aeolian sand sheets and longitudinal dune fields, calcrete, ferricrete, alluvial sediments and lacustrine deposits.

Flora and Fauna

Appendix 4: Desktop Assessment of Flora, Fauna, Weed Infestation and Feral Animals – Included as Appendix 4.

The Desktop Assessment of Flora, Fauna, Weed Infestation and Feral Animals identified that there is no threatened flora within the targeted area however there is one record of a threatened species (Bilby) within the area proposed for drilling.

Our technical review of the target area indicates that it contains no topography or landforms suitable for a Bilby habitat.

Our management plan is focused on reducing as much as possible, our impact on flora and mitigating direct risk to fauna or destruction of habitats. Our management plan thus includes the following as key points:

- All access tracks are to be very lightly graded (in effect only to remove sticks that may cause punctures) and,
- where a berm (windrow) is created it will be limited to 100mm in height and will be remediated at completion, even on the tracks the pastoralists wants left open, and
- We will not commence daily operations until 30 minutes after sunrise and will complete daily operations 30 minutes prior to sunset to avoid any chance of interfering with possible fauna movement and foraging, and
- No work will be undertaken if it is raining or after rain if the ground is sufficiently wet to leave wheel ruts, and
- Strict protocols for the prevention of accidental fires will be in place whilst drilling is undertaken

Aboriginal Heritage

Ferdies Find Pty Ltd has entered into an exploration agreement with the Central Land Council (CLC). A Sacred Site Clearance certificate for the 2017 target area was issued to Ferdies Find Pty Ltd on the 7th December 2106.

Subsequent consultation and correspondence has continued with CLC. A second Sacred Sites Clearance Survey has been completed (C2018-073, dated 18 June 018) over the Phase 2 target area (refer Appendix 2).

Ferdies Find Pty is fully aware of its' obligations under both the exploration Agreement and the Sacred Sites Clearance Certificate process. Workplace participants including contractors and site visitors will be fully informed of their respective and collective responsibilities in regard to aboriginal heritage and culture.

Feral Animal and Weed Species

Appendix 4: Desktop Assessment of Flora, Fauna, Weed Infestation and Feral Animals. – Included as Appendix 4.

5.0 Environmental Management System

Environmental Policy and Responsibilities

Ferdies Find Pty Ltd commits to ensuring responsible environmental management that will minimise damage to the environment through:

- The development and implementation of an Environmental Management System to encourage environmental protection through proactive environmental management and compliance with statutory requirements;
- Providing appropriate training and communication to employees and contractors on matters related to Environmental Management and the importance of natural resource protection including soils, vegetation, fauna, water, energy, waste and mineral products / by- products;
- Engaging with stakeholders in good faith around issues of common and shared interest;
- Communicating with stakeholders, regulatory authorities, employees and community on environmental performance and progress in activities
- Undertaking rehabilitation and recovery of disturbed areas in a timely manner, consistent with industry standards, regulatory requirements and relevant guidelines;
- Providing opportunity for the implementation of innovative and sustainable options through a process of continuous improvement by completing the following targets:
    - Monitor and record the environmental performance of contractors during the programmes.
    - Conduct a joint meeting after each programme, with the Ferdies Find Pty Ltd field supervisors, contractors and drillers to list those things that could improve environmental consequences in future programmes.
    - After each programme and rehabilitation work is completed, review all environmental and safety aspects specific to the programme to identify areas for further improvement.

The company's environmental management procedures are based on four approaches:

- Awareness – all onsite personnel and contractors are made aware of potential impacts and expected to use this awareness to avoid impact.
- Impact reduction – notwithstanding the practical and financial constraints under which the Company operates, work must always be conducted in a manner that causes the least environmental impact.
- Rehabilitation – all ground disturbances are to be rehabilitated to the standards set by the DME guidelines.
- Review/audit – Rehabilitation progress is to be internally monitored and reviewed. Information gathered should be used to inform future work and rehabilitation program planning. External audits are to be facilitated.

Specifically, the company will use best endeavours to minimise and/or prevent:

- any adverse effect on the natural environment
- any adverse effect on waterways
- pollution

- disturbance to soil structure, flora and fauna
- the construction of new access tracks
- possibility of introduction of noxious plants and weeds
- destruction of mature trees
- the use of vehicles off established tracks
- the possibility of the occurrence of bushfires
- the amount of disturbance to vegetation when selecting drill sites

Ferdies Find Pty Ltd Environmental Responsibilities

Level Within Organisation	Responsibilities
Responsible Officer	Ensures that the organisation meets the environmental commitments set.
Manager	Manager plans, schedules and controls all work and must ensure that the environmental commitments set out in the MMP are met.
Supervisors/Geologists	Supervisors control of the day to day work in the field under the guidance of the manager and implement the actions to minimize environmental damage.
Employees/contractors	Employees are required to complete their work in a manner that does not put themselves, others or the environment at risk.

Wayne Bergmann is the nominated responsible officer and manager of the exploration programme and ultimately responsible for environmental impact and management.

Howard Dawson is the appointed field supervisor responsible for day to day control of environmental management activities.

The Responsible Officer is the person responsible for the conduct of environmental activities within the organisation.

- The Responsible Officer will prepare a schedule for environmental monitoring of disturbances, the performance of rehabilitation activities and the monitoring of rehabilitated areas for soil stability and to assess the regrowth of vegetation on the areas and
- will undertake a review of the Environmental Systems every 12 months.

The Manager has responsibility for:

- training employees, establishing schedules to perform rehabilitation activities and to conduct monitoring activities of rehabilitated areas.
- delegation of responsibilities to the supervisor
- his role as detailed in the MMP
- identifying all risks to the environment, and effectively controlling those risks by regular monitoring of activities on the site and scheduling regular site meetings.
- ensuring employees are equipped with the necessary skills, training and equipment to safely undertake their work in an environmentally responsible manner.

Supervisors- Geologists have a responsibility to:

- ensure that employees have the necessary skills, knowledge and tools to conduct activities in accordance with the environmental commitments in the MMP
- implement relevant environmental practices in their areas of control
- provide the necessary information, instruction and training to workers and contractors under their control
- ensure workers and contractors carry out their jobs effectively and safely.

Employees and contractors have a responsibility to:

- follow reasonable instructions and have regard to training in the performance of activities on the site, observe work directions and conduct rehabilitation activities as directed by the Supervisor or Manager
- protect their own health and safety and to avoid adversely affecting the health and safety of other persons in the workplace
- report any environmental incident or accident to the supervisor as soon as possible after the event
- ensure that all equipment is used correctly and safely and that manufacturer's recommendations are followed.
- report and make recommendations to management to avoid, eliminate or minimize any hazards of which they are aware regarding working conditions or methods
- keep their work area tidy and free of hazards.

Statutory and Non-Statutory Requirements

Ferdies Find Pty Ltd is aware that it has statutory obligations other than those contained in the *Mining Management Act*, *Mineral Titles Act* and *Mining Management Regulations*. Other statutes that may impact on the project are;

- Water Act;
- Work Health and Safety (National Uniform Legislation) Act 2011 and Regulations;
- Heritage Conservation Act;
- Waste Management and Pollution Control Act;
- Environmental Protection and Biodiversity Conservation Act;
- Environmental Assessment Act;
- Soil Conservation and Land Utilisation Act;
- Bushfires Act;
- Weeds Management Act
- NT Aboriginal Land Rights Act

- MMA Authorisation conditions; and
- Tenement conditions.

Ferdies Find is also aware that it has non-statutory requirements that have an impact on the exploration programme, namely:

- Mineral Exploration Agreement between Ferdies Find Pty Ltd and CLC
- Issue of Sacred Site Clearance Certificate for Exploration Proposal

Training and Inductions

All employees and contractors will be required to undertake a site induction prior to commencing work on Ferdies Find Pty Ltd site. Copies of weed identification and environmental responsibilities will be made distributed to all people on site.

The induction will cover:

- Environmental responsibilities of the company;
- Environmental responsibilities of the individual;
- Environmental awareness;
- Responsible operating practices;
- Rules of behaviour while on-site;
- Sacred site clearance certificate and exclusion zones;
- Aboriginal cultural sensitivities;
- Obligations under Exploration Agreement;
- Reporting procedures

The names of employees and contractors who have participated in and completed the induction process will be recorded. Records will be stored at the company's offices.

Training topics covered both in the induction and as additional training include:

- Incident reporting;
- Site inspections;
- Weed identification;
- Emergency procedures and emergency response training;
- Any other issues that may be raised during toolbox meetings and require additional instruction.

Toolbox meetings will be held on a daily basis.

This section must include the following information:

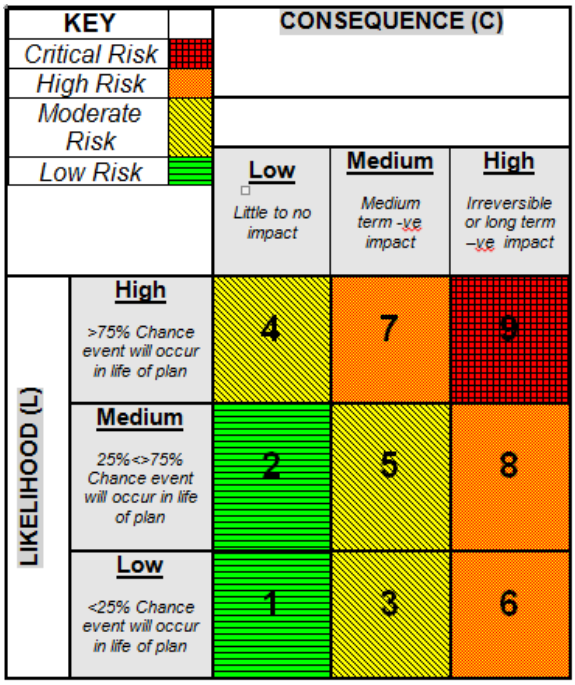
- Overview of environmental training and education process, eg Induction, tool box meetings etc.
- Outline of environmental issues covered in the induction.
- Any additional training required or carried out, eg weed identification, radiation handling, emergency response training, etc.

Identification of Environmental Aspects and Impacts

Aspect	Impact	Risk Rating	Management measures (prevention)	Management measures (remediation)
Clearing for drill pads/ tracks/ camps	Possible loss of native flora and habitat for fauna	Medium	Drill pads are not required. Clear tracks using light blade–up technique where appropriate. Establish camps in cleared areas.	Cap drill holes as soon as possible after rig has left drill site. Remove all rubbish from camp areas for disposal at approved facility
Weed management	Weed infestation	Medium	Vehicle drivers will visually inspect the outside and underside of vehicles prior to entry and exit from the project area, remove any plant material.	Establish a monitoring regime to ensure that the measures that are in place are effective.
Driving between drill sites	Spread of weed	Medium	Monitor drill site for infestation, clean vehicles if necessary only travel on drill access tracks.	Avoid traffic over weed infested areas.
Drilling	Hydrocarbon spills – risk of contamination of soil. Dust and noise emission – disturbance to flora and fauna	Medium	Diesel fuel will be brought onto site in a drill rig support truck and transferred via electric pump. Noise and dust emissions will be managed with mandatory noise and dust reduction equipment on plant and machinery. PPE will be issued to personnel to minimize exposure to dust and noise.	Spill kit will be on hand at transfer point. Any contamination spills will be recorded and reported as part of the Environmental Management System. Spoiled soil will be bagged and removed to a suitable disposal point.

Hydrology	Water encountered during drilling. There are no permanent or perennial water courses on the target area.	Medium	If fresh water is encountered, it will be dispersed on the ground away from the drilling rig. If salt water is encountered drilling will be ceased immediately until a settling sump is dug.	Water to be diverted onto surrounding land will first be diverted into a sump or a silt trap, then outflow allowed. Salt water will be retained in sump and allowed to evaporate. Sump will be filled in
Waste Management	Human waste, kitchen waste and food scraps can attract animals and contribute to spread of disease.	Medium	Covered bins will be used for the collection and storage of camp waste. Perishable waste will be incinerated in a drum and the residue removed to the Tanami Homestead refuse pit. A pit latrine (long drop) will service the camp. Lime will be supplied to ameliorate stench.	All personnel will be instructed in correct waste management during their site induction. Any industrial waste will be removed and disposed of at an appropriate disposal facility.
Erosion Management	Tracks, drill pads, drill holes and camp clearings can become eroded. Risk of impact on flora and fauna.	Low	Rehabilitate drill pads and cap drill holes to DME specifications as soon as possible. Maintain uniform surface contouring on area.	Monitor rehabilitated areas for revegetation and evidence of erosion.
Sacred Site Intrusion	Possible destruction of sacred site	Low	The operator has a Sacred Sites Clearance Certificate issued by the Central Land Council – no site advised. If an Aboriginal site is discovered all work in the vicinity will cease and the Central Land Council advised as soon as practicable.	The Central Land Council will take control of remediation in line with the Exploration Agreement.

The risk rating for the identified impacts is of the initial risk, prior to application of control measures.



Sample risk matrix and key.

Environmental Audits, Inspections and Monitoring

Monitoring during the Phase 1 programme in 2017 recorded the following environmental impacts.

Aspect	Method	Observation	Comment	Action Required	Person Responsible	Action Completed
Camp site function	Visual Inspection	Good function and housekeeping	All contribute	Remove risk factors, store appropriately	Wayne Bergmann	Daily inspection and compliance. Function good
Camp site hygiene	Visual Inspection	Long drop pit toilet function effective. Bathing	Personal bathing by bucket.	Cover long drop orifice	All users	Daily – function good.
Local vehicle travel	Visual Inspection	Dust	Minimise dust-slow down	Inform all drivers to slow down	Howard Dawson	Daily- compliance good

Drill rig operations	Visual Inspection	Proximity to rig	Well managed	Keep field crew away from rig	Driller	At start of programme then reminders when necessary. Managed well by drill crew and compliance good.
Sampling function	Visual Inspection	Methodical and precise	Consistent	Take consistent sample	Max Nind	Daily managed well and compliance consistent with QA/QC procedures.
Drill site rehab	Visual Inspection	NA	NA	Plug and backfill holes. Photo record	Howard Dawson	All holes completed.
Hydrocarbon spill	Visual Inspection	Each hole on completion	No spills recorded. Occasional grease blobs.	Blobs removed in plastic bag	Howard Dawson	All holes completed. Grease blobs removed in plastic bag and disposed of at Tanami Homestead refuse pit.
Hazardous material	Visual Inspection	NA				N/A
Surface water	Visual Inspection	NIL				N/A
Groundwater	Drill log	Minor water occurred in 3 drill holes	Recorded in logging			Recorded in drill log. No action required.
Weed control	Visual Inspection	None identified				N/A
Flora damage	Visual Inspection	During clearing of tracks	Minimal	Request for tracks to be left open	Wayne Bergmann	Request from Lessee of station has been received.
Fauna damage	Visual Inspection	Nil				N/A
Waste	Visual Inspection	Waste bins effective.		Incinerate perishable waste. Remove residue to station tip.	Howard Dawson	Waste burnt on site, then residue removed to Tanami Homestead refuse pit.
Noise emissions	Visual Inspection	Normal in drilling operation	Protect ears	Issue ear plugs	Howard Dawson	Ear plugs issued daily. Compliance good
Dust emissions	Visual Inspection	Minimal from rig	Dust suppressor on rig	nil	Driller	Dust control effective.
Cultural sites	Visual Inspection	None observed	Site clearance received	nil		N/A. SSCC issued and compliance good.
Erosion	Visual Inspection	Soil disturbance	Landscape flat-erosion unlikely	nil		Any erosion during the most recent wet will be evident during the upcoming field season.
Fuel supply	Measure content	Abundant on drill rig and support truck		check	Driller	Abundant fuel available
Water supply	Measure content	Abundant in tanks and containers for duration of programme		check	Wayne Bergmann	Abundant water available.

The Phase 2 exploration season is expected to run for approximately one month. An environmental audit will be carried out on the same basis as above, following the completion of the Phase 2 drilling.

Environmental Performance Objectives

The environmental performance objectives that have been set by Ferdies Find Pty Ltd are outlined below. The information in the table details how Ferdies Find Pty Ltd intends to meet these environmental goals and how it will measure it effectiveness in meeting its stated goals.

Ferdies Find Pty Ltd's performance objectives for the Grave Yard Bore Project are:

- To minimise the risk of injury to employees, contractors, the public and other third parties.
- To minimise disturbance to soil by avoiding eroded areas, avoid establishing new tracks where possible and monitoring existing tracks for erosion
- To avoid contamination of soil by constructing bunds around fuel stations and using plastic sheet membranes beneath drill rigs at drill sites.
- To avoid the introduction or spread of pest plants.
- To minimise disturbance to drainage patterns.
- To minimise disturbance to native vegetation and native fauna.
- To remediate and rehabilitate operational areas to agreed standards.
- To avoid disturbance to sites of cultural and heritage significance.

Performance Reporting

The "Environmental Audits, Inspections and Monitoring" table above records the outcomes of the Environmental Performance Objectives in the last column, headed "Action Completed".

In summary, the following aspects are of interest:

1. the camp functioned well, including waste management and health and safety aspects – inductions at start of campaign and daily toolbox meetings held - no injuries reported.
2. Graveyard bore track was re-established to access the general area. New tracks for drilling access. Any erosional events following the recent wet season will be assessed during the upcoming campaign and be ameliorated in conjunction with the Lessee of Tanami downs.
3. Fuel was stored in a truck mounted tank. Fuel was transferred via electric fuel pump. Caution during transfer was observed. No spills were reported.
4. Vehicles were checked for weeds at the Tanami Homestead before travelling to site. No evidence of weeds noticed.
5. Ground is largely flat. No significant drainage channels in the work area.

6. Native vegetation was disturbed during drill traverse and access track grading. This disturbance was minimised by avoiding large trees and raising the blade over grassed areas where possible.

7. The lessee of the Tanami Station has requested that drill traverses and access tracks be left open to allow mustering and fire monitoring and control. All drillholes were plugged 1 m downhole, backfilled and mounded to prevent downhole erosion. Effectiveness will be monitored during the upcoming field season. The field camp and drill camp areas were left as is to allow camping during the upcoming season.

8. The CLC has issued a SSCC for the 2017 season, outlining restricted work areas and prohibited entry areas. The requirements of the SSCC were complied with. No cultural sites were observed during 2017 season. A SSCC has been issued for the 2018 season area of interest.

Figure 6: A typical example of rehabilitation of an Air core drill site (Phase 1). Photographs of rehabilitation of the 61 drill holes for the 2017 season are attached as Appendix 7.

Environmental Emergency Procedures and Incident Reporting

Hydrocarbon Spill:

The most likely occurrence of an environmental emergency on the project area will arise from a hydraulic oil hose fracture resulting in oil spill or a fuel spill during transportation or transfer of fuel.

The emergency procedure for managing such an event is as follows:

Without placing the safety of the individual at risk, identify the source of the leak and determine if it can safely be stopped; if so, stop the leak;

Alert co-workers and report the incident/accident to the immediate supervisor;

Trap any liquid if possible by placing a receptacle at the source of leak and by bunding the area to prevent spread of contamination.

Manage any threat of fire by having fire extinguishers that can deal with oil based fires and grass fires;

Disposal of any contaminated soil and material such as rags and blankets at an approved facility

Enter the occurrence of the incident/ accident in the site diary, reporting details of the incident/ accident

The site manager/supervisor will report the incident/accident to DME in accordance with the section 29 Reporting Guideline.

Fire

Fire is also a risk while conducting works on the project. Ferdies Find Pty Ltd will implement the following management measures to reduce the risk of fire generation during exploration activities:

Exploration personnel will be trained in the use of fire extinguishers and fire prevention measures.

Vehicles will be fitted with an appropriate fire extinguisher at all times.

Highly flammable substances will be appropriately stored during all exploration activities.

All site personnel will be made aware of the risk of bushfires and the precautions implemented to minimise risks associated with fires, including knowledge of escape routes in the site induction.

In areas of substantial vegetation cover and/or fuel loads, no welding, grinding, soldering or cutting will be carried out unless appropriate fire fighting equipment is present and a spotter allocated to the job.

Exploration Rehabilitation

Proposed rehabilitation aspects and methods post the Phase 1 & 2 programmes are as follows:

- Existing tracks: leave in good condition – request from station lessee to leave tracks open from Phase 1 & 2 programmes with the exception of drill lines 9 and 10 from Phase 2 (see Figure 4) which will be closed over on completion of the program. Where a berm (windrow) is created it will be limited to 100mm in height and will be remediated at completion, even on the tracks the pastoralists wants left open
- New access tracks: leave in good condition to allow access for future work. – request from station lessee to leave tracks open.
- Drill pads: rake over if drill pad cleared no drill pads cleared. Drill holes on access tracks.
- Drill holes: remove marker peg, plug hole 1000 mm down hole, fill collar and mound dirt to 300 mm height to encourage water runoff and prevent erosion. All holes rehabilitated following end of 2017 season- see photographs appendix 7.
- Sample piles: spread out along the contour (the target area is very flat). Completed.
- All sample bags will be removed immediately following drilling. Bags not used.

It is expected that all sample and reject bags will be removed from site within six (6) months of completion of the hole. All drill collars will be temporarily capped immediately after drilling, then collars will be cut-off or removed and holes plugged, at a minimum depth of 400mm, within six (6) months of completion of drilling of the hole.

Description of Rehabilitation Methods

Disturbance	Rehabilitation Method	Schedule (Timing)	Closure Objectives / Targets	Monitoring and Remediation
Drill holes	Peg removed. Collar cut and hole plugged with plastic cone 400mm below ground level, backfilled, and mounded with soil. Uncollared holes to be plugged at least 1 m below ground level. Drill spoils returned to drill hole and remaining inert material respread on drill site. Sample bags and all rubbish removed.	Collar temporary capped at the completion of each hole. Rehabilitation of the drill holes will be undertaken after down hole geophysics is completed and chemical assays returned.	All holes plugged/capped and stable/safe prior to end of program.	Inspection of holes to be undertaken at end of wet season/within six months to ensure no hole plug failures and in subsequent years to monitor site stability. Remediation of any failures to be undertaken at inspection. Before, immediately after, and subsequent year photos to be taken.
Drill pads	Drill pads are not expected to be cleared. In the event that pads are constructed, they will be across slope to avoid erosion. Cleared vegetation to be spread over the site to encourage regrowth.	On completion of each hole or at end of programme.	Drill sites to be returned to original contour and to blend with surrounding environment.	Inspection of drill sites to be undertaken at end of wet season or within six months to monitor site stability, erosion, weeds and natural vegetation regrowth. Ongoing monitoring to be undertaken in subsequent years to monitor rehabilitation success. Remediation of any unsuccessful objectives to be initiated at the inspection. Before, immediately after, and subsequent year photos to be taken.
Sumps	Sumps are not expected to be required at aircore drilling stage. If in the event they are required to hold ground water topsoil will be stockpiled. Sump will be backfilled and spread with topsoil.	On completion of each hole or at end of programme.	Drill sites to be returned to original contour and to blend with surrounding environment.	Monitor at inspection stage: re-above

Disturbance	Rehabilitation Method	Schedule (Timing)	Closure Objectives / Targets	Monitoring and Remediation
Existing tracks	Leave in good condition	End of programme		
New tracks	Leave in good condition for next round of drilling	End of Programme	Pending decision to continue	Monitor for erosion.
Sample bags	Sample bags to be removed and drill cuttings to be backfilled in the drill hole. Inert material may be respread over the drill site.	End of programme	Drill sites to be returned to original contour and to blend with surrounding environment	Inspection at completion drill programme
Camp	Leave clean and tidy for next programme	End of programme	Pending decision to continue	Inspection at completion drill programme

Exploration Rehabilitation Register

A Rehabilitation Register (Attachment B) has been established for EL30256. It is worthy to note that research into previous exploration reports from GEMIS indicates that there has not been any ground exploration work done on the target area by previous explorers.

Ferdies Find developed the Rehabilitation Register during and post the first drill campaign including before and after photographs of access track clearing, drill traverses, drill sites and camp site. Follow up inspections will take place to monitor revegetation and stability of track and drill hole rehabilitation. This data will be recorded in the register.

Costing of Closure Activities

NOTE: This section may be included as an Appendix

Cost for closure activities are calculated using the department's Security Calculation spreadsheet – *Exploration Operations Security Calculation Tool* which is available on the website at: nt.gov.au/industry/mining-and-petroleum.

Cost of closure for Phase 2 amount to $16,922.

Appendix 5: Security Calculation Tool.

Appendices

See attached.

Appendix 1: CLC Mineral Exploration Agreement

See separate attachment

Appendix 2: Sacred Sites Clearance Certificate

See separate attachment

Appendix 3: Drill Hole Locations

See separate attachment

Phase 2 Drill Hole Locations

	Prop ID	East	North
Line 1	TWAC-1	542050	7708800
	TWAC-2	542250	7709146
	TWAC-3	542450	7709493
	TWAC-4	542650	7709839
Line 2	TWAC-5	542090	7707020
	TWAC-6	542290	7707366
	TWAC-7	542490	7707713
	TWAC-8	542690	7708059
	TWAC-9	542890	7708406
	TWAC-10	543090	7708752
	TWAC-11	543290	7709098
	TWAC-12	543490	7709445
	TWAC-13	543690	7709791
Line 3	TWAC-14	542050	7705150
	TWAC-15	542250	7705496
	TWAC-16	542450	7705843
	TWAC-17	542650	7706189
	TWAC-18	542850	7706536
	TWAC-19	543050	7706882
	TWAC-20	543250	7707228
	TWAC-21	543450	7707575
	TWAC-22	543650	7707921
	TWAC-23	543850	7708268
	TWAC-24	544050	7708614
	TWAC-25	544250	7708961
	TWAC-26	544450	7709307
	TWAC-27	544650	7709653
Line 4	TWAC-28	542342	7704210
	TWAC-29	542542	7704556
	TWAC-30	542742	7704903
	TWAC-31	542942	7705249
	TWAC-32	543142	7705596
	TWAC-33	543342	7705942
	TWAC-34	543542	7706288
	TWAC-35	543742	7706635
	TWAC-36	543942	7706981
	TWAC-37	544142	7707328
	TWAC-38	544342	7707674
	TWAC-39	544542	7708021
	TWAC-40	544742	7708367
	TWAC-41	544942	7708713
	TWAC-42	545142	7709060
	TWAC-43	545342	7709406
	TWAC-44	545542	7709753
	TWAC-45	545742	7710099
Line 5	TWAC-46	543526	7704236
	TWAC-47	543726	7704582

	TWAC-48	543926	7704929
	TWAC-49	544126	7705275
	TWAC-50	544326	7705622
	TWAC-51	544526	7705968
	TWAC-52	544726	7706314
	TWAC-53	544926	7706661
	TWAC-54	545126	7707007
	TWAC-55	545326	7707354
	TWAC-56	545526	7707700
	TWAC-57	545726	7708047
	TWAC-58	545926	7708393
	TWAC-59	546126	7708739
	TWAC-60	546326	7709086
	TWAC-61	546526	7709432
	TWAC-62	546726	7709779
Line 6	TWAC-63	544658	7704236
	TWAC-64	544858	7704582
	TWAC-65	545058	7704929
	TWAC-66	545258	7705275
	TWAC-67	545458	7705622
	TWAC-68	545658	7705968
	TWAC-69	545858	7706314
	TWAC-70	546058	7706661
	TWAC-71	546258	7707007
	TWAC-72	546458	7707354
	TWAC-73	546658	7707700
	TWAC-74	546858	7708047
	TWAC-75	547058	7708393
	TWAC-76	547258	7708739
	TWAC-77	547458	7709086
	TWAC-78	547658	7709432
	TWAC-79	547858	7709779
Line 7	TWAC-80	545782	7704236
	TWAC-81	545982	7704582
	TWAC-82	546182	7704929
	TWAC-83	546382	7705275
	TWAC-84	546582	7705622
	TWAC-85	546782	7705968
	TWAC-86	546982	7706314
	TWAC-87	547182	7706661
	TWAC-88	547382	7707007
	TWAC-89	547582	7707354
	TWAC-90	547782	7707700
	TWAC-91	547982	7708047
	TWAC-92	548182	7708393
	TWAC-93	548382	7708739
	TWAC-94	548582	7709086
	TWAC-95	548782	7709432
	TWAC-96	548982	7709779
Line 8	TWAC-97	547000	7704236

	TWAC-98	547200	7704582
	TWAC-99	547400	7704929
	TWAC-100	547600	7705275
	TWAC-101	547800	7705622
	TWAC-102	548000	7705968
	TWAC-103	548200	7706314
	TWAC-104	548400	7706661
	TWAC-105	548600	7707007
	TWAC-106	548800	7707354
	TWAC-107	549000	7707700
	TWAC-108	549200	7708047
	TWAC-109	549400	7708393
	TWAC-110	549600	7708739
	TWAC-111	549800	7709086
	TWAC-112	550000	7709432
Line 9	TWAC-113	548217	7704236
	TWAC-114	548417	7704582
	TWAC-115	548617	7704929
	TWAC-116	548817	7705275
	TWAC-117	549017	7705622
	TWAC-118	549217	7705968
	TWAC-119	549417	7706314
	TWAC-120	549617	7706661
	TWAC-121	549817	7707007
	TWAC-122	550017	7707354
	TWAC-123	550217	7707700
Line 10	TWAC-124	549347	7704236
	TWAC-125	549547	7704582
	TWAC-126	549747	7704929
	TWAC-127	549947	7705275
	TWAC-128	550147	7705622
	TWAC-129	550300	7705900

Appendix 4: Desktop Assessment of Flora, Fauna, Weed Infestation and Feral Animals.

See separate attachment.

DESKTOP ASSESSMENT
OF
FLORA, VEGETATION AND FAUNA VALUES
ON THE
GRAVEYARD BORE PROJECT AREA,
TANAMI, NORTHERN TERRITORY

Prepared by: Mattiske Consulting Pty Ltd

Prepared for: Ferdie's Find Pty Ltd

APRIL 2017

Disclaimer and Limitation

This report has been prepared on behalf of and for the exclusive use of Ferdie's Find Pty Ltd, and is subject to and issued in accordance with the agreement between Ferdie's Find Pty Ltd and Mattiske Consulting Pty Ltd. Mattiske Consulting Pty Ltd accepts no liability or responsibility whatsoever for it in respect of any use of or reliance upon this report by any third party.

This report is based on the scope of services defined by Ferdie's Find Pty Ltd, budgetary and time constraints imposed by Ferdie's Find Pty Ltd, the information supplied by Ferdie's Find Pty Ltd (and its agents), and the method consistent with the preceding.

DOCUMENT HISTORY

Report	Version	Prepared By	Reviewed By	Submitted to Client	
				Date	Copies
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Revised with Client Comments	V2	CB/JR	EMM	11/04/17	Electronic
Final Report	V3	-	EMM	13/04/17	Electronic

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1: Summary of Threatened Flora, Significant Flora, Restricted Range Flora and Introduced Species as extracted from NR maps

2: Summary of Threatened Flora, Significant Flora, Restricted Range Flora and Introduced Species from Protected Matters Search Tool

FIGURES

1: Grave Yard Bore Project – Locality, Tanami, Northern Territory

2.0: Grave Yard Bore Project – Overview, Topography

2.1: Grave Yard Bore Project – Overview, Aerial Photography 2011

2.2: Grave Yard Bore Project – EL30256 (North), Aerial Photography 2011

2.3: Grave Yard Bore Project – EL30256 (South), Aerial Photography 2011

2.4: Grave Yard Bore Project – Target Study Area, Aerial Photography 2011

2.5: Grave Yard Bore Project – Target Area Activities, Aerial Photography 2011

3: Rainfall and temperature data for Rabbit Flat

4: Grave Yard Bore Project – Environment Landscape Classes – NT Land Systems (1M)

5: Grave Yard Bore Project – Environment Tanami Downs Land System (250k)

6: Grave Yard Bore Project – Environment, Significant Flora

7: Grave Yard Bore Project – Environment, Weeds

8: Grave Yard Bore Project – Environment, Significant Fauna

9: Grave Yard Bore Project – Environment, National Vegetation Information System

10: Grave Yard Bore Project – Environment, Sites of Botanical Significance

11: Grave Yard Bore Project – Environment, Aquifer Type

APPENDIX

A: EPBC Act Protected Matters Search Tool – 30km of EL30256 target area (DotEE 2017b)

1. SUMMARY

The desktop assessment for the Grave Yard Bore lease areas and a target area within the lease areas was prepared after extracting a range of datasets from the Northern Territory and National databases.

The following potential values may occur on the targeted area and the Graveyard Bore lease areas:

1. Landsystems – variable landforms and soils which at the regional level were broadly defined. The landsystems all are well represented beyond the boundary of the targeted study area.

2. Flora – on the basis of the database searches no threatened flora species have been recorded within 30km of the targeted study area; however in view of several landform, soils and site preferences there may be the potential for several threatened species to occur. The latter may relate to the paucity of detailed studies near the Grave Yard Bore targeted study area.

3. Weeds – a range of weeds have been located in the region and there is a need to be proactive in minimising the spread of weeds.

4. Fauna – on the basis of the database searches no threatened fauna species have been recorded within 30km of the targeted study area; however in view of several landforms, soils and site preferences there may be the potential for several threatened species to occur. The latter may relate to the paucity of detailed studies near the Grave Yard Bore targeted study area. Of the species highlighted the listed Greater Bilby appears to be the closest record to the targeted study area.

5. Feral Animals – a range of feral animals have been recorded in the region and there is a need to be proactive in their management to minimize the threats to the native fauna species; in particular the conservation significant species.

6. Vegetation – on the basis of the NVIS vegetation mapping data and a comparison with the more detailed landsystem data for Tanami Downs there appears to be greater variation present than that reflected in the NVIS national mapping.

7. Sites of Botanical Significance – the targeted study area associated with the Grave Yard Bore study area does not occur within a defined site of botanical significance by the Northern Territory government; however the central and northern areas of EL30256 do occur within a site of botanical significance associated with the Tanami Desert.

Purpose of the desktop assessment was to identify ecological values that have the potential to be impacted by the proposed development activities on the Grave Yard Bore lease areas. The lease area (EL30256) consists of three areas, the northern area, the southern area and the target study area (Figure 1). This lease area occurs southwest of the Rabbit Flat Roadhouse and southwest of the Tanami Road.

In view of the nature of the proposed localized and initial exploration activities within the targeted study any impacts should be minimal as the underlying landsystems, landforms, soils and vegetation are well represented outside the targeted study area. The exception to the latter is the soak on the western fringe of the targeted study area that is relatively restricted and as such may support a range of specialised flora and fauna species. Consequently every effort should be made to avoid the soak area on the western fringes of the targeted study area.

In summary, the data indicates that there is some potential for several threatened flora and fauna species to occur within the targeted study area on EL30256 and therefore if the project activities intensify beyond this initial phase then it is recommended that detailed flora and fauna studies are undertaken on the targeted study area.

2. INTRODUCTION

Mattiske Consulting Pty Ltd was commissioned by Ferdie's Find Pty Ltd to prepare a desktop assessment of the potential ecological values on EL30256 (Grave Yard Bore lease areas) and in particular the target study area (Figure 1). The lease area (EL30256) consists of three areas, the northern area, the southern area and the target study area (Figure 1). This lease area occurs southwest of the Rabbit Flat Roadhouse and southwest of the Tanami Road.

2.1 Relevant Northern Territory and National Legislation and Guidelines

In undertaking this review the authors were aware of the main legislation and guidelines for the Northern Territory and the Commonwealth of Australia, namely:

- *The Mining Management Act*
- *Environmental Assessment Act*
- *Territory Parks and Wildlife Conservation Act 2006*
- *Weeds Management Act 2001*
- *The Northern Territory Land Clearing Guidelines 2010 (Department of Natural Resource, Environment, the Arts and Sport (2010)*
- *The Northern Territory Guidelines for Assessment of Impacts on Terrestrial Biodiversity (NT, EPA 2013)*
- *The Northern Territory Offset Guidelines on Environmental Offsets and Associated Approval Conditions*
- *The Environment Protection and Biodiversity Conservation Act 1999 (DotEE 2017a, 2017b)*

3. DESKTOP REVIEW METHODOLOGY

To assess and detail potential botanical values present within the proposed targeted study area within the Grave Yard Bore project area, suitable databases were accessed and reviewed. These included:

1. The *Commonwealth EPBC Act 1999* protected matters search tool (PNST) database
2. (http://www.environment.gov.au/epbc/pmst/index.html),
3. NT Natural Resource Management InfoNet database (NR Map),
4. Atlas of Living Australia (www.ala.org.au) online portal,
5. Northern Territory Department of Land Resource Management Natural Resource Mapping portal, and
6. Relevant ecological studies undertaken in the vicinity of the proposed development (e.g. White *et al.* 2000; EcOz Environmental Services 2012).

Appropriately, analysis of database searches used an indicative 20 km buffer from the proposed Grave Yard Bore project area; with a 30 km buffer used for additional contextual information.

4. KEY VALUES

4.1 Topography and Landforms

The target study area as indicated by a review of the various topography (Figure 2) and the series of aerials (Figure 2.1 to 2.4) is dominated by the sand ridges with east-west dunes in the northern section of the target area and the spinifex dominated sandplains in the central and southern sections of the target area. The east-west dunes are more dominant in the northern half of the southern section of EL30256. In addition, there are stands of Mulga on the target study area and a small low lying soak or seasonally wetter area in the south-western corner of the target study area. The proposed initial exploration activities are relatively localized and restricted on the targeted study area of EL30256 to the more dominant land systems (Figure 2.5).

A soak occurs on the western side of the targeted study area on EL30256, and therefore as this is a restricted landsystem in terms of its representation within the local area, this area should be avoided during this initial phase of exploration activities.

Drawn: CAD Resources ~ Tel 9246 3242 ~ URL www.cadresources.com.au ~ CAD Ref: a2520_F001 ~ Basemap: Geoscience Australia

0 75 150 km

Scale: 1:7,500,000
GDA 1994

CAD Ref: a2520_F001

Date: April 2017 | Rev: A | A4

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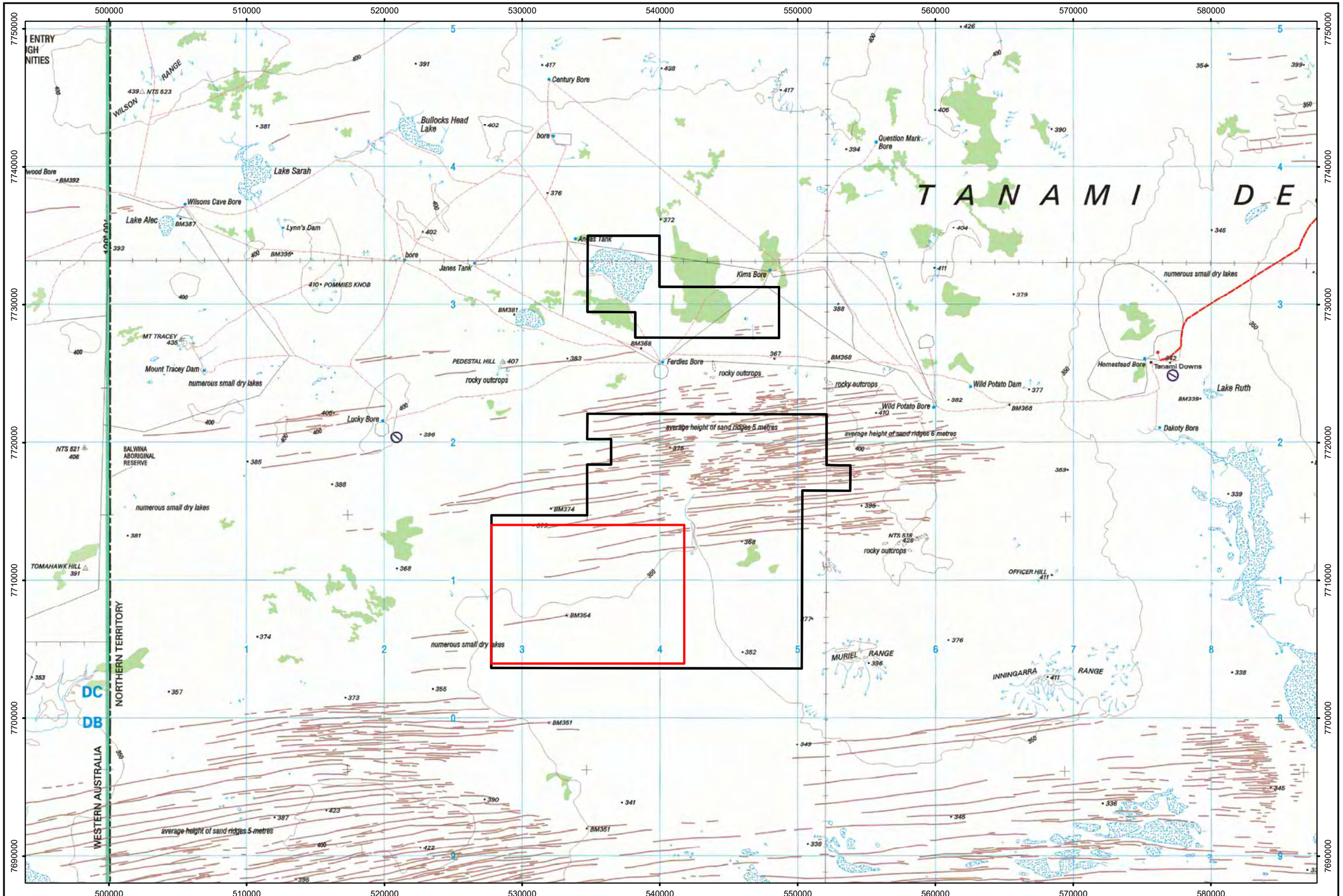
Author: E M Mattiske | MCPL Ref:
Drawn: CAD Resources ~ www.cadresources.com.au
Tel: (08) 9246 3242 ~ Fax (08) 9246 3202

Grave Yard Bore Project
Locality
Tanami, Northern Territory

Figure: **1**



Legend
- Target Study Area
- EL30256

Notes:
Topography: Geoscience Australia (250k)

Client:
Ferdie's Find Pty Ltd

0 2.5 5km
Scale: 1:250,000
GDA 1994 MGA Zone 52
CADRef: a2520_F002_00
Date: Apr 2017 | Rev: A | A3

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Grave Yard Bore Project
Overview
Topography

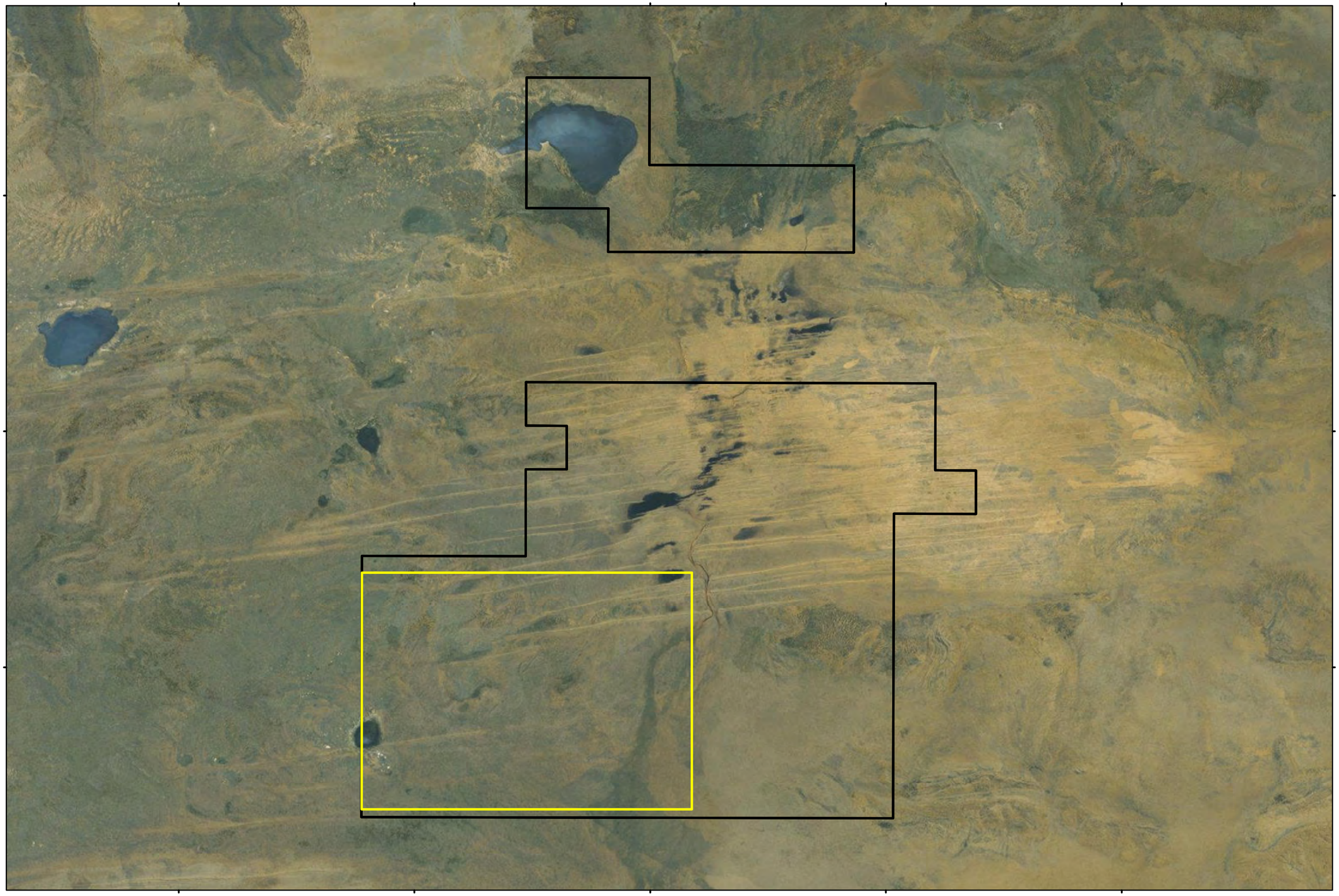
Figure: **2**

520000 530000 540000 550000 560000

7730000

7720000

7710000



520000 530000 540000 550000 560000

Legend
- Target Study Area
- EL30256

Notes:
Imagery: Digital Globe (06/02/2011)

Client:
Ferdie's Find Pty Ltd

N

0 1.5 3km
Scale: 1:150,000
GDA 1994 MGA Zone 52
CADRef: a2520_F002_01
Date: Apr 2017 | Rev: A | A3

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Grave Yard Bore Project
Overview
Aerial Photography, 2011

Figure:
2.1

534000 536000 538000 540000 542000 544000 546000 548000 550000

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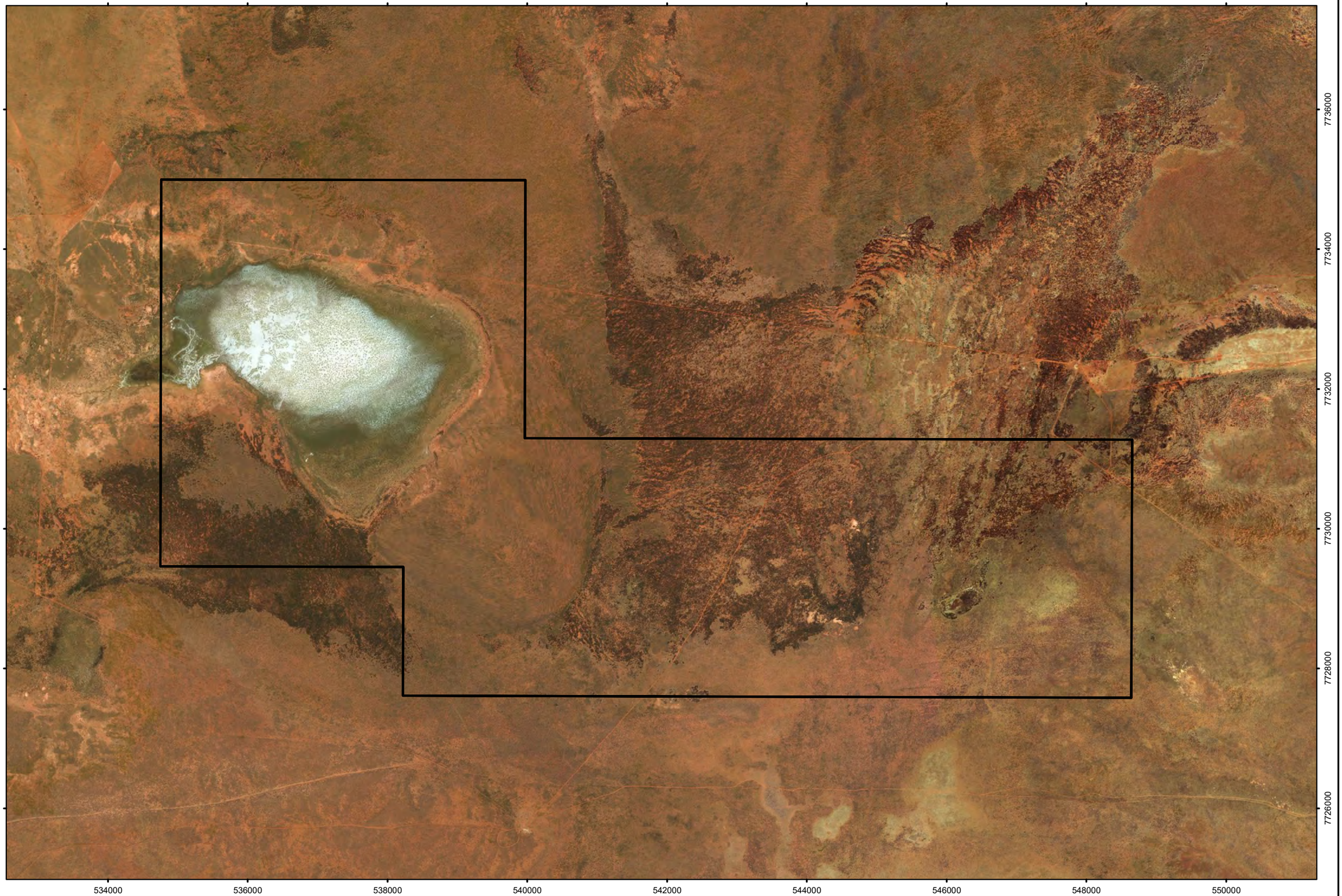

534000 536000 538000 540000 542000 544000 546000 548000 550000

Legend
EL30256

Notes:
Imagery: Digital Globe (06/02/2011)

Client:
Ferdie's Find Pty Ltd

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Scale: 1:50,000
GDA 1994 MGA Zone 52
CADRef: a2520_F002_02
Date: Apr 2017 | Rev: A | A3

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Grave Yard Bore Project
EL30256 (North)
Aerial Photography, 2011

Figure:
2.2

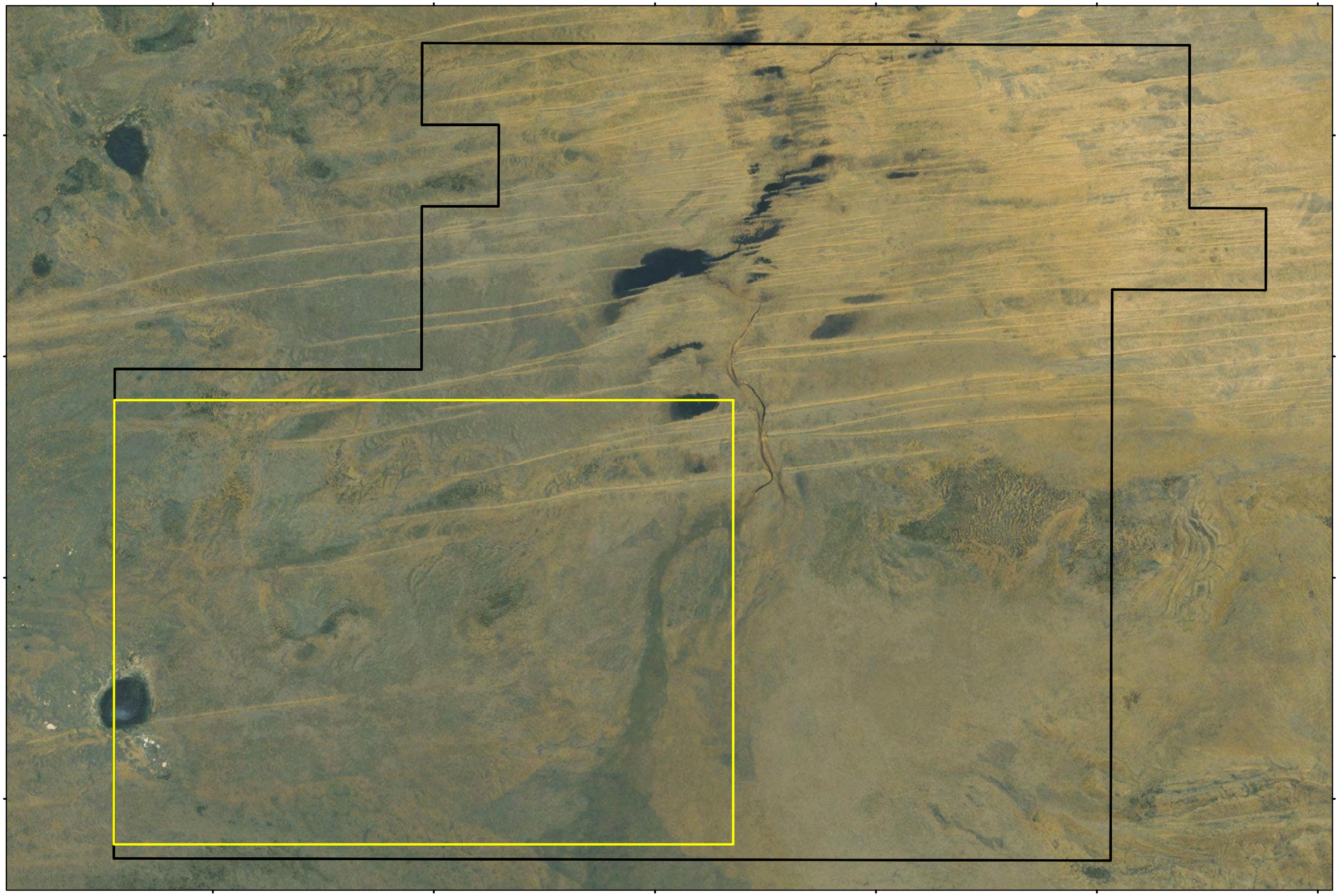
530000 535000 540000 545000 550000 555000

7720000

7715000

7710000

7705000



Legend

- Target Study Area
- EL30256

Notes:
Imagery: Digital Globe (06/02/2011)

Client:

Ferdie's Find Pty Ltd

N

0 1 2km

Scale: 1:80,000
GDA 1994 MGA Zone 52

CADRef: a2520_F002_03

Date: Apr 2017 | Rev: A | A3

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Grave Yard Bore Project
EL30256 (South)
Aerial Photography, 2011

Figure:

2.3

526000 528000 530000 532000 534000 536000 538000 540000 542000 544000

7714000 7712000 7710000 7708000 7706000 7704000

Legend
- Target Study Area
- EL30256

Notes:
Imagery: Digital Globe (06/02/2011)

Client:
Ferdie's Find Pty Ltd

0 0.5 1km
Scale: 1:50,000
GDA 1994 MGA Zone 52

CADRef: a2520_F002_04
Date: Apr 2017 | Rev: A | A3

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Grave Yard Bore Project
Target Study Area
Aerial Photography, 2011

Figure:
2.4

526000 528000 530000 532000 534000 536000 538000 540000 542000 544000

7714000 7712000 7710000 7708000 7706000 7704000

Legend

- Target Study Area
- EL30256
- Soil Samples
- Drill Traverse Phase 1
- Drill Traverse Phase 2
- Tracks To Clear
- Existing Tracks

Notes:
Imagery: Digital Globe (06/02/2011)

Client:
Ferdie's Find Pty Ltd

N

0 0.5 1km
Scale: 1:50,000
GDA 1994 MGA Zone 52

CADRef: a2520_F002_05
Date: Apr 2017 | Rev: A | A3

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Grave Yard Bore Project
Target Study Area Activities
Aerial Photography, 2011

Figure:
2.5

4.2 Climate

The climate at Rabbit Flat (located north of the target study area is associated with wetter summer months and drier winter months and higher maximum and minimum temperatures in the summer months as compared to the winter months. The mean annual rainfall is 483.7 mm of precipitation (Bureau of Meteorology 2017). The effectiveness of the rainfall events is influenced by higher temperatures and evaporation rates.

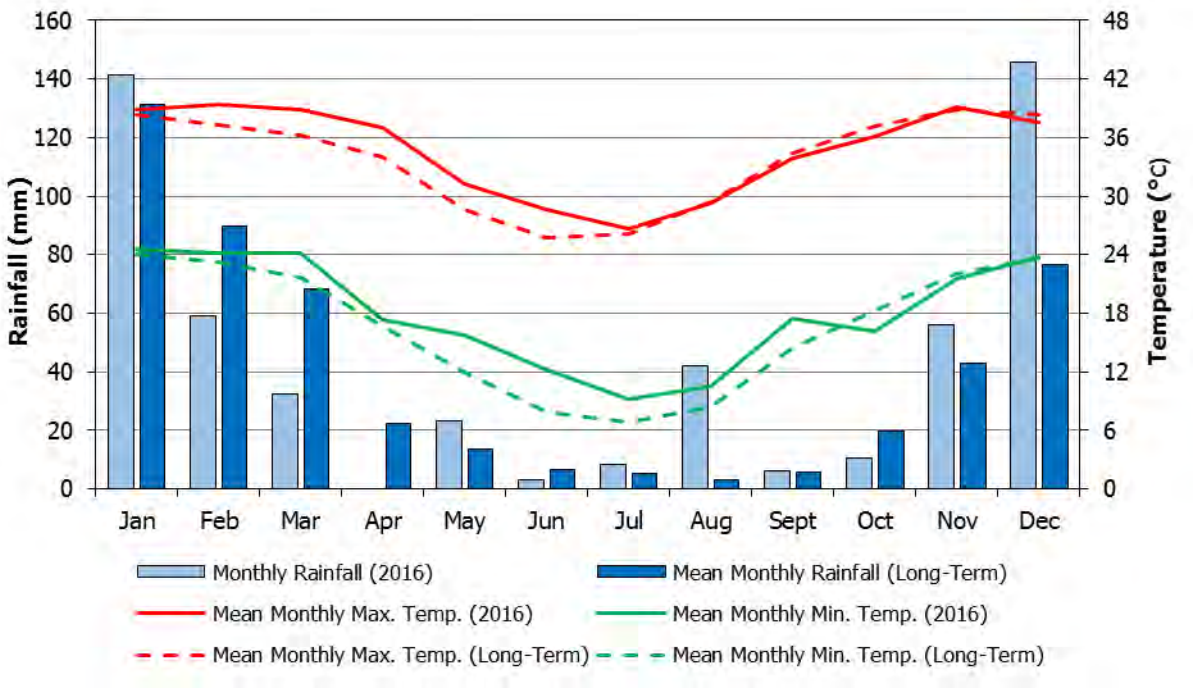


Figure 3: Rainfall and temperature data for Rabbit Flat
Long term average (LTA) rainfall and temperature data, together with monthly rainfall data for the period 1997 to 2016 are shown (BOM 2017).

4.3 Landsystems

Three landsystem classes as defined by Northern Territory government (from Northern Territory Government Atlas) at a regional scale were recorded in the target study area of EL30256 and in the wider EL30256 (Figure 4). These landsystems were:

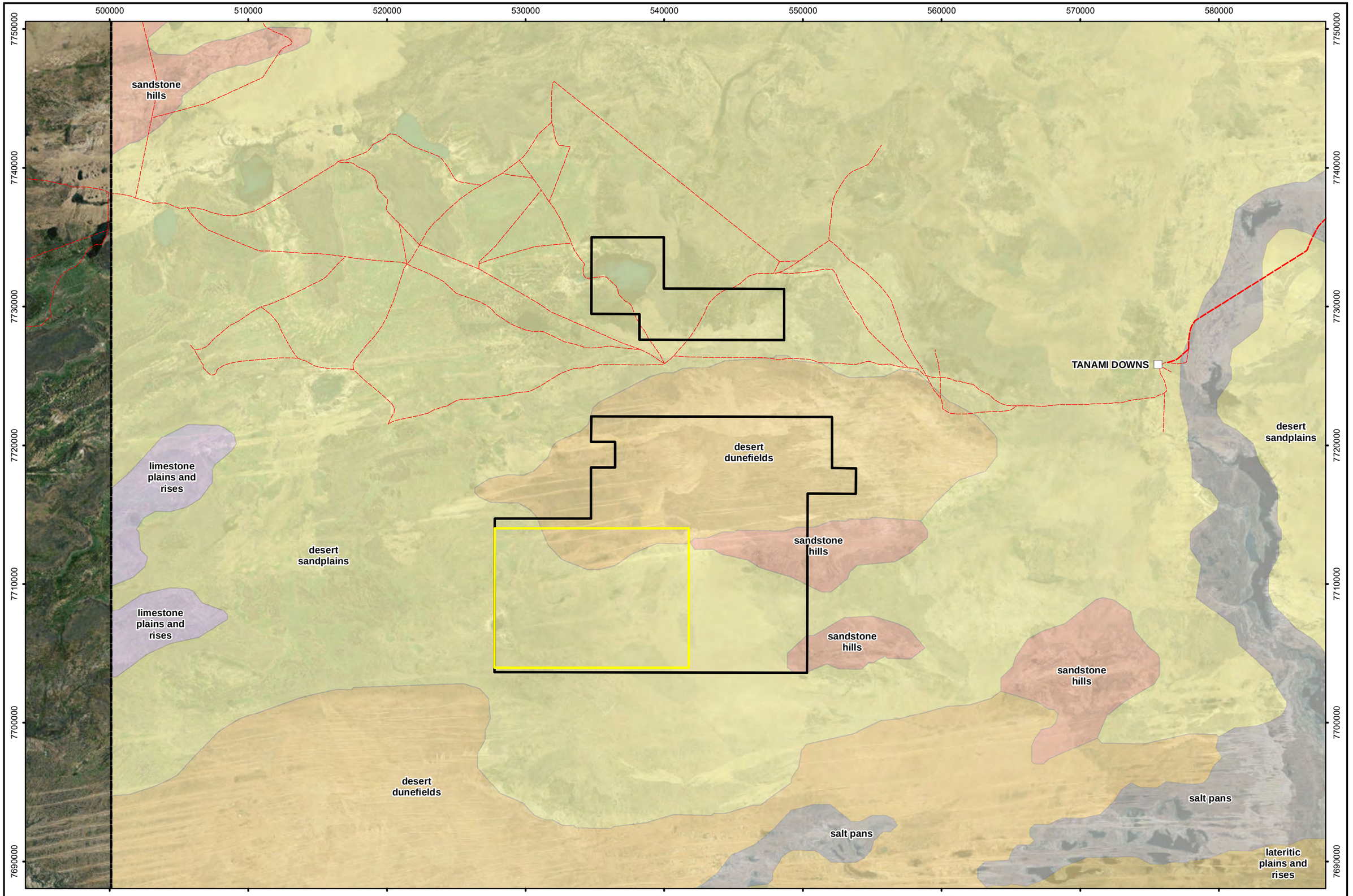
- Coolindie and Singleton - Desert Sandplains – Level to undulating sandplains with red sands
- Atlas_AB53 - Desert Dunefields – Dunefields with parallel linear dunes, reticulate dunes and irregular or aligned short dunes; red sands
- Atlas_BA5 - Sandstone Hills - low hills, hills and stony plateaux on sandstone, siltstone, quartzite and conglomerate (deeply weathered in places); outcrop with shallow stony soils

All of these landsystems within the target study area extend well beyond the boundary of the target area.

At a more local scale associated with Tanami Downs the dominate landsystems supports a range of dominant landforms, soils and vegetation types, namely (Figure 5):

- Sand Ridges (in the target area and EL30256)
- Spinifex Sandplain (in the target area and EL30256)
- Grassland (in the target area and EL30256)
- Mulga (not in the target area, but in EL30256)
- Salt Lakes or Fresh Water Swamps (not in the target area at the mapping scale, but in EL30256)
- Hills (not in EL30256)

The majority of these landsystems (with the exception of the soak on the western side of the study area) that occur within the target study area extend well beyond the boundary of the target area (Figure 5).



Legend
- Target Study Area
- EL30256

Notes:
Imagery: SPOT 5 (CNES/Airbus DS)
Data: NT Government Atlas

Client:

Ferdie's Find Pty Ltd

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Scale: 1:250,000
GDA 1994 MGA Zone 52
CADRef: a2520_F003_06
Date: Apr 2017 | Rev: A | A3

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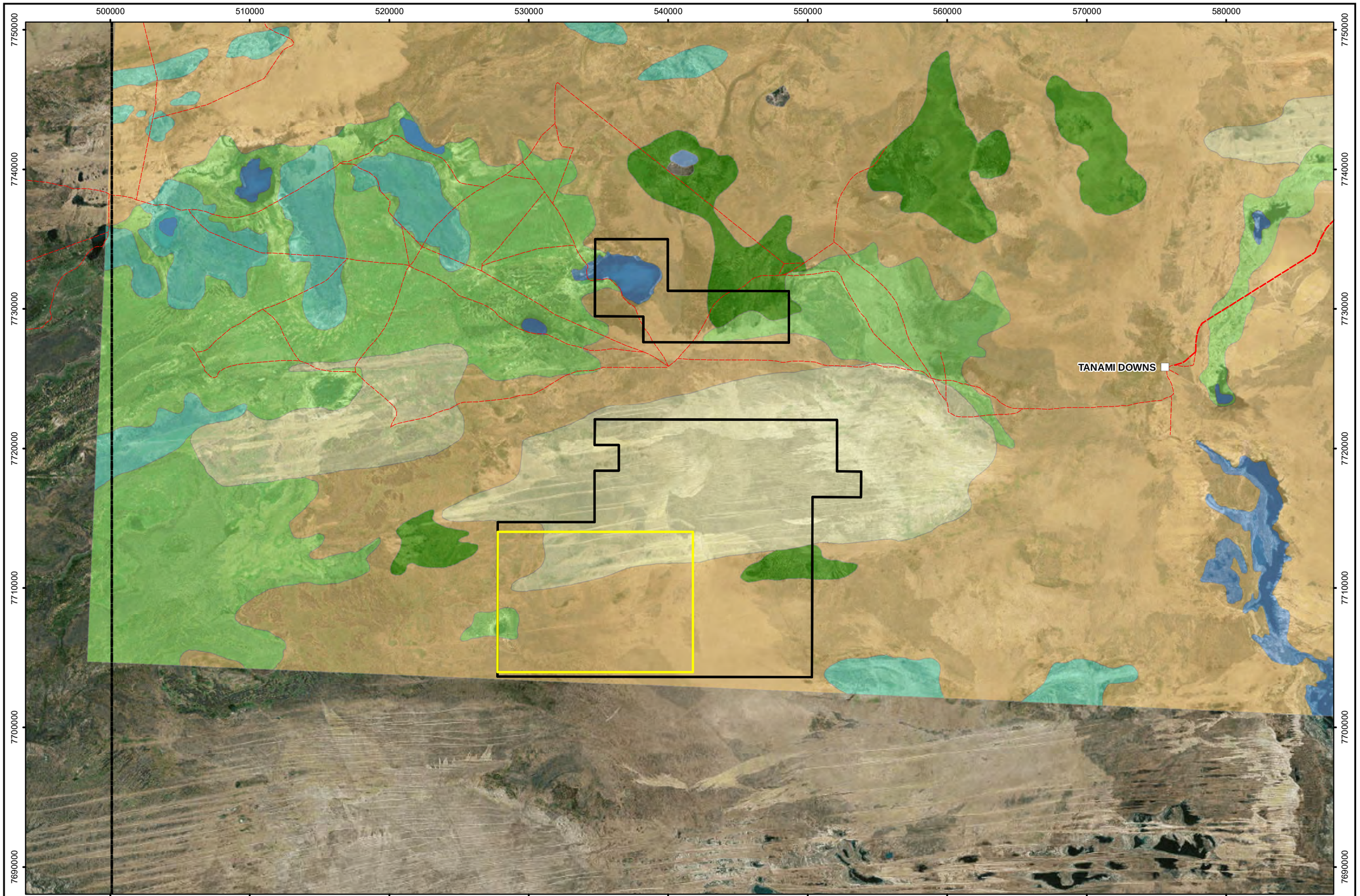
Grave Yard Bore Project
Environment
Landscape Classes - NT Land Systems (1M)

Figure: **4**



Legend

- Target Study Area
- EL30256
- Grassland
- Hills
- Mulga
- Salt Lakes or Fresh Water Swamps
- Sand Ridges
- Spinifex Sandplain

Notes:
Imagery: SPOT 5 (CNES/Airbus DS)
Data: NT Government Atlas

Client:

Ferdie's Find Pty Ltd

N

0 2.5 5km
Scale: 1:250,000
GDA 1994 MGA Zone 52

CADRef: a2520_F003_07

Date: Apr 2017 | Rev: A | A3

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Grave Yard Bore Project
Environment
Tanami Downs Land System (250k)

Figure:

5

4.4 Flora

The various databases at the Territory and National level and information from regional studies (White *et al.* 2000; DotEE 2017b) indicated a range of species that may occur within the Grave Yard Bore project area. The likelihood of all of these species within the different landform and soils will depend also on seasonal conditions. Several limitations were found in the flora databases, as the data is dependent on previous efforts by various researches and therefore the data as extracted is considered potential flora.

4.4.1 Threatened and Significant Flora

One threatened flora species *Eleocharis papillosa* (*Environment Protection and Biodiversity Conservation Act 1999* - VU) has been recorded within 40km of the target study area. As this species occurs on lower lying areas this species may occur in the soak on the western edge of the targeted study area. Given the likelihood of occurrence scenarios for *Eleocharis papillosa* (VU), the desktop assessment correctly recommended that the soak is avoided in the initial phase of exploration and that if the project activities increase in later phases that field validation be undertaken in view of the potential impact to individuals and/or populations as a result of the proposal.

No threatened flora species were highlighted within the bounds of the desktop assessment buffer 20km and 30km radius from targeted study area, although a range of significant flora were recorded, Tables 1 and 2. In addition, 4 near Threatened and 5 significant flora species have the potential to occur as they have been recorded in the wider region, namely – near Threatened - *Trianthema oxycalyptra, Trachymene inflata, Heliotropium sphaericum* and *Trianthema glossostigma*; as well as potentially significant flora - *Heliotropium parviatrum, Acacia maconochieana, Corynotheca asperata, Bonamia alatisemina* and *Tribulus* sp. Long-styled elchlerianua (Figure 6).

On the basis of the database searches no threatened flora species have been recorded within 30km of the targeted study area; however in view of several landform, soils and site preferences there may be the potential for several threatened species to occur. The latter may relate to the paucity of detailed studies near the Grave Yard Bore targeted study area.

Although significant flora are not afforded the same legislative protection as threatened flora, the presence of such taxa can, in some cases, pose constraints to development. Hence, quantification of individuals and/or populations within the proposed Grave Yard Bore targeted study area could provide important local and regional information to contextualise and mitigate potential impacts if the project develops beyond this initial exploration phase.

If initial exploration activities are restricted to the dominant landsystems and vegetation types that extend well beyond the targeted study area on EL30256 then any impacts on threatened or significant species should be negligible at this phase of the exploration activities.

		Taxon Name	Threatened 2012	Significant 2012	Introduced Status
NR maps (20km)	Threatened flora	No Threatened flora species are likely to be found within 20 km radius	N/A	N/A	N/A
	Significant flora	FABACEAE Acacia pachycarpa F.Muell.	N/A	1	NATIVE TO NT
		RUBIACEAE Spermacoce resinosula Harwood	N/A	1	NATIVE TO NT
	Restricted Range	No Restricted Range flora species are likely to be found within 20 km radius	N/A	N/A	N/A
	Introduced species	POACEAE Cenchrus ciliaris L.	N/A	N/A	INTRODUCED TO NT
NR maps (30km)	Threatened flora	No Threatened flora species are likely to be found within 30 km radius	N/A	N/A	N/A
		AIZOACEAE Trianthema glossostigma F.Muell.	N/A	1	NATIVE TO NT
		BORAGINACEAE Heliotropium sphaericum Craven	N/A	1	NATIVE TO NT
		FABACEAE Sesbania cannabina (Retz.) Pers. var. sericea (Benth.) N.T.Burb.	N/A	1	NATIVE TO NT
		FABACEAE Gompholobium simplicifolium (F.Muell. & Tate) Crisp	N/A	1	NATIVE TO NT
		MALVACEAE Lawrencia viridigrisea Lander	N/A	1	NATIVE TO NT
		FABACEAE Acacia pachycarpa F.Muell.	N/A	1	NATIVE TO NT
		POACEAE Ectrosia lasioclada (Merr.) S.T.Blake	N/A	1	NATIVE TO NT
		PHRYMACEAE Peplidium sp. Tanami (P.K.Latz 11904)	N/A	1	NATIVE TO NT
		LAMIACEAE Dasymalla chorisepala (Munir) B.J.Conn. & M.J.Henwood	N/A	1	NATIVE TO NT
		FABACEAE Tephrosia rosea F.Muell. ex Benth. var. rosea	N/A	1	NATIVE TO NT
		RUBIACEAE Spermacoce resinosula Harwood	N/A	1	NATIVE TO NT
		FABACEAE Acacia synchronicia Maslin	N/A	1	NATIVE TO NT
		ARALIACEAE Trachymene inflata Maconochie	N/A	1	NATIVE TO NT
	Restricted Range	No Restricted Range flora species are likely to be found within 30 km radius	N/A	N/A	N/A
	Introduced species	AIZOACEAE Trianthema portulacastrum L.	N/A	N/A	INTRODUCED TO NT
		FABACEAE Senna obtusifolia (L.) H.S.Irwin & Barneby	N/A	N/A	INTRODUCED TO NT
		CUCURBITACEAE Citrullus colocynthis (L.) Schrad.	N/A	N/A	INTRODUCED TO NT
		CYPERACEAE Cyperus hamulosus M.Bieb.	N/A	N/A	STATUS UNCERTAIN IN NT
		MALVACEAE Malvastrum americanum (L.) Torr.	N/A	N/A	INTRODUCED TO NT
		POACEAE Cenchrus ciliaris L.	N/A	N/A	INTRODUCED TO NT
		POACEAE Echinochloa colona (L.) Link	N/A	N/A	STATUS UNCERTAIN IN NT
		SOLANACEAE Solanum chippendalei Symon	N/A	N/A	WITH INTRODUCED POPULATIONS
		ASTERACEAE Flaveria trinervia (Spreng.) C.Mohr	N/A	N/A	STATUS UNCERTAIN IN NT

Table 1: Summary of Threatened Flora, Significant Flora, Restricted Range Flora and Introduced Species as extracted from NR maps (note – NR Maps data from Northern Territory online Portal)

500000 510000 520000 530000 540000 550000 560000 570000 580000

7750000 7740000 7730000 7720000 7710000 7700000 7690000

BORAGINACEAE Heliotropium parviantrum Craven

PHRYMACEAE Peplidium sp. Tanami (P.K.Latz 11904)

CYPERACEAE Eleocharis papillosa Latz

FABACEAE Acacia maconochieana Pedley

FABACEAE Acacia stellaticeps Kodela, Tindale & D.Keith

FABACEAE Acacia maconochieana Pedley

FABACEAE Acacia maconochieana Pedley

FABACEAE Acacia pachycarpa F.Muell.

FABACEAE Acacia pachycarpa F.Muell.

FABACEAE Sesbania cannabina (Retz.) Pers. var. sericea (Benth.) N.T.Burb.

FABACEAE Acacia synchronicia Maslin

FABACEAE Acacia pachycarpa F.Muell.

FABACEAE Acacia pachycarpa F.Muell.

RUBIACEAE Spermacoce resinosula Harwood

FABACEAE Acacia pachycarpa F.Muell.

PHRYMACEAE Peplidium sp. Tanami (P.K.Latz 11904)

FABACEAE Tephrosia rosea F.Muell. ex Benth. var. rosea

FABACEAE Acacia pachycarpa F.Muell.

HEMEROCALLIDACEAE Corynotheca asperata R.J.F.Hend.

RUBIACEAE Spermacoce resinosula Harwood

AIZOACEAE Trianthema glossostigma F.Muell.

FABACEAE Acacia synchronicia Maslin

AIZOACEAE Trianthema oxycalyptra F.Muell. var. oxycalyptra

FABACEAE Acacia pachycarpa F.Muell.

TANAMI DOWNS ZYGOPHYLLACEAE Tribulus sp. long-styled eichlerianus (A.S.George 10666) R.M. Barker

CONVOLVULACEAE Bonamia alatisemina R.W.Johnson

FABACEAE Gompholobium simplicifolium (F.Muell. & Tate) Crisp

BORAGINACEAE Heliotropium sphaericum Craven

FABACEAE Acacia pachycarpa F.Muell.

ARALIACEAE Trachymene inflata Maconochie

Legend

- Target Study Area
- EL30256
- Vulnerable
- Near Threatened
- Data Deficient

Notes:
Imagery: SPOT 5 (CNES/Airbus DS)
Flora: NT Government Atlas

Client: **Ferdie's Find Pty Ltd**

0 2.5 5km
Scale: 1:250,000
GDA 1994 MGA Zone 52
CADRef: a2520_F003_01
Date: Apr 2017 | Rev: A | A3

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Grave Yard Bore Project
Environment
Significant Flora

Figure: **6**

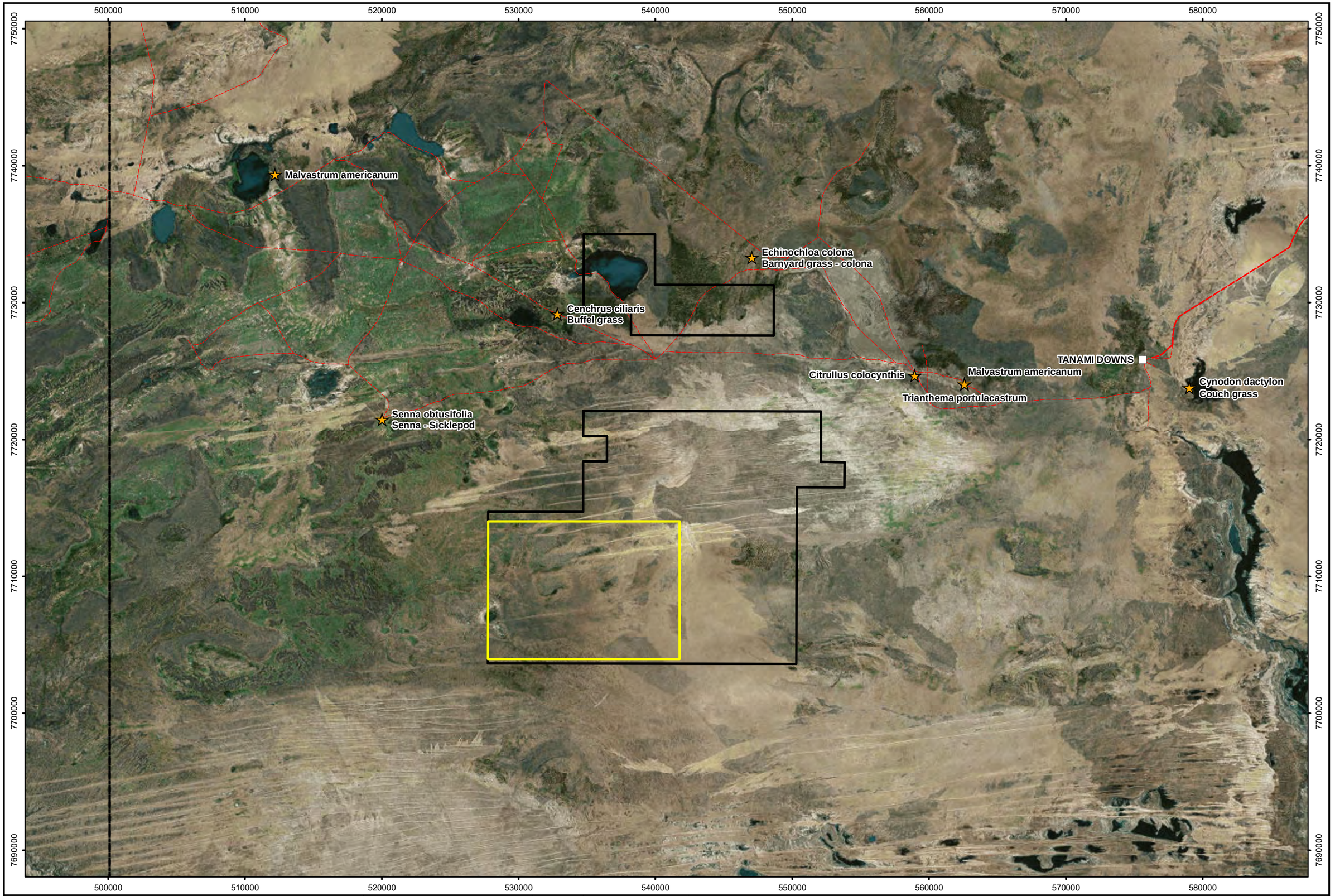
		Taxon Name	Threatened 2012	Significant2012	Introduced Status
PMST (20km)	Threatened flora	No Threatened flora species are likely to be found within 20 km radius	N/A	N/A	N/A
	Significant flora	No Significant flora species are likely to be found within 20 km radius	N/A	N/A	N/A
	Restricted Range	No Restricted Range flora species are likely to be found within 20 km radius	N/A	N/A	N/A
	Introduced species	Buffel grass	N/A	N/A	INTRODUCED TO NT
PMST (30km)	Threatened flora	No Threatened flora species are likely to be found within 30 km radius	N/A	N/A	N/A
	Significant flora	No Significant flora species are likely to be found within 30 km radius	N/A	N/A	N/A
	Restricted Range	No Restricted Range flora species are likely to be found within 30 km radius	N/A	N/A	N/A
	Introduced species	Buffel grass	N/A	N/A	INTRODUCED TO NT

Table 2: Summary of Threatened Flora, Significant Flora, Restricted Range Flora and Introduced Species from Protected Matters Search Tool (note – from PMST - DotEE 2017b)

4.4.2 Weeds

A range of introduced species have been highlighted in Tables 1 and 2 and Figure 7. Many of these have the potential to impact on the biodiversity values of the targeted study area and the vegetation on EL30256 (NR Map (NT government database and DotEE 2017b).

A range of weed species have the potential to occur or spread to the targeted study area. To appropriately fulfil management and control obligations it would be necessary to maintain vehicle hygiene during any exploration activities. The location and extent of weed populations within the targeted study area of EL30256 would form the foundation of weed management plans and protocols throughout the work phases on site.



Legend
- Target Study Area
- EL30256
- Weeds

Notes:
Imagery: SPOT 5 (CNES/Airbus DS)
Data: NT Government Atlas

Client:

Ferdie's Find Pty Ltd

0 2.5 5km
Scale: 1:250,000
GDA 1994 MGA Zone 52
CADRef: a2520_F003_03
Date: Apr 2017 | Rev: A | A3

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Author: E M Matttiske | MCPL Ref:
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Grave Yard Bore Project
Environment
Weeds

Figure: **7**

4.5 Threatened and Significant Fauna

A database search of the Protected Matters (DotEE 2017b) highlighted:

. 4 bird species, one critically endangered (Curlew Sandpiper – *Calidris ferruginea*), two endangered (Night Parrot – *Pezoporus occidentalis* and Australian Painted Snipe – *Rostratula alexandrae*) and one vulnerable (Princess Parrot or Alexandra's Parrot – *Polytelis alexandrae*), Appendix A. All of these species have the potential to occur in the targeted study area and EL 30256. The Night Parrot appears to prefer long unburnt hummock (Spinifex grasslands) and although recorded recently in Australia is difficult to survey and assess.

. 2 mammal species, one endangered (Central Rock-rat or Antina – *Zyzomys pedunculatus*) and one vulnerable (Greater Bilby – *Macrotis lagotis*), Appendix A. The Greater Bilby has been recorded just east of the targeted study area and to the north and northeast of the study area and is therefore highly likely in view of its preferred habitats to occur in the targeted study area (Figure 8). There is also the potential for the Brush-tailed Mulgara (*Dasycercus blythi*) (Vulnerable in Northern Territory but not listed under *EPBC Act 1999*) and Crest-tailed Mulgara (*Dasycercus cristicauda*) listed as Vulnerable at the National levels may occur in the study area (Pavey *et al.* 2006; DotEE 2017b). Their absence from Appendix A may reflect the lack of data in the area near EL30256.

. 1 reptile species, one vulnerable Great Desert Skink or Tjakura, or Warrarna or Mulyamiji (*Liopholis kintorei)*, Appendix A. This species has an extensive burrows within a well-defined territory and also appears to prefer a complex habitat with old and regenerating vegetation (McAlpin 2001), see Figure 8.

. 2 Migratory terrestrial species namely – the Barn Swallow (*Hirundo rustica*), the Grey Wagtail (*Motacilla cinerea*) and the Yellow Wagtail (*Motacilla flava*) may occur in the area (Appendix A). These birds are protected under the CAMBA and JAMBA international agreements.

. 3 Migratory wetland species, the Curlew Sandpiper (*Calidris ferruginea* (CE see above), the Oriental Plover or Oriental Dotterel (*Charadrius veredus*) and the Oriental Pratincole (*Gareola maldivarum*). These birds are protected under the CAMBA and JAMBA international agreements. These species have the potential to occur in the study area during more favourable conditions, which include during normal migratory movements and during favourable conditions, where standing water is available (i.e. ponds and wetlands)

Several additional significant conservation fauna species are summarized in Figure 8 which were not highlighted in the DotEE (2017b) protected matters search tool, namely the Australian Bustard, Bush Stone-Curlew, the Northern Nailtail Wallaby, the Spectacled Hare-Wallaby, the Woma Python, the King Brown Snake, the Common Greenshank, Emu and Long-tailed Rat. Of these the Greater Bilby is highly likely to occur in the targeted study area.

On the basis of the review of locations summarized in Figure 8, one of the limitations of the previous studies appears to relate to the accessibility of the survey areas with many of the previously recorded species located near tracks and roads in the wider area.

Of these fauna species the most likely threatened species that will require targeted searching is the Greater Bilby (*Macrotis lagotis*) as this species has been recorded just east of the targeted study area. In addition, in view of the range of landform and soil types within the targeted area it is suggested that more targeted searches are made for the range of these significant species that may occur on the project study area should be undertaken if the initial phase of exploration leads to more on-ground activities. Whilst the proposed activities may be relatively confined a better understanding of the site values in relation to the habitats that may support these species should be undertaken. The quantification of individuals and/or populations within the proposed

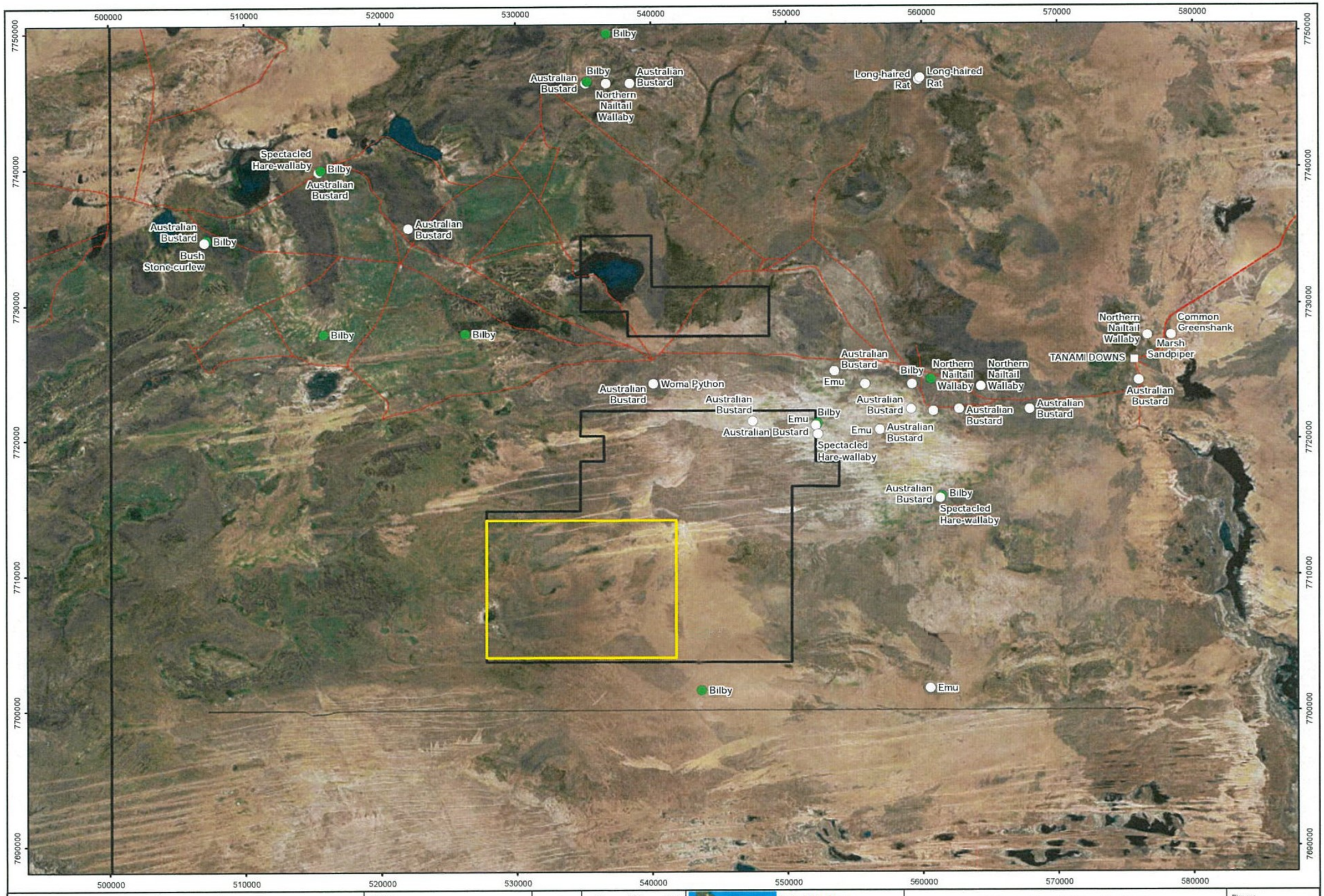
activity areas on the Grave Yard Bore targeted study area could provide important local and regional information to contextualise and mitigate potential impacts of the project activities.

If initial exploration activities are restricted to the dominant landsystems and vegetation types that extend well beyond the targeted study area on EL30256 then any impacts on threatened or significant species should be negligible at this phase of the exploration activities.

4.6 Feral Animals

A range of feral animals have been recorded in the region and there is a need to be proactive in their management to minimize the threats to the native fauna species; in particular the conservation significant species, Appendix A.

The feral animals include the Camel (*Camelus dromedaries*), the domestic dog (*Canis lupus familiaris*), the domestic cat (*Felis catus*), the House Mouse (*Mus musculus*) and the Red Fox (*Vulpes vulpes*). These animals may compete for food and resources and some threaten the native animals through predation. Numbers of feral animals are known to fluctuate markedly under different seasonal conditions and the government has committed significant resources to management of these feral animals. Therefore any effort that can be made during proposed activities to minimise the impact of these introduced animals on native fauna should be optimised.



Legend
- Target Study Area
- EL30256
- EN
- VU
- (not listed)

Notes:
Imagery: SPOT 5 (CNES/Airbus DS)
Data: NT Government Atlas

Client:
Ferdie's Find Pty Ltd

0 2.5 5km
Scale: 1:250,000
GDA 1994 MGA Zone 52
CADRef: a2520_F003_02
Date: Apr 2017 | Rev: A | A3

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Author: E M Mattiske | MCPL Ref:
Drawn: CAD Resources ~ www.cadresources.com.au
Tel: (08) 9246 3242 ~ Fax (08) 9246 3202

Grave Yard Bore Project
Environment
Significant Fauna

Figure: 8

4.7 Vegetation

Four main vegetation types have been mapped according to the National Vegetation Information System (Figure 9), see NR Map atlas database. Three of these four occur within the targeted study area, namely:

410 – Open Tussock Grassland (V1_NVISL2), *Eragrotis* (mixed) low open tussock grassland (V1_NVISL3), *Acacia* low open woodland*Eragrostis* low open tussock grassland (V1_NVISL4)

576 – Hummock Grassland (V1_NVISL2), *Triodia* hummock grassland (V1_NVISL3), *Triodia* hummock grassland (V1_NVISL4)

1032 – Open Hummock Grassland (V1_NVISL2), *Triodia* low open hummock grassland (V1_NVISL3), *Eucalyptus* low isolated trees*Acacia* tall sparse shrubland l*Triodia* low open hummock grassland (V1_NVISL4)

The fourth vegetation type occurs in the northern section of EL30256, namely:

416 - Open Shrubland (V1_NVISL2), *Salsola* low open chenopod shrubland (V1_NVISL3), *Melaleuca* low open woodland*Salsola* low open chenopod shrubland (V1_NVISL4)

No *EPBC Act* protected Threatened Ecological Communities were identified as occurring or having the potential to occur within the targeted study area within EL30256 of the Grave Yard Bore project area.

These communities were not considered to be threatened or locally restricted. Consequently, the desktop assessment would indicate that at this scale of regional and national mapping any proposed activities would have a minimal impact. As indicated in the review of previous topography and landsystem areas it is likely that some localized areas (such as the soak on the western fringes of the study area) may support a range of different species. To confirm the latter detailed targeted studies on the vegetation would have to be undertaken after this initial exploration phase to ensure that these restricted topographical features and landforms are not supporting restricted or conservation significant species.

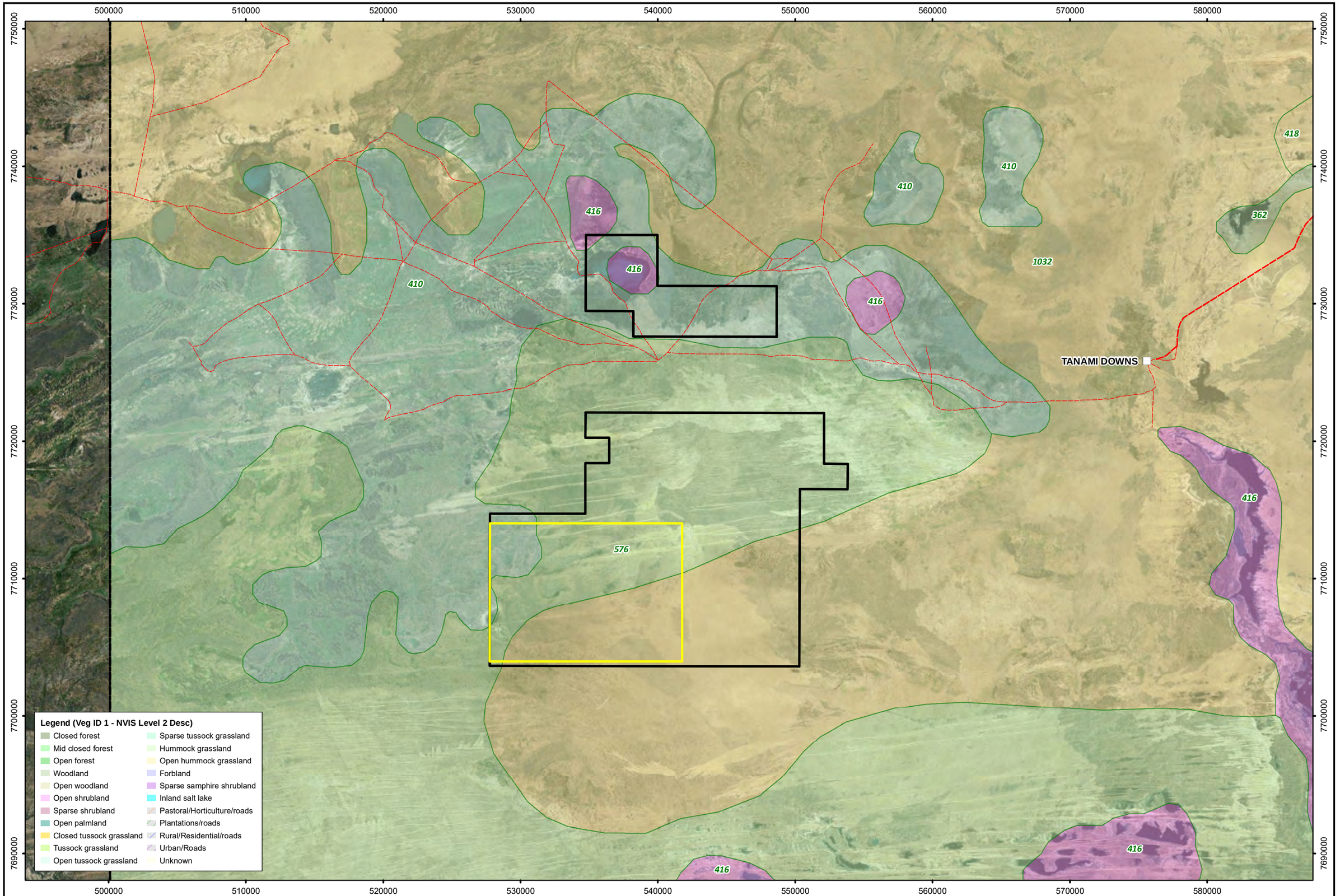
4.8 World Heritage Areas and Ramsar Wetlands

No World Heritage Areas or RAMSAR wetlands were identified as having the potential to occur within the targeted study area within EL30256 or the wider EL30256 (DotEE 2017b).

4.9 Sites of Conservation Significance

The targeted study area in the southern section of EL30256 does not intercept any Sites of Conservation Significance, but the northern section of EL30256 intersects the Mongrel Downs in the Central Tanami Desert (20-1-4) is of regional significance, Figure 10 (White *et al.* 2000b).

The Western Tanami Paleo-drainage Systems (20-1-3) is of national significance occurs east of the EL30256 lease areas. These sites are recognised by the Northern Territory Government as being the most important sites for biodiversity conversation (White *et al.* 2000b).



Legend
- Target Study Area
- EL30256

Notes:
Imagery: SPOT 5 (CNES/Airbus DS)
Data: NT Government Atlas

Client:
Ferdie's Find Pty Ltd

0 2.5 5km
Scale: 1:250,000
GDA 1994 MGA Zone 52
CADRef: a2520_F003_05
Date: Apr 2017 | Rev: A | A3

Mattiske Consulting Pty Ltd
28 Central Road, Kalamunda WA 6076 ~ Tel: 9257 1625 ~ Fax: 9257 1640
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Grave Yard Bore Project
Environment
National Vegetation Information System

Figure: **9**

5. CONCLUSIONS

Purpose of the desktop assessment was to identify ecological values that have the potential to be impacted by the proposed development activities on the Grave Yard Bore lease areas. The lease area (EL30256) consists of three areas, the northern area, the southern area and the target study area. This lease area occurs southwest of the Rabbit Flat Roadhouse and southwest of the Tanami Road.

The key findings highlighted the lack of known records of threatened species on the targeted study area. In view of the nature of the proposed localized and initial exploration activities within the targeted study any impacts should be minimal as the underlying landsystems, landforms, soils and vegetation are well represented outside the targeted study area. The exception to the latter is the soak on the western fringe of the targeted study area that is relatively restricted and as such may support a range of specialised flora and fauna species. Consequently every effort should be made to avoid the soak area on the western fringes of the targeted study area.

As the data on potential ecological values indicates that there is some potential for several threatened flora and fauna species to occur within the targeted study area on EL30256 it is recommended that if the project activities intensify beyond this initial phase then detailed flora and fauna studies are undertaken on the targeted study area.

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Australian Government
Department of the Environment and Energy

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

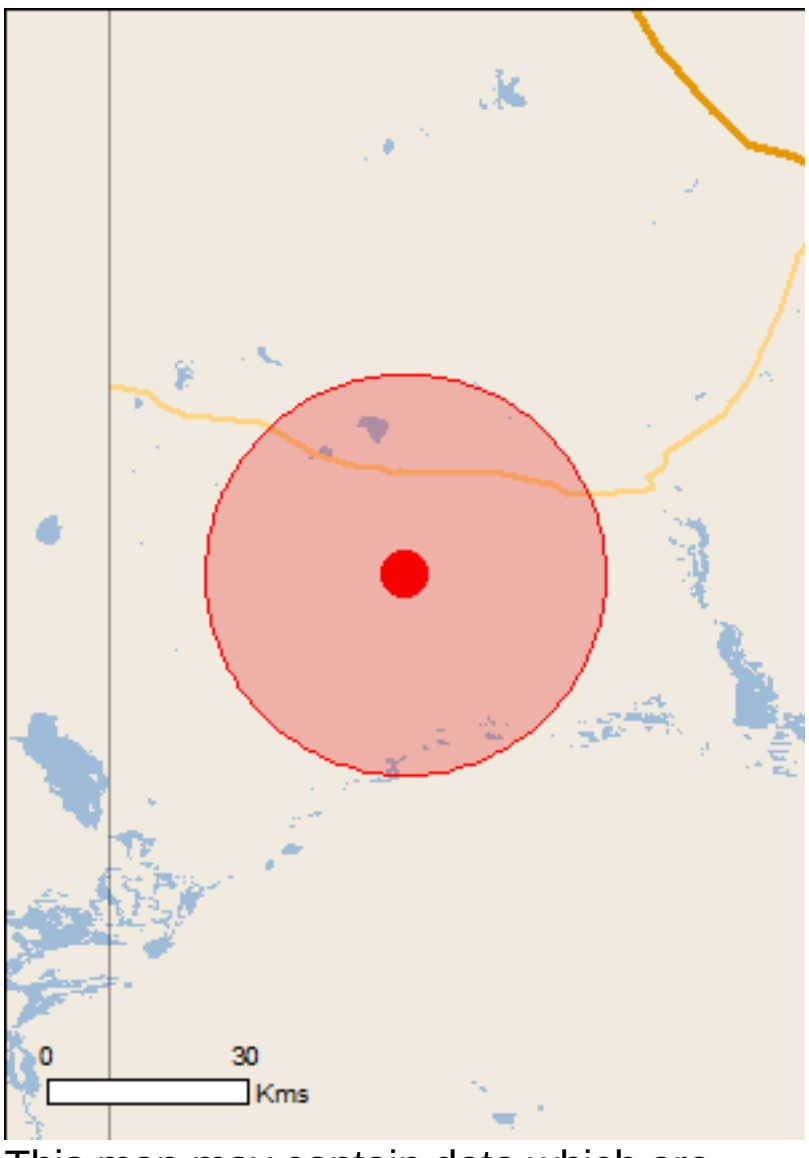
Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

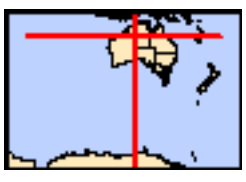
Report created: 28/03/17 18:40:08

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements



Coordinates
Buffer: 30.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	7
Listed Migratory Species:	7

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	11
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	1
Regional Forest Agreements:	None
Invasive Species:	6
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat may occur within area
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Mammals		
Macrotis lagotis Greater Bilby [282]	Vulnerable	Species or species habitat known to occur within area
Zyzomys pedunculatus Central Rock-rat, Antina [68]	Endangered	Species or species habitat may occur within area
Reptiles		
Liopholis kintorei Great Desert Skink, Tjakura, Warrarna, Mulyamiji [83160]	Vulnerable	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
[Motacilla flava](#)		
Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
[Calidris ferruginea](#)		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
[Charadrius veredus](#)		
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
[Glareola maldivarum](#)		
Oriental Pratincole [840]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
[Apus pacificus](#)		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
[Ardea alba](#)		
Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
[Ardea ibis](#)		
Cattle Egret [59542]		Species or species habitat may occur within area
[Calidris ferruginea](#)		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
[Charadrius veredus](#)		
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
[Glareola maldivarum](#)		
Oriental Pratincole [840]		Species or species habitat may occur within area
[Hirundo rustica](#)		
Barn Swallow [662]		Species or species habitat may occur within area
[Merops ornatus](#)		
Rainbow Bee-eater [670]		Species or species habitat may occur within area
[Motacilla cinerea](#)		
Grey Wagtail [642]		Species or species habitat may occur within area
[Motacilla flava](#)		
Yellow Wagtail [644]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Rostratula benghalensis (sensu lato)		
Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Southern Tanami	NT

Invasive Species	[Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Mammals		
Camelus dromedarius Dromedary, Camel [7]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-20.69268 129.39873

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

Department of the Environment
GPO Box 787
Canberra ACT 2601 Australia
+61 2 6274 1111

Appendix 5: Security Calculation Tool.

See separate attachment

Appendix 6: Letter from Station Manager re request to leave tracks from Phase 1 and 2 open

See separate attachment

Mark Savage
Tanami Downs Station
PO Box 1164
Alice Springs,NT.

13 July 2018

Ferdies Find Pty Ltd
12 Gibson Retreat
CABLE BEACH WA 6726

Dear Sir/Madam

Upcoming Exploration Program – Grave Yard Bore Project (EL 30256)

I confirm that following completion of your Phase 2 drilling program, it is our preference that you leave some of the tracks open from both this program and also that of the Phase 1 program (as per Figure 4_MMP August 2017_Phase 1 Drilling Program) as attached, so that we can use the tracks for control and monitoring of fire and vegetation. Also future drilling and equipping of water bores in this area.

We also acknowledge that we will assume the responsibility and for the future management of the transferred tracks.

Should you have any queries in relation to this request, please contact me on 08 89568738.

Yours faithfully

Mark Savage.

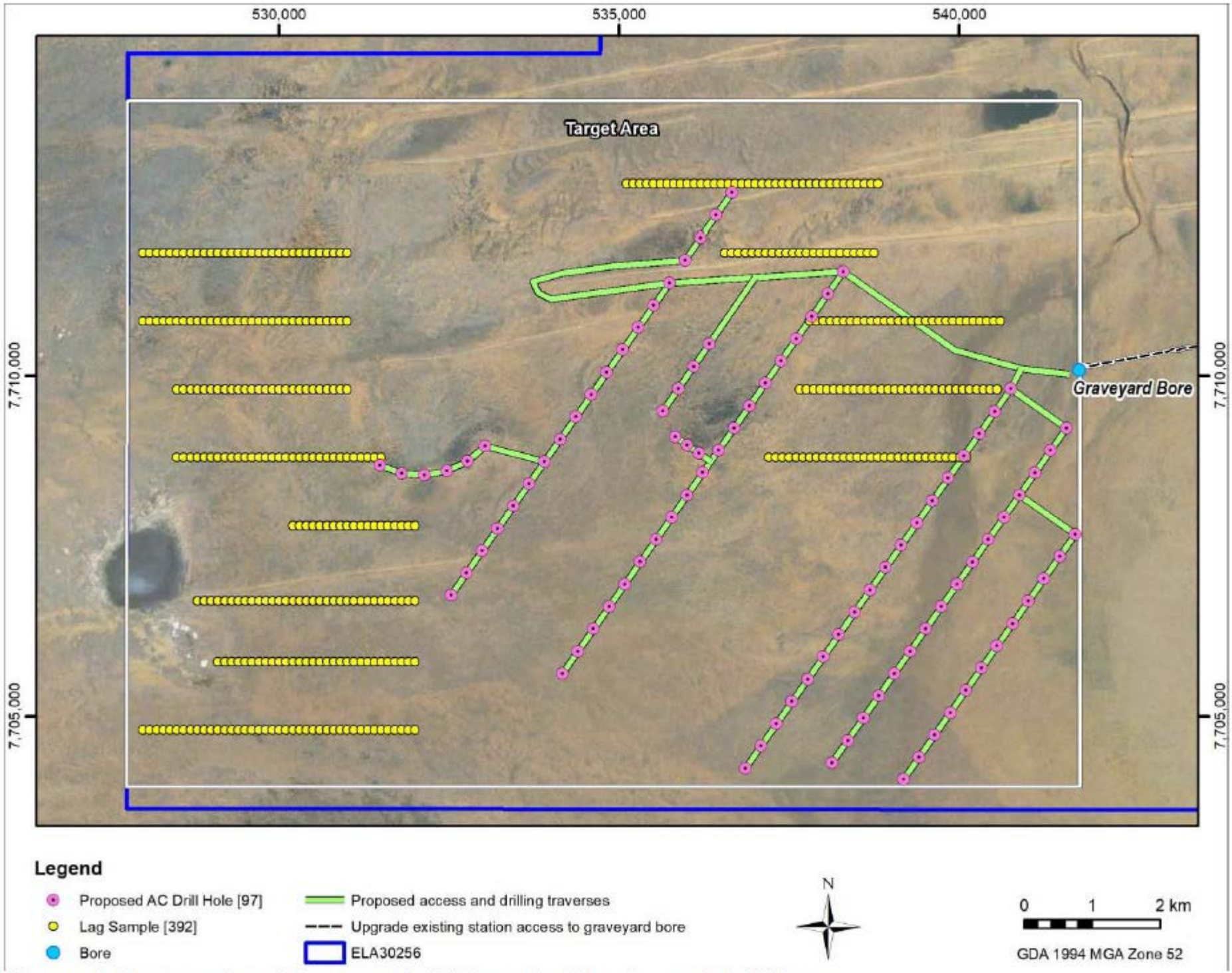
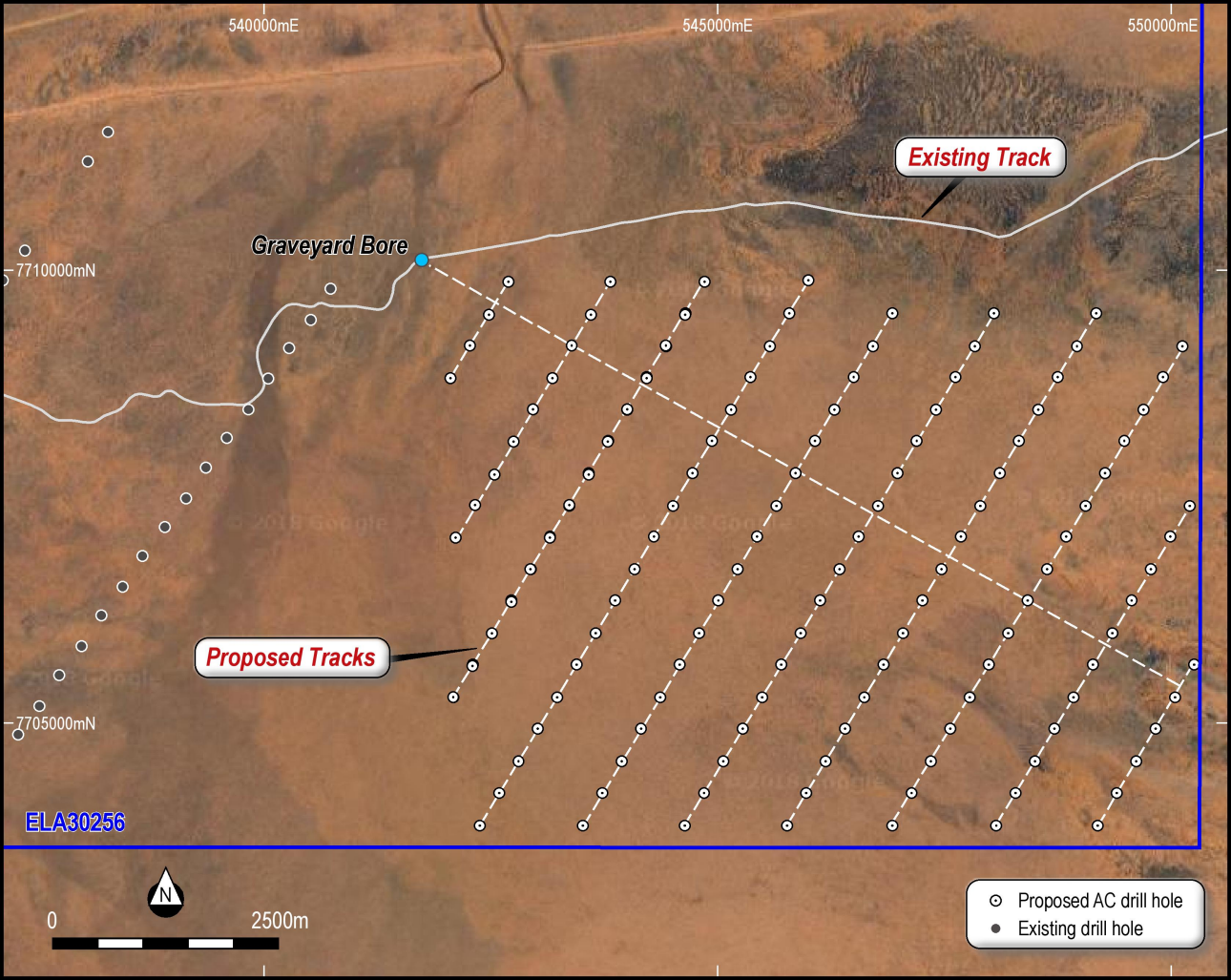


Figure 4: Preparatory Phase, establishment of tracks and drill lines


540000mE
545000mE
550000mE
Existing Track
Graveyard Bore
7710000mN
Proposed Tracks
7705000mN
ELA30256
N
0
2500m
Proposed AC drill hole
Existing drill hole

Appendix 7: Photographs of 61 aircore holes rehabilitated following completion of 2017 season.

The Photographs of the rehabilitated aircore holes have been uploaded via the Departments FTP site.

Attachment A - Rehabilitation Checklist

Hole ID	Date Drilled	Drill hole Coordinates (GDA94 LatLong or GDA94 Zone 52 UTM)	Rehabilitation (✓ or date completed)									Post-closure Monitoring (1 Year after)							Sign off and Comments
			Drill holes plugged/capped	Drill spoils buried/backfilled	Sample bags/core removed	Sumps backfilled	Topsoil/vegetation replaced	Drill pad ripped	Access track ripped	Rubbish removed	Is radiation within background levels?	Date of Monitoring	Is site nominated for ongoing monitoring?	Is the site revegetated?	Are there signs of erosion?	Are there weeds?	Is there subsidence?	Is radiation within background levels?	
FFAC001	23/7/17	536844E 7704237N	✓	✓	✓	X	X	X	X	✓	X								Monitor in Aug 18 during Phase 2 exploration
FFAC002	23/7/17	537078E 7704565N	✓	✓	✓	X	X	X	X	✓	X								Monitor in Aug 18 during Phase 2 exploration
FFAC003	23/7/17	537304E 7704893N	✓	✓	✓	X	X	X	X	✓	X								Monitor in Aug 18 during Phase 2 exploration
FFAC004	23/7/17	537541E 7705220N	✓	✓	✓	X	X	X	X	✓	X								Monitor in Aug 18 during Phase 2 exploration
FFAC005	24/7/17	536225E 7708586N	✓	✓	✓	X	X	X	X	✓	X								Monitor in Aug 18 during Phase 2 exploration
FFAC006	24/7/17	536437E 7708918N	✓	✓	✓	X	X	X	X	✓	X								Monitor in Aug 18 during Phase 2 exploration
FFAC007	24/7/17	536732E 7709190N	✓	✓	✓	X	X	X	X	✓	X								Monitor in Aug 18 during Phase 2 exploration
FFAC008	24/7/17	537026E 7709516N	✓	✓	✓	X	X	X	X	✓	X								Monitor in Aug 18 during Phase 2 exploration
FFAC009	24/7/17	537135E 7709896N	✓	✓	✓	X	X	X	X	✓	X								Monitor in Aug 18 during Phase 2 exploration
FFAC010	24/7/17	537375E 7710221N	✓	✓	✓	X	X	X	X	✓	X								Monitor in Aug 18 during Phase 2 exploration

FFAC011	24/7/17	534855E 7706611N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC012	24/7/17	535083E 7706938N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC013	24/7/17	535299E 7707281N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC014	25/7/17	535524E 7707611N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC015	25/7/17	535769E 7707923N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC016	25/7/17	535988E 7708268N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC017	25/7/17	535825E 7709190N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC018	25/7/17	535982E 7708981N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC019	25/7/17	536157E 7708845N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC020	25/7/17	531478E 7708673N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC021	25/7/17	531812E 7708579N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC022	25/7/17	532211E 7708628N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC023	25/7/17	532612E 7708669N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC024	25/7/17	532845E 7708791N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC025	25/7/17	532971E 7707445N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC026	26/7/17	533209E 7707770N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC027	26/7/17	533449E 7708085N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC028	26/7/17	533685E 7708407N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration

FFAC029	26/7/17	533073E 7708997N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC030	26/7/17	533901E 7708747N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC031	26/7/17	534139E 7709067N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC032	26/7/17	534367E 7709398N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC033	26/7/17	534590E 7709733N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC034	26/7/17	534817E 7710058N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC035	26/7/17	535058E 7710381N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC036	26/7/17	535287E 7710712N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC037	26/7/17	535513E 7711035N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC038	26/7/17	535741E 7711362N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC039	26/7/17	535968E 7711737N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC040	26/7/17	536188E 7712013N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC041	27/7/17	536455E 7712352N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC042	27/7/17	538287E 7711529N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC043	27/7/17	538064E 7711205N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC044	27/7/17	535638E 7709481N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC045	27/7/17	535872E 7709809N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC046	27/7/17	536097E 7710138N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration

FFAC047	27/7/17	536325E 7710459N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC048	27/7/17	537760E 7705548N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC049	27/7/17	537992E 7705876N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC050	28/7/17	538223E 7706203N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC051	28/7/17	538452E 7706531N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC052	28/7/17	538684E 7706859N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC053	28/7/17	538914E 7707186N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC054	28/7/17	539139E 7707514N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC055	28/7/17	539366E 7707842N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC056	28/7/17	539597E 7708169N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC057	28/7/17	539837E 7708497N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC058	28/7/17	540060E 7708824N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC059	28/7/17	540295E 7709152N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC060	28/7/17	540524E 7709480N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration
FFAC061	28/7/17	540756E 7709807N	✓	✓	✓	X	X	X	X	✓	X							Monitor in Aug 18 during Phase 2 exploration

Attachment B –Rehabilitation Register

Rehabilitation Status

Summarise the rehabilitation status of all exploration sites during the current and previous reporting periods.

Exploration Activities Rehabilitation Summary (Cumulative)											
Reporting period	**Tenement**	**MMP Reference**	**Drill Holes /Pads (No.)**	**Drill Holes/ Pads under Rehab (No.)**	**Drill Line/ Access Track Length (km)**	**Drill line/access track under Rehab (km)**	**Camp (ha)**	**Camp under Rehab (ha)**	**Costeans /Bulk Samples (No.)**	**Costeans /Bulk Samples Under Rehab (No.)**	**Comments**
29/12/16-28/12/17	EL 30256	0922-01	61	61							All holes rehabbed
29/12/16-28/12/17	EL 30256	0922-01			80						Tracks left open at request of Station Manager (Appendix 6
29/12/16-28/12/17	EL 30256	0922-01					0.1				Camp to be used in Phase 2 exploration in Aug 18
29/12/16-28/12/17	EL 30256	0922-01							X	X	N/A

Provide details (where applicable) of the rehabilitation activities that were conducted during the past 12 months and from previous reporting periods.

Drill Hole/Pad Rehabilitation Status												
Tenement	**Drill Hole ID**	**Easting GDA 94 Zone 52**	**Northing GDA 94 Zone 52**	**MMP Ref. #**	**Date Drilled**	**Drilling Method ***	**Size of Drill Pad (m^2)**	**No. of sumps**	**Status †**	**Rehab Date**	**Planned Rehab Date**	**Comments**
EL 30256	FFAC001	536844	7704237	0922-01	23/7/17	AC			C	23/7/17		
EL 30256	FFAC002	537078	7704565	0922-01	23/7/17	AC			C	23/7/17		
EL 30256	FFAC003	537304	7704893	0922-01	23/7/17	AC			C	23/7/17		
EL 30256	FFAC004	537541	7705220	0922-01	23/7/17	AC			C	23/7/17		
EL 30256	FFAC005	536225	7708586	0922-01	24/7/17	AC			C	24/7/17		
EL 30256	FFAC006	536437	7708918	0922-01	24/7/17	AC			C	24/7/17		
EL 30256	FFAC007	536732	7709190	0922-01	24/7/17	AC			C	24/7/17		
EL 30256	FFAC008	537026	7709516	0922-01	24/7/17	AC			C	24/7/17		
EL 30256	FFAC009	537135	7709896	0922-01	24/7/17	AC			C	24/7/17		
EL 30256	FFAC010	537375	7710221	0922-01	24/7/17	AC			C	24/7/17		
EL 30256	FFAC011	534855	7706611	0922-01	24/7/17	AC			C	24/7/17		
EL 30256	FFAC012	535083	7706938	0922-01	24/7/17	AC			C	24/7/17		
EL 30256	FFAC013	535299	7707281	0922-01	24/7/17	AC			C	24/7/17		
EL 30256	FFAC014	535524	7707611	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC015	535769	7707923	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC016	535988	7708268	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC017	535825	7709190	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC018	535982	7708981	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC019	536157	7708845	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC020	531478	7708673	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC021	531812	7708579	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC022	532211	7708628	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC023	532612	7708669	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC024	532845	7708791	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC025	532971	7707445	0922-01	25/7/17	AC			C	25/7/17		
EL 30256	FFAC026	533209	7707770	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC027	533449	7708085	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC028	533685	7708407	0922-01	26/7/17	AC			C	26/7/17		

Drill Hole/Pad Rehabilitation Status												
Tenement	**Drill Hole ID**	**Easting GDA 94 Zone 52**	**Northing GDA 94 Zone 52**	**MMP Ref. #**	**Date Drilled**	**Drilling Method ***	**Size of Drill Pad (m^2)**	**No. of sumps**	**Status †**	**Rehab Date**	**Planned Rehab Date**	**Comments**
EL 30256	FFAC029	533073	7708997	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC030	533901	7708747	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC031	534139	7709067	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC032	534367	7709398	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC033	534590	7709733	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC034	534817	7710058	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC035	535058	7710381	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC036	535287	7710712	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC037	535513	7711035	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC038	535741	7711362	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC039	535968	7711737	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC040	536188	7712013	0922-01	26/7/17	AC			C	26/7/17		
EL 30256	FFAC041	536455	7712352	0922-01	27/7/17	AC			C	27/7/17		
EL 30256	FFAC042	538287	7711529	0922-01	27/7/17	AC			C	27/7/17		
EL 30256	FFAC043	538064	7711205	0922-01	27/7/17	AC			C	27/7/17		
EL 30256	FFAC044	535638	7709481	0922-01	27/7/17	AC			C	27/7/17		
EL 30256	FFAC045	535872	7709809	0922-01	27/7/17	AC			C	27/7/17		
EL 30256	FFAC046	536097	7710138	0922-01	27/7/17	AC			C	27/7/17		
EL 30256	FFAC047	536325	7710459	0922-01	27/7/17	AC			C	27/7/17		
EL 30256	FFAC048	537760	7705548	0922-01	27/7/17	AC			C	27/7/17		
EL 30256	FFAC049	537992	7705876	0922-01	27/7/17	AC			C	27/7/17		
EL 30256	FFAC050	538223	7706203	0922-01	28/7/17	AC			C	28/7/17		
EL 30256	FFAC051	538452	7706531	0922-01	28/7/17	AC			C	28/7/17		
EL 30256	FFAC052	538684	7706859	0922-01	28/7/17	AC			C	28/7/17		
EL 30256	FFAC053	538914	7707186	0922-01	28/7/17	AC			C	28/7/17		
EL 30256	FFAC054	539139	7707514	0922-01	28/7/17	AC			C	28/7/17		
EL 30256	FFAC055	539366	7707842	0922-01	28/7/17	AC			C	28/7/17		
EL 30256	FFAC056	539597	7708169	0922-01	28/7/17	AC			C	28/7/17		
EL 30256	FFAC057	539837	7708497	0922-01	28/7/17	AC			C	28/7/17		
EL 30256	FFAC058	540060	7708824	0922-01	28/7/17	AC			C	28/7/17		
EL 30256	FFAC059	540295	7709152	0922-01	28/7/17	AC			C	28/7/17		
EL 30256	FFAC060	540524	7709480	0922-01	28/7/17	AC			C	28/7/17		

Drill Hole/Pad Rehabilitation Status												
Tenement	**Drill Hole ID**	**Easting GDA 94 Zone 52**	**Northing GDA 94 Zone 52**	**MMP Ref. #**	**Date Drilled**	**Drilling Method ***	**Size of Drill Pad (m^2)**	**No. of sumps**	**Status †**	**Rehab Date**	**Planned Rehab Date**	**Comments**
EL 30256	FFAC061	540756	7709807	0922-01	28/7/17	AC			C	28/7/17		

** AC = aircore/vacuum, RM = rotary mud, RC = reverse circulation, RAB = rotary air blast, D = diamond, P = percussion, V = vibracore or sonic, O = other.*

† C = drillsite completely rehabilitated (hole collar removed plugged and backfilled, drill spoils buried and sample bags removed, sumps backfilled, drill pads re-contoured and ripped, photograph taken), N = no rehabilitation completed, PR = partial rehabilitation (specify remaining rehabilitation to be completed within the comments section).

Access Track/Drill Line Rehabilitation Status							
Tenement	**Track ID**	**Tracks/lines Created (km)**	**Tracks/lines under Rehab (km)**	**Status †**	**Rehab Date**	**Planned Rehab Date**	**Comments**
EL 30256	MT01	30		N			Tracks left open at request of Station Manager (Appendix 6)
EL 30256	AT01	50		N			Tracks left open at request of Station Manager (Appendix 6)
† C = rehabilitation completed, N = no rehabilitation completed, PR = partial rehabilitation (specify remaining rehabilitation to be completed within the comments section).							

NOTE: Existing and proposed tracks and drill access lines must be shown on the site layout maps included in Section 3.0

Campsite Rehabilitation Status										
Tenement	**Camp Name**	**Date Est.**	**Easting (GDA 94 Zone 52)**	**Northing (GDA 94 Zone 52)**	**Camp Size (ha)**	**Status †**	**Waste Removed**	**Camp Rehab Date**	**Planned Rehab Date**	**Comments**
EL 30256	Camp 01	22/7/17	541640	7710150	0.1	PR	Y	29/7/17	Aug/Sept 18	Camp to be used in Phase 2 exploration in Aug 18
† C = rehabilitation completed, N = no rehabilitation completed, PR = partial rehabilitation (specify remaining rehabilitation to be completed within the comments section).										

NOTE: Existing and proposed campsites must be shown on the maps included in Section 3.0

Not applicable

Costean and Bulk Sample Rehabilitation Status									
Tenement	**Costean/ Bulk Sample ID**	**Date Excavated**	**Dimensions (L x W x D)**	**Easting (GDA 94 Zone X)**	**Northing (GDA 94 Zone X)**	**Status †**	**Costean Rehab Date**	**Planned Rehab Date**	**Comments**
† C = rehabilitation completed, N = no rehabilitation completed, PR = partial rehabilitation (specify remaining rehabilitation to be completed within the comments section).									

NOTE: Costean and bulk sample sites must be shown on the maps included in Section 3.0

Not applicable

Bulk Sample Disposal Status										
Tenement	**Reason for bulk sample disposal site**	**Date Buried**	**Clean Cover Depth**	**Dimensions (L x W x D)**	**Easting (GDA 94 Zone X)**	**Northing GDA 94 Zone X)**	**Status†**	**Rehab date**	**Planned rehab date**	**Comments**
† C = rehabilitation completed, N = no rehabilitation completed, PR = partial rehabilitation (specify remaining rehabilitation to be completed within the comments section).										

NOTE: Bulk sample disposal sites must be shown on the maps included in Section 3.0