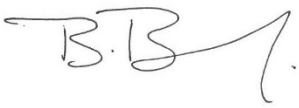
DevEx RESOURCES

2021

# NABARLEK MINERAL LEASE

# MINING MANAGEMENT PLAN
# MLN 962

| | Author | Reviewed by | Approved by |
|---|---|---|---|
| Date | 28 June 2021 | 28 June 2021 | 28 June 2021 |
| Date (Amended) | 21 September 2021 | 21 September 2021 | 21 September 2021 |
| Date (Amended #2) | 11 April 2022 | 11 April 2022 | 11 April 2022 |
| Name | Daniel Greene | Brendan Bradley | Brendan Bradley |
| Signature |  |  |  |

I Brendan Bradley, Managing Director 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: 28 June 2021

Authorisation 0435-01

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## List of Appendices

# Amendments

As per Section 41(3) of the *Mining Management Act*, an MMP reviewed and amended under Section 41(1)(a) is to clearly identify amendments made. These changes must be outlined in a table, including relevant page numbers, as per the example below.

| Section | Amendment |
|---|---|
| Section 1. Operator Details | Change of Key Contacts and Organization Chart (pp 8 and 9). |
| Section 2.1. Outcomes of Stake Holder Consultations | Updated (pp 11)<br>Section 2.1 Outcomes of Stake Holder Consultations added to table of contents. |
| Section 3. Project Details | Updated to reflect current year (pp 11). |
| Section 3.1. Previous Activities and Current Status | Update of historical activities and progression of rehabilitation (pp 13).<br>Update on 2020 Exploration Programme. |
| Section 3.1.2. Recent Exploration Work | Updated to reflect current year (pp 14). |
| Section 3.2. Proposed Activities | Proposed activities for 2021 exploration and rehabilitation updated (pp 21). |
| Section 3.2.1. Exploration | Figure 9 added to show prospect area (pp 21). |
| Section 3.2.2. Rehabilitation | Updated to reflect current plans and rehabilitation completed (pp 22). |
| Section 4.1. Climate | Rainfall chart and data updated (pp 22). |
| Section 4.3. Hydrology | Updated to reflect groundwater sampling in 2020 (pp 24). |
| Section 4.4. Flora and Fauna | Updated with content from the Request for Information (RFI) Response report provided by COOE. |
| Section 5. Environmental Management System | Updated with content from the Request for Information (RFI) Response report provided by COOE. |
| Section 5.7.4. Exploration Drilling | Updated with site visit obs. being actioned (pp 60). |
| Section 5.7.5. Surface and Groundwater Monitoring | Updated with Nov 2020 sample results and Apr 2021 report details. Map of sampling locations added and added to list of figures (pp 61 – pp 64). |
| Section 7.1.3. Discussion and Future Work | Updated (pp 74). |
| Appendix 1. | Drillhole rehabilitation register updated. |
| Appendix 9. | Expanded pre-drilling procedures.<br>Added Flora & Fauna to Risk Assessment. |
| Appendix 11. | Groundwater report updated with 2021 report. |
| Appendix 14 | Request for Information (RFI) Response report provided by COOE. |

# 1. Operator Details

This Mining Management Plan (MMP) has been prepared by DevEx Resources Limited for activities conducted at Mineral Lease Northern 962 (MLN962 or the Nabarlek Project). The nominated operator of the project is DevEx Resources Limited (DevEx).

DevEx, previously operated under the name of Uranium Equities Limited (UEL), both names within the document are interchangeable, or collectively referred to the Company.

Since 2008 the Company has been actively exploring the Nabarlek Project in tandem with ongoing rehabilitation of the historical mine site.

Key DevEx personnel for the Nabarlek operations in the Perth office are listed in Table 1 below.

Table 1: Contact Details for Key Perth Staff

| DevEx Personnel | Phone | Mobile | Email |
|---|---|---|---|
| Managing Director<br>(Brendan Bradley) | | | |
| Senior Geologist<br>(Daniel Greene) | | | |
| Level 3, 1292 Hay Street<br>West Perth, Western Australia 6005<br>Phone: 08 6186 9490<br>Fax: 08 6186 9495 | | | |

Field personnel are employed on a contract basis at the beginning of each dry season.

Site contact details for the Nabarlek Base Camp where field personnel will be based during the field season are provided in Table 2.

Table 2: Contact Details for Key On-Site Staff

| | Phone |
|---|---|
| Nabarlek Satellite Phone | |

## 1.1. Organisational Structure

The organisational chart for DevEx is shown in Figure 1.

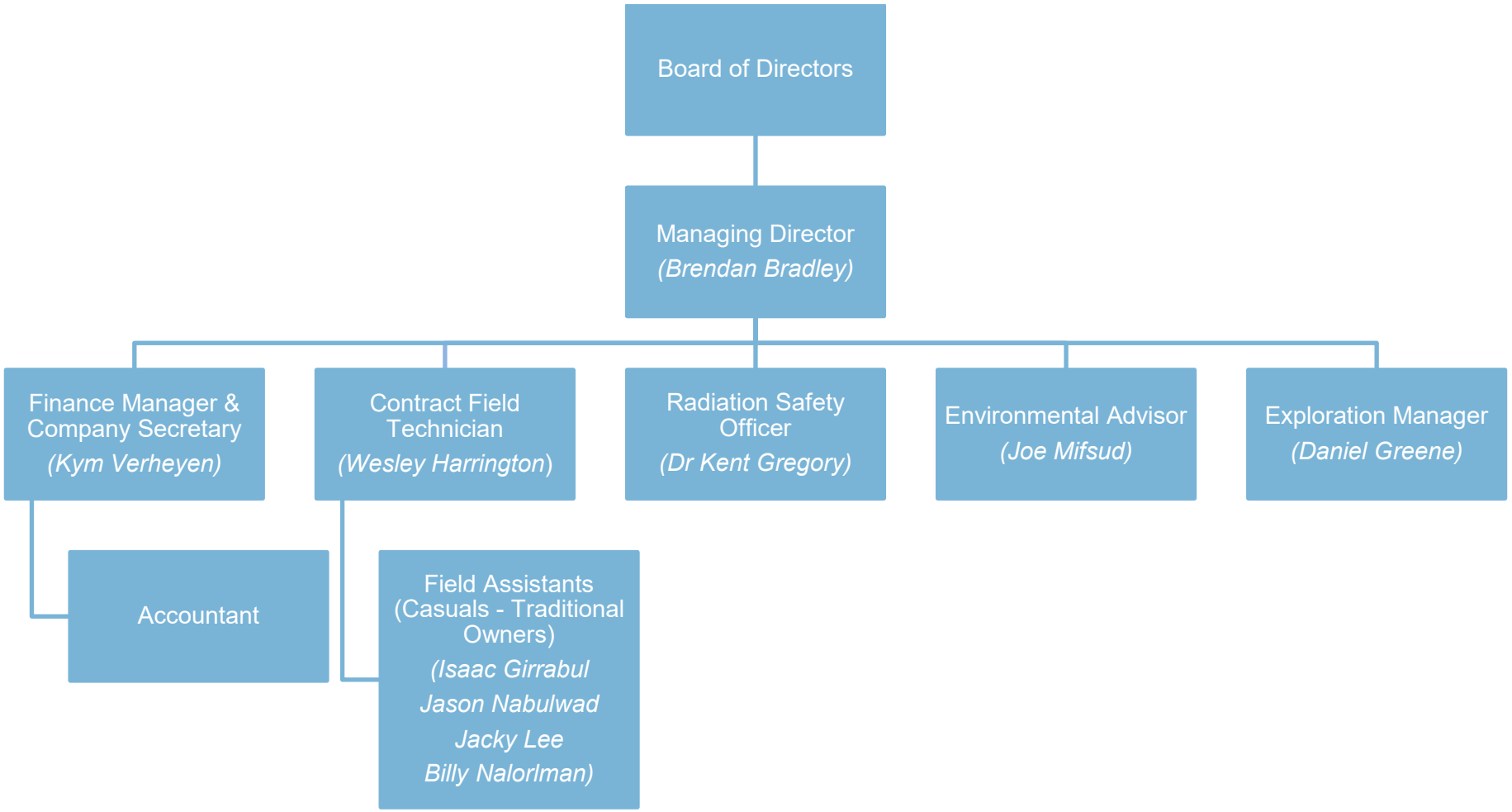



Figure 1: DevEx Resources Limited Organisational Chart May 2021

## 1.2. Workforce

The workforce will consist of a maximum of eight people. Dry season exploration personnel will consist of DevEx staff and contract exploration personnel, including the Senior Exploration Geologist, up to four geophysics contractors, and up to one earthmoving contractor if required.

In addition to the on-site personnel listed above there will be other personnel that will visit the camp periodically such as DevEx Perth-based geology and environmental staff.

During the wet season the workforce at Nabarlek Camp will be reduced and demobilised (maximum of six people). Activities will typically be revegetation and weed control. Personnel will include two DevEx field assistants with the remainder being contract tree planters, weed sprayers and a supervisor.

DevEx has a policy of endeavouring to employ local Traditional Owners where possible and anticipates that at least one of the field assistants will be a Traditional Owner. DevEx has regularly employed at least one Traditional Owner during wet and dry season operations since taking over management of the site. The small size and infrequent nature of the Company's operations does not allow for a firm employment target for Traditional Owners to be set, although it is expected that in 2021 up to two Traditional Owners will be utilised to assist with any planned work.

# 2. Identified Stakeholders and Consultation

Current identified stakeholders include:

- Traditional Owners;
- Northern Land Council;
- Department of Primary Industry and Resources (DPIR);
- NT WorkSafe;
- Department of Environment and Energy – Supervising Scientist Branch (SSB);
- Demed Aboriginal Corporation Adjumarllarl Rangers (DEMED);
- Njanjma Aboriginal Rangers
- Department of Land Resources Management (Bushfires NT);
- Weed Management Branch Department of Environment and Natural Resources;
- Arnhem Land Fire Abatement (ALFA);
- Northern Land Council (NLC) - Caring for Country regional ranger groups;
- Warddeken Land Management; and
- DevEx Resources Limited.

The primary stakeholders for the Nabarlek region are the Northern Land Council (NLC) and the Aboriginal Traditional Owners (TOs). DevEx undertakes exploration and rehabilitation activities in accordance the regulations for MLN962, the Final Environmental Impact Statement and existing Agreements entered into between the Company, the NLC and the TOs.

Prior to undertaking exploration works each year, Work Area Clearance meetings are held with TOs and representatives of the NLC. At these meetings TOs are presented with the proposed exploration program and their permission is sought for DevEx to proceed. The meeting provides a forum for TOs to ask questions and voice any concerns.

Where required, a component of the work area clearance process is for archaeological and heritage clearances to be conducted prior to commencement of works and any identified No-Go zones or heritage zones removed from the program.

## 2.1. Outcomes of Stake Holder Consultations

A meeting to discuss the work programme for the West Arnhem and Nabarlek Project was held on the 8th April 2021 with no issues raised by the NLC or TOs and permission was given for DevEx to proceed with the 2021 field programme. These activities are planned and/or underway and are described within this Mine Management Plan. COVID travel restrictions have meant that some disruptions to the field season may take place. Targets will likely require surface sampling and ground-based geophysics which was presented during the Work Area Clearance meeting.

On 15th September 2020 DevEx participated in the Nabarlek Mine Site Technical Committee (MTC) Meeting and outlined current exploration and rehabilitation activities during the 2019 to 2020 Year (MTC Minutes yet to be received). Key rehabilitation items discussed during the MTC, and included in this report are:

a) Outcome of Exploration and Remediation of drill pads
b) Weed Mapping of the Nabarlek Site
c) Remediation Option for the Nabarlek Radiological Anomalous Area (RAA)
d) Progression of a Revegetation Strategy
e) The Mill Run Off Pond
f) Ground Water Monitoring

With assistance from the NLC, DevEx actively employs senior Traditional Owners from the area to work on both exploration and remediation activities at Nabarlek. Remediation plans across the Mineral Lease are actively discussed and their involvement is encouraged.

DevEx had previously liaised on a regular basis with the Njanjma Rangers and ALFA about field activities and timing of weed control and bush fire management.

# 3. Project Details

Nabarlek is located within the western portion of the Arnhem Land Aboriginal Reserve, 28km east of the Gunbalanya (Oenpelli) Aboriginal community and approximately 300km east of Darwin in the Northern Territory (Figure 2).

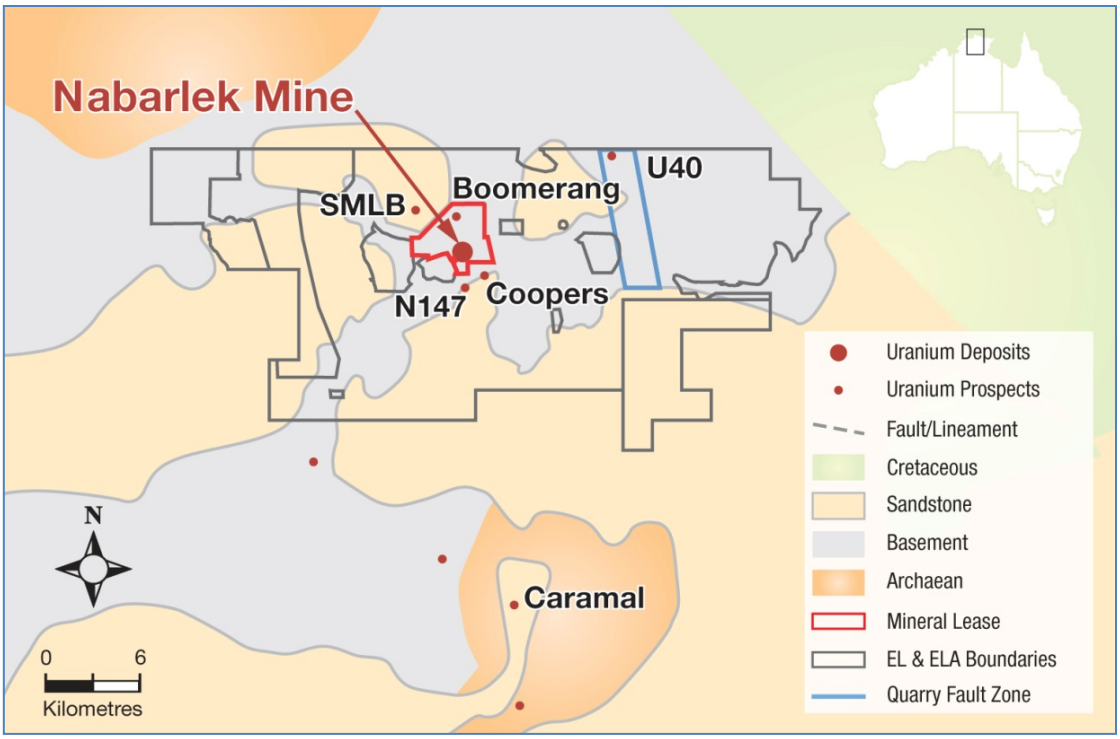



Figure 2: Location of Nabarlek Mineral Lease, Geology of West Arnhem Region, Arnhem Land

Table 3: Nabarlek Tenement Status

| Tenement | Holder | Status | Area ($km^2$) |
|---|---|---|---|
| MLN962 | Queensland Mines Pty Limited | Granted | 13.08 |

Access to the Nabarlek Project area from Darwin is via the Arnhem Highway to Jabiru, northeast to Oenpelli then east via the unsealed and seasonal Oenpelli – Maningrida road from Cahill's Crossing at the East Alligator River to the 'Three Ways' intersection to the Coburg Peninsula. From there, access is via the old Nabarlek Mine access road onto the Mineral Lease (Figure 3). Access within the surrounding tenements is good. In general, most of the country is flat lying and can be readily accessed by four-wheel drive during the dry season. Exceptions are the heavily dissected sandstone escarpments that are best traversed by foot and accessed by helicopter.

The 2021 work program will be operated out of the Nabarlek Camp which accommodates dry season operations. It is located adjacent to the Nabarlek airstrip for both convenience and safety considerations.

During 2013 all hired camp infrastructure items were demobilised to reduce the ongoing holding costs of maintaining the Nabarlek Camp. The two accommodation blocks, kitchen, ablutions/laundry block and self-bunded storage tank were demobilised. The large camp generator was replaced by a more appropriate smaller unit. The transportable office block remains, as does the storage containers and dangerous goods container which are located adjacent to the camp office.

Due to the short dry season exploration program, the camp generator and light vehicles will be serviced by drummed fuel stored in the self-bunded dangerous goods container. A hydrocarbon spill kit will be located adjacent to this area. Drilling companies will source fuel from Darwin or Jabiru utilising a truck mounted fuel tank.

A temporary ablutions block has been hired and connected to the established septic system (tank and soakage trench) which was installed by licenced plumbers when the original ablution block was established in 2008.

There is an existing water bore in the camp environs that has suitable water quality, water depth, and location and provides sufficient volumes of water. The camp bore is not being used for potable water and all drinking water is now bottled water.

The small volumes of water required for drilling and camp operations are not of a level that requires further licensing. Measurement of the standing water level (SWL) in the camp bore commenced in the 2012 dry season. The measurements, although irregular, do indicate that there were no draw-down effects on groundwater levels from on-site activities. Measurement of the standing water level in the camp bore will continue to be undertaken during the 2021 dry season with the recommencement of the exploration program.

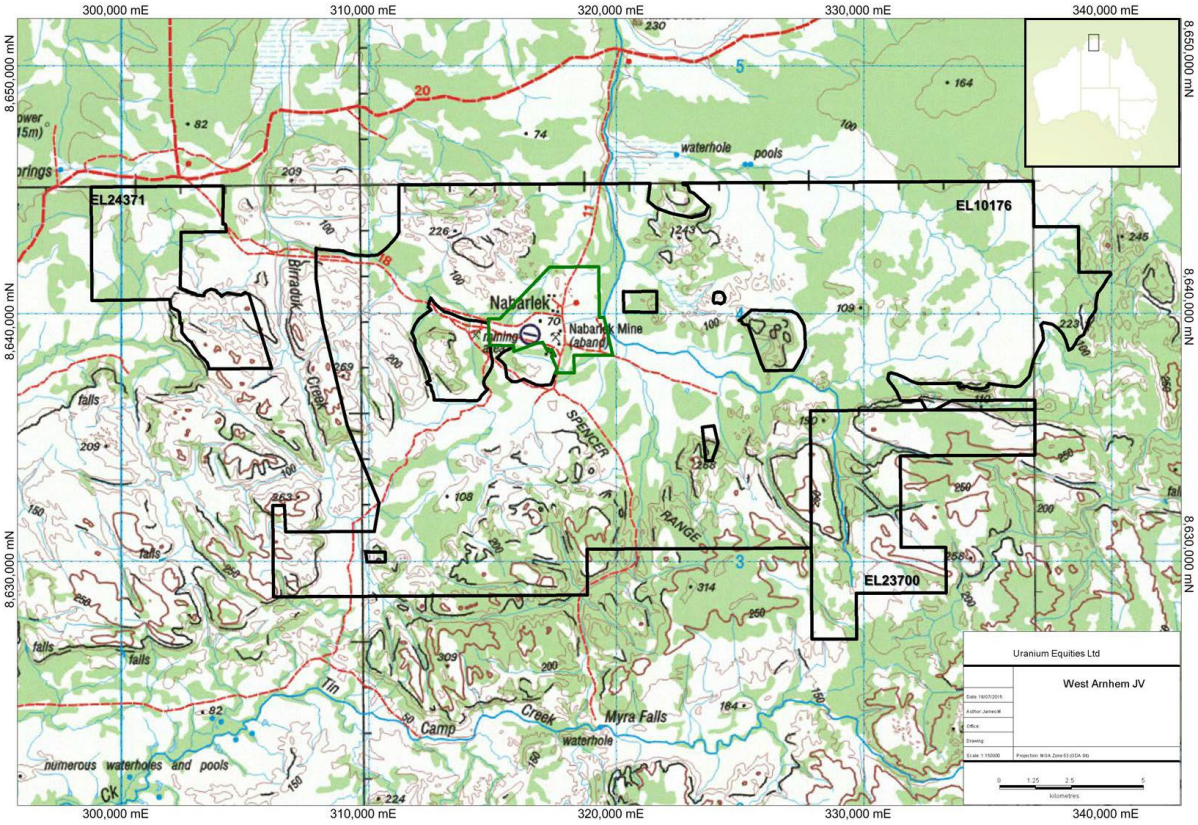



Figure 3: Topographic location of Nabarlek Project

## 3.1. Previous Activities and Current Status

### 3.1.1. Historical Activities

Queensland Mines Pty Limited (QMPL) discovered surficial uranium mineralisation in the Nabarlek region in June 1970 from the follow-up of an intense airborne radiometric anomaly.

Initial exploration work included trenching, mapping, scintillometer surveys and sampling. Drilling commenced from July to November 1970, then again from April to December 1971. The initial drilling concentrated on delineating the Nabarlek orebody with minimal exploration work conducted on the area surrounding the orebody.

On the 15th November 1977, an environmental impact statement was prepared by Queensland Mines Limited ("QML") in relation to the development of the Nabarlek uranium deposit. This was prepared in accordance with the Environment Protection (Impact of Proposals) Act 1975-1975 and subsequently revised in accordance with Paragraph 8.1 of the Environmental Protection Administrative Procedures subsequent to public comment. The Final Environmental Impact Statement (FEIS) was submitted on January 1979 to the Minister for Environment, Housing, and Community Development and approved.

The Nabarlek mine was operated by QMPL from 1978 until 1988; mining was conducted in one campaign of 143 days duration in the dry season and the ore was stockpiled on a custom built impermeable pad. The mill was built through the following wet season and milling commenced in 1980. A total of 606,700t of ore was milled to produce 11,084 t of $U_3O_8$ product. During this process 2.3Mt of waste rock material was temporarily stockpiled and 595,900t of tailings material was deposited in the mined out pit.

Agreements between QMPL and the NLC, and noted in the FEIS, set aside certain facilities to become the property of the NLC, holding QMPL exempt from decommissioning of these facilities. These facilities extend to the permanent accommodation area and associated facilities, the airstrip, the water bore sites and access roads, administration buildings and barge landing, water and diesel fuel tanks, the remaining concrete pads, the refuse and sewerage sites and other equipment (the Facilities). This agreement was endorsed by the Commonwealth Minister for Aboriginal and Torres Strait Islander Affairs.

Rehabilitation commenced in part in 1988 with the clean-up of the mill. In 1992 the pond surfaces were scraped and all residues returned to the pit and the tailings were prepared for consolidation with the insertion of de-watering wicks and the placement of a dry surface cover, geotextile and waste rock. This was left for 6 years to ensure full subsidence. Final dismantling of infrastructure and transport off site occurred in 1994/95 and final revegetation seeding was completed in December 1995.

Remaining Facilities were handed over to the NLC (or Arnhem Land Trust) on 31st December 1995. In 1996 many of the items were sold by tender and items were required to be removed by 31 October 1996. The two large tanks were also reported as purchased and an extension of time was given to the purchaser through to 1997.

The site has still not achieved regulatory release, despite initial applications. Various papers have been published by the Supervising Scientist and other government personnel on the status of the rehabilitation on the lease many with conflicting views. Recent issues affecting the rehabilitation success were; the devastation caused in 2005 by Cyclone Monica and a firebombing incident, destroying fire intolerant species. However, revegetation is now well on its way to achieving a self-sustaining open woodlands environment, consistent with the revegetation requirements and wishes of the Traditional Owners.

No exploration activities occurred within the mine lease during the period from 1973 to 1981. Exploration work resumed in 1981, with geochemical soil and track etch radon surveys conducted over parts of the Mineral Lease. Drilling was initiated from 1983 to 1984 to target eight anomalous zones identified from the surveys.

A further exploration hiatus then followed until 1994, when AFMEX conducted drilling operations to the southeast and northwest of the mine. Several water pollution control observation bores were emplaced around the mine and stockpile area for the closure and rehabilitation stage of the mine in 1984.

From 1994 until 2007, no further drilling or geological sampling was carried out on MLN962. However a number of airborne surveys were conducted over the Mineral Lease which has been part of wider regional surveys conducted by Cameco Australia Pty Limited, including radiometrics, magnetics, hyperspectral and electromagnetic (GEOTEM/TEMPEST) surveys.

From 2008-2017 work completed included various drilling campaigns testing conceptual geochemical and structural targets, none of which returned significant uranium results.

### 3.1.2. Recent Exploration Work

During the 2018-19 field season a 3-dimensional IP survey was completed over the Nabarlek Uranium Mine to map extensions to alteration and sulphides associated with uranium mineralisation, resulting in the definition of a chargeability anomaly located beneath the historical open pit. The anomaly is located beneath the Oenpelli Dolerite and is interpreted to be a deflected extension of the North Fault, which was a controlling feature of the Nabarlek deposit and the position where

highest grades were recorded. The extension of this crucial feature has not yet been located beneath the Oenpelli Dolerite with drilling largely having targeted to the north.

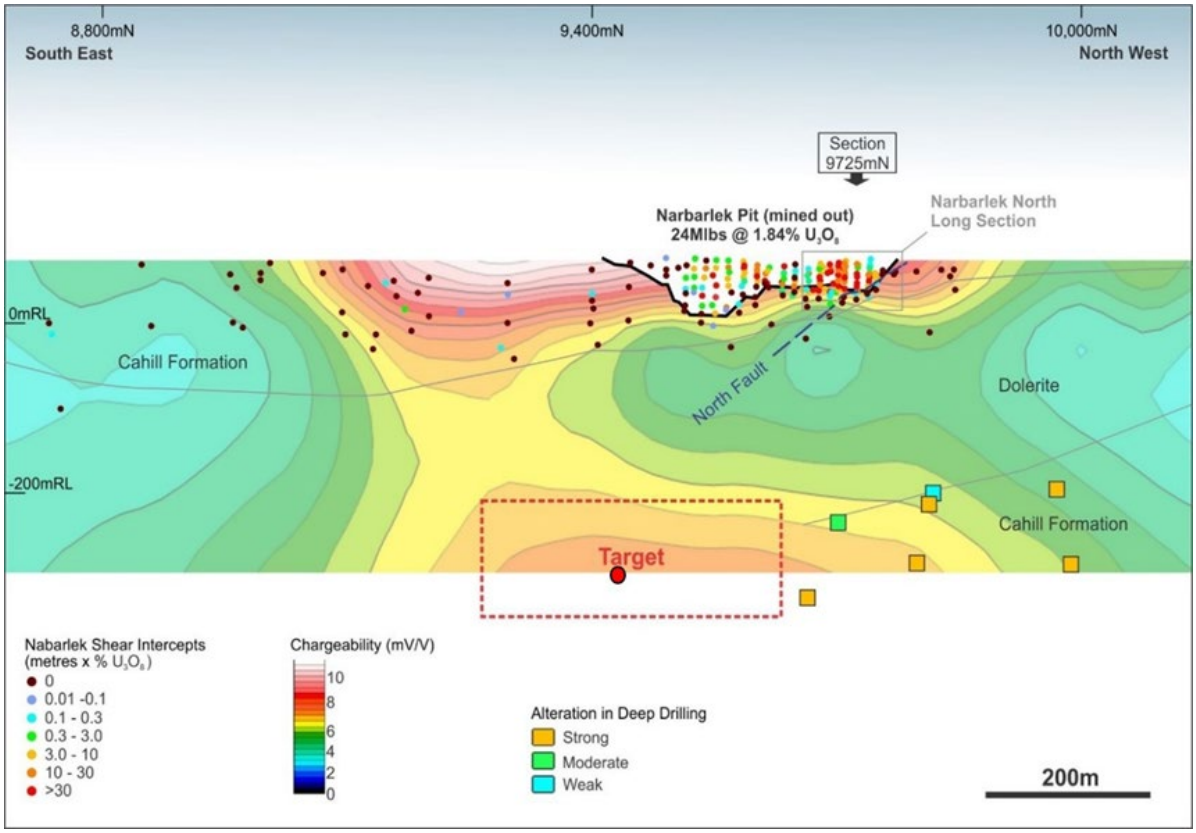



Figure 4: Nabarlek long-section (with 3DIP slice at 10120mE) showing piece-point location of proposed drill hole (red dot) beneath the pit in relation to the IP chargeability anomaly which is the drill target for this programme. Note position of alteration in previous deep holes 250m to the north missed the IP anomaly but showed encouraging fault breccias and silica sericite alteration

Six holes were drilled for a total of 1,490.4m which comprised 1,118.8m of diamond (NQ and HQ) and 371.6m of RC. The deeper diamond holes were drilled to test a chargeability high defined from work in 2018-19. This feature was proposed to be caused by sulphide mineralisation along the deflected position of the continuation of the North Fault below the Oenpelli Dolerite, shown in Figures 4-5. Although the grades of the mineralisation are below the previous high-grade intercepts seen within the historical Nabarlek Mine, the results confirm the continuation of mineralisation beneath Nabarlek with significant space surrounding this drilling to host repetitions of the high-grade Nabarlek type deposits.

The previous deep drilling assumed a linear path from the position of the Nabarlek Shear following a hypothetical northern plunge to the position of the shear beneath the Oenpelli Dolerite. DevEx interprets favourable structural dilation within the Myra Falls Metamorphics (Cahill Formation equivalent) where F6 and Nabarlek Shear “type” structures pass through the upper and lower contacts of the Oenpelli Dolerite. The southern projection of the North Fault provides additional conceptual support that the most favourable structural position for repetition of Nabarlek Uranium mineralisation is immediately north of the intersection of the projected North Fault with the Nabarlek Shear where it lies immediately beneath the Oenpelli Dolerite. The recent 3DIP chargeability anomaly provides further support to this exploration target, as shown in Figure 5.

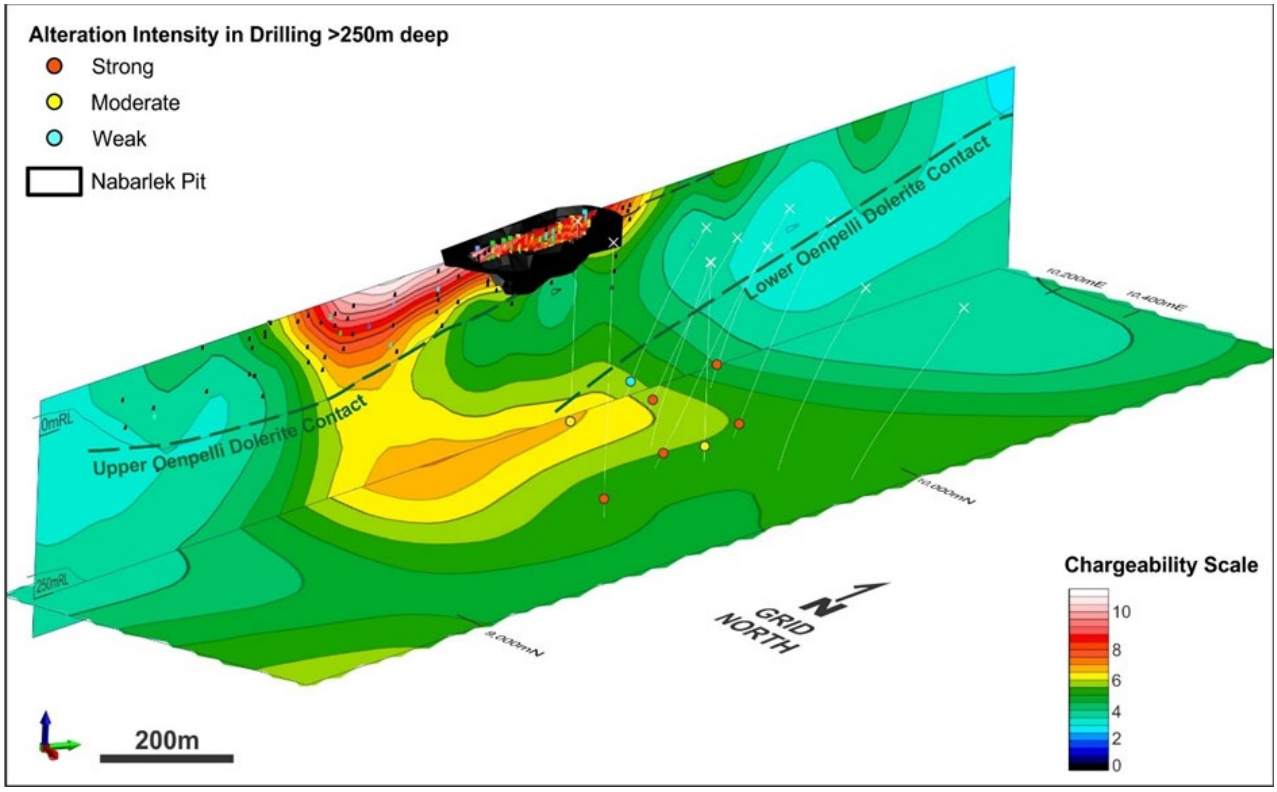



Figure 5: 3rd Dimension representation of IP Anomaly beneath Nabarlek pit in context to historical drilling. Nabarlek long-section showing mined-out pit in relation to the deeper IP chargeability anomaly which is the drill target for this programme. Note of alteration in previous deep holes north of the IP anomaly showed encouraging breccia faulting and silica sericite alteration

The Nabarlek deposit was hosted by Cahill Formation schists just above the flat lying, 250m thick, Oenpelli Dolerite sill. The new chargeability anomaly is located in Cahill Formation schists just below the lower contact of the Oenpelli Dolerite sill and is an attractive drill target. The Oenpelli Dolerite predates mineralisation and its upper and lower contacts provide favourable positions for structural complications in through-going mineralised feeder structures such as the Nabarlek Shear and the North Fault (Figure 5).

Drilling into the primary target below the Oenpelli Dolerite intersected the targeted Nabarlek F6 Fault Breccia in Hole 1 (19NBDD001) and Hole 2 (19NBDD002). Low-grade uranium mineralisation was seen within this fault breccia in both holes with Hole 2 showing the most promising result, intersecting the strongly silicified F6 fault breccia comprising a broad zone of pyrite mineralisation which extends into the footwall schists. At the base of this fault zone, a thin interval of uranium and anomalous gold mineralisation was encountered (see Table 4 and Figure 6).

Elevated uranium mineralisation (0.3m @ 525ppm U3O8) appears to be associated with a noticeable drop in silica content at the base of the breccia (possibly de-silicified). This style of mineralisation bears strong similarity to that seen within the historical Nabarlek ore zone suggesting the potential for a Nabarlek-style deposit to occur in the near vicinity.

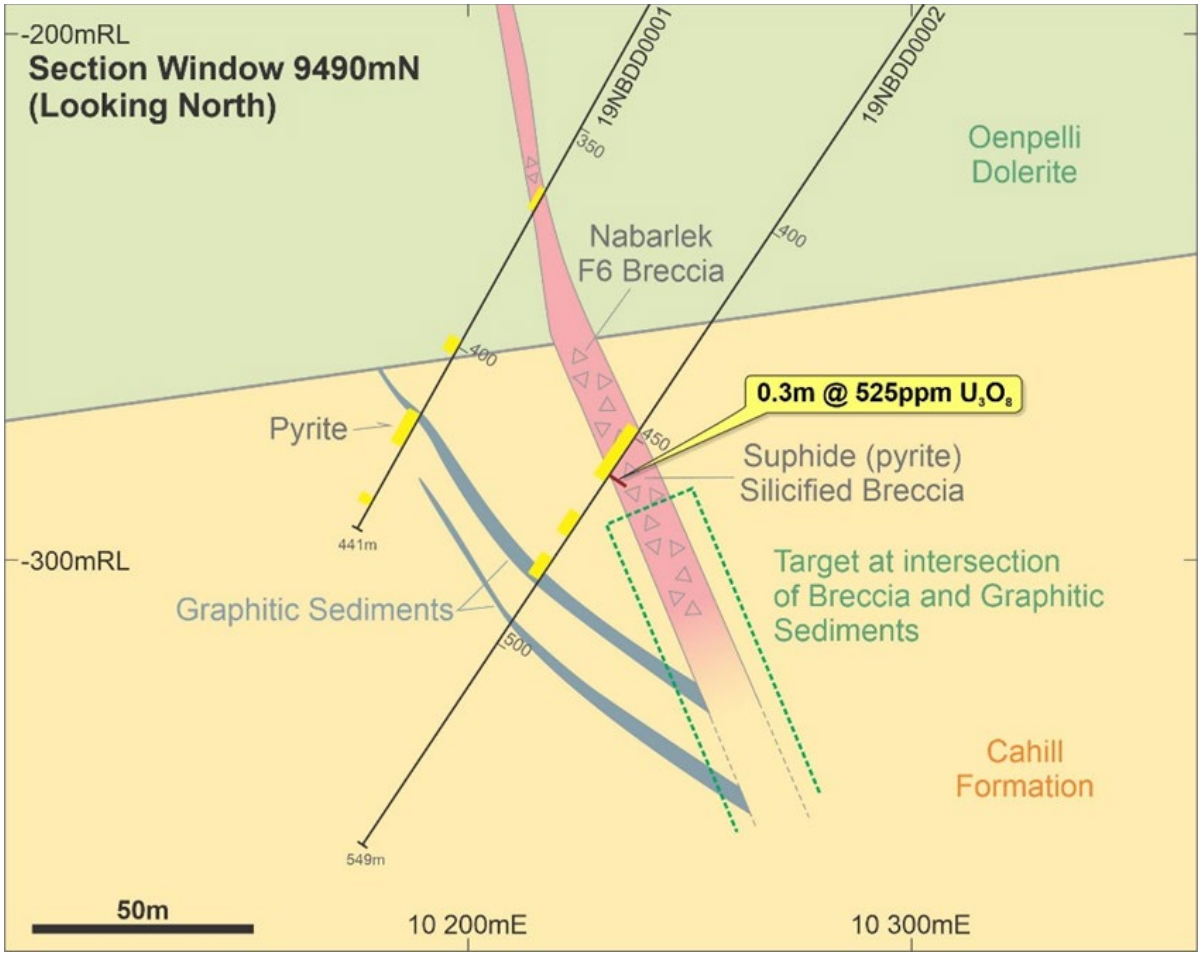



Figure 6: Cross-section window 9490mN looking north beneath historical Nabarlek Mine, showing 2019 drilling beneath the Oenpelli Dolerite

Several beds of south-east dipping graphitic sediments were also noted further down the hole (between 482.9m and 494.6m). Graphitic sediments are typically targeted by uranium explorers as they provide the catalyst for uranium enriched fluid to deposit along fault zones. The intersection of the F6 Fault Breccia and these or other graphitic sediments at Nabarlek will provide priority targets for further drilling.

Other drill holes into the shallower Nabarlek targets south of the historical mine tested areas where previous drilling was too broad spaced to effectively test for Nabarlek style mineralisation, including one hole in the Oenpelli dolerite. No significant uranium or gold mineralisation was encountered from this drilling.

Fieldwork has not been possible during the 2020-2021 reporting period due to travel restrictions imposed as a result of COVID-19. The Company has used the time to re-evaluate the prospectivity of the Nabarlek project and as a result have identified new targets proposed for testing in the coming year.

Extensions to and repeats of the Nabarlek deposit itself remain strong possibilities due to early exploration focusing on a Proterozoic unconformity-related uranium geological model. In practical terms this has meant:

- Limited exploration drilling at depth - away from the theoretical position of the unconformity above Narbarlek (the Kombolgie Sandstone sitting unconformably above the Nabarlek metamorphics has been eroded away).
- Discounting of possible “blind” deposit positions (a “gets weaker with depth” mentality).
- Discounting of the dolerite as a major host (despite age dating evidence to the contrary and

sub-economic mineralization at the N147 Prospect).

Also, an overly tight sample selection criteria on historical drilling has resulted in a paucity of geochemical data away from high-grade zones.

The conceptual targets derived from the review will be further tested with surface geochemistry with the potential for the use of ground geophysics to evaluate their merit.

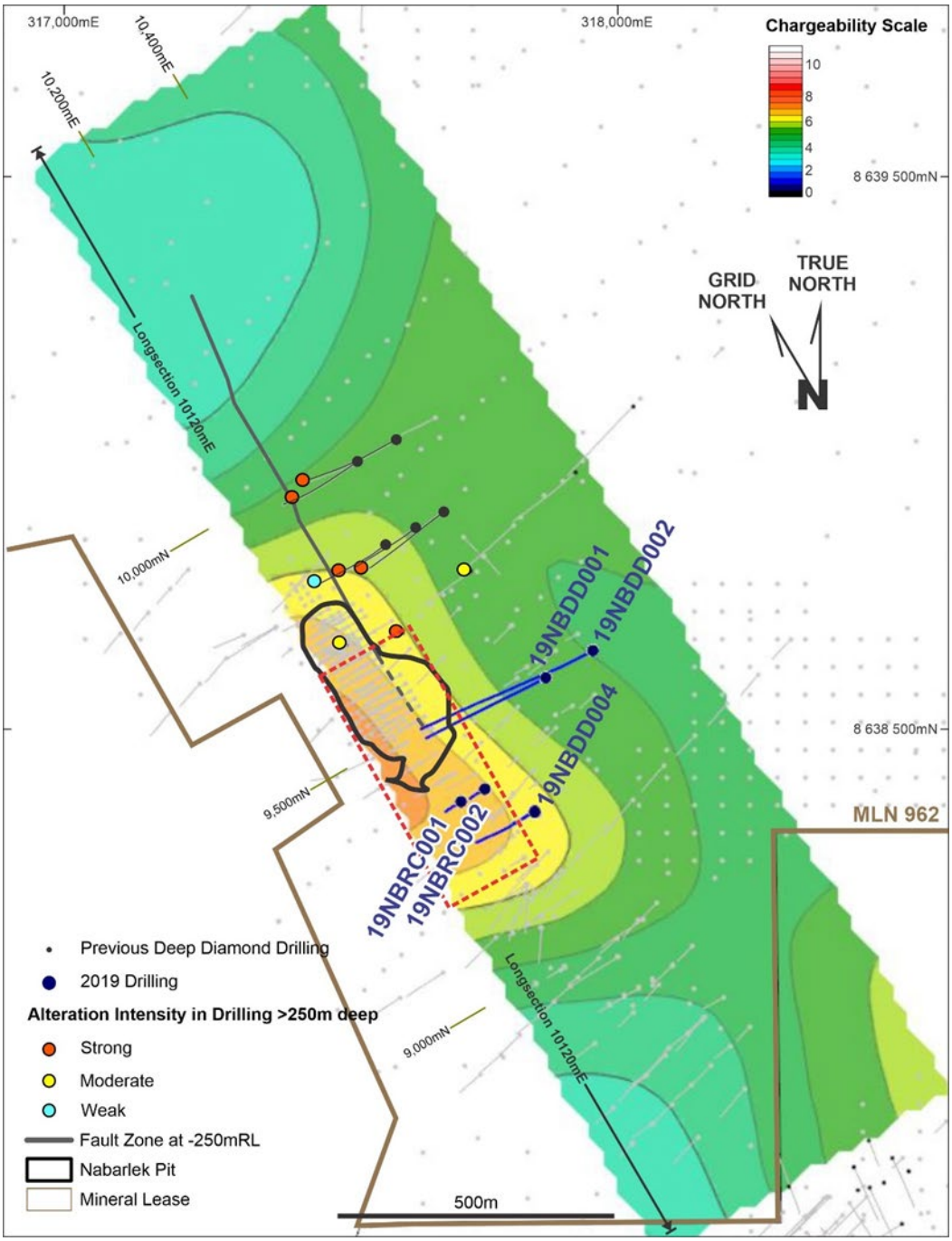



Figure 7: 2019 RC and Diamond Drilling (in blue) at Nabarlek Prospect testing Nabarlek 2018 IP and structural target.

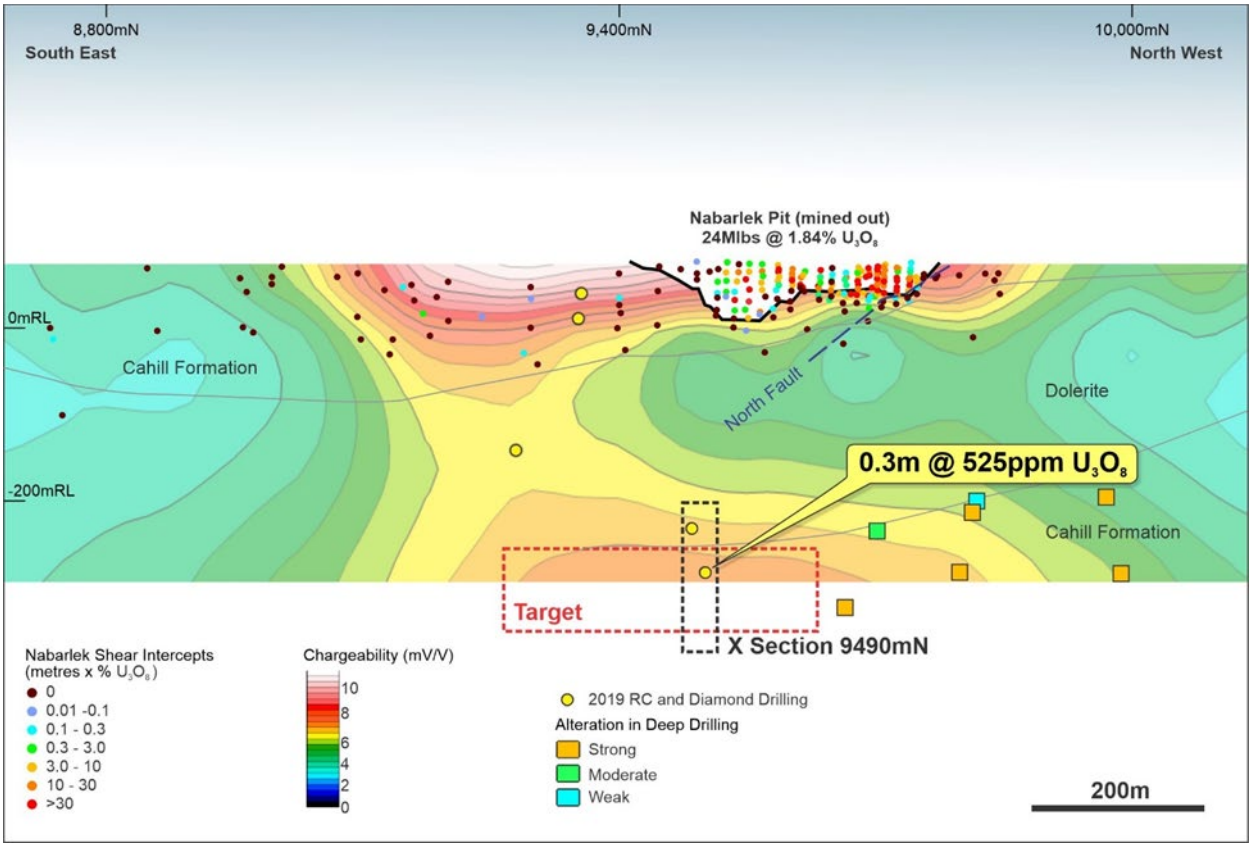



Figure 8: Nabarlek Long section showing the location of the 2019 drilling and the anomalous intercept in hole 19NBDD002 beneath the Oenpelli Dolerite.

Table 4: Significant Intercepts from 2019 drilling

| Prospect | Hole | East GDA | North GDA | East Local | North Local | RL | Depth (m) | Dip | True Azi | From (m) | To (m) | Interval | Au ppm | $U_3O_8$ ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nabarlek | 19NBDD001 | 317,859 | 8,638,595 | 10,418 | 9,467 | 74 | 441 | -56 | 243 | No significant intercept | | | | |
| | 19NBDD002 | 317,944 | 8,638,644 | 10,518 | 9,467 | 74 | 549 | -53 | 242 | 458.1 | 458.4 | 0.3 | 0.25 | 526 |
| | 19NBRC001 | 317,706 | 8,638,371 | 10,174 | 9,351 | 81 | 78 | -60 | 240 | No significant intercept | | | | |
| | 19NBRC002 | 317,749 | 8,638,394 | 10,224 | 9,351 | 81 | 78 | -60 | 240 | No significant intercept | | | | |
| | 19NBDD004 | 317,839 | 8,638,352 | 10,283 | 9,271 | 80 | 254 | -49 | 241 | No significant intercept | | | | |

## 3.2. Proposed Activities

### 3.2.1. Exploration

The conceptual targets derived from the 2020-2021 review are proposed for testing with surface geochemistry, mapping and ground geophysics. Specific plans are currently being developed to identify the best ways to test the merit of each of the concepts. These concepts are:

- Additional RC/Diamond drilling at the N147, Nabarlek Pit, and North Buffalo Prospects (Figure 9).
    - 12 RC/DDH holes are planned to test these targets.
    - The Security calculation has been modified to reflect these holes.
- Surface mapping and rockchip sampling of historical breccias within MLN962 for gold.
- Potential for mineralisation along cross structures (NE-SW), orthogonal to the mine trend.

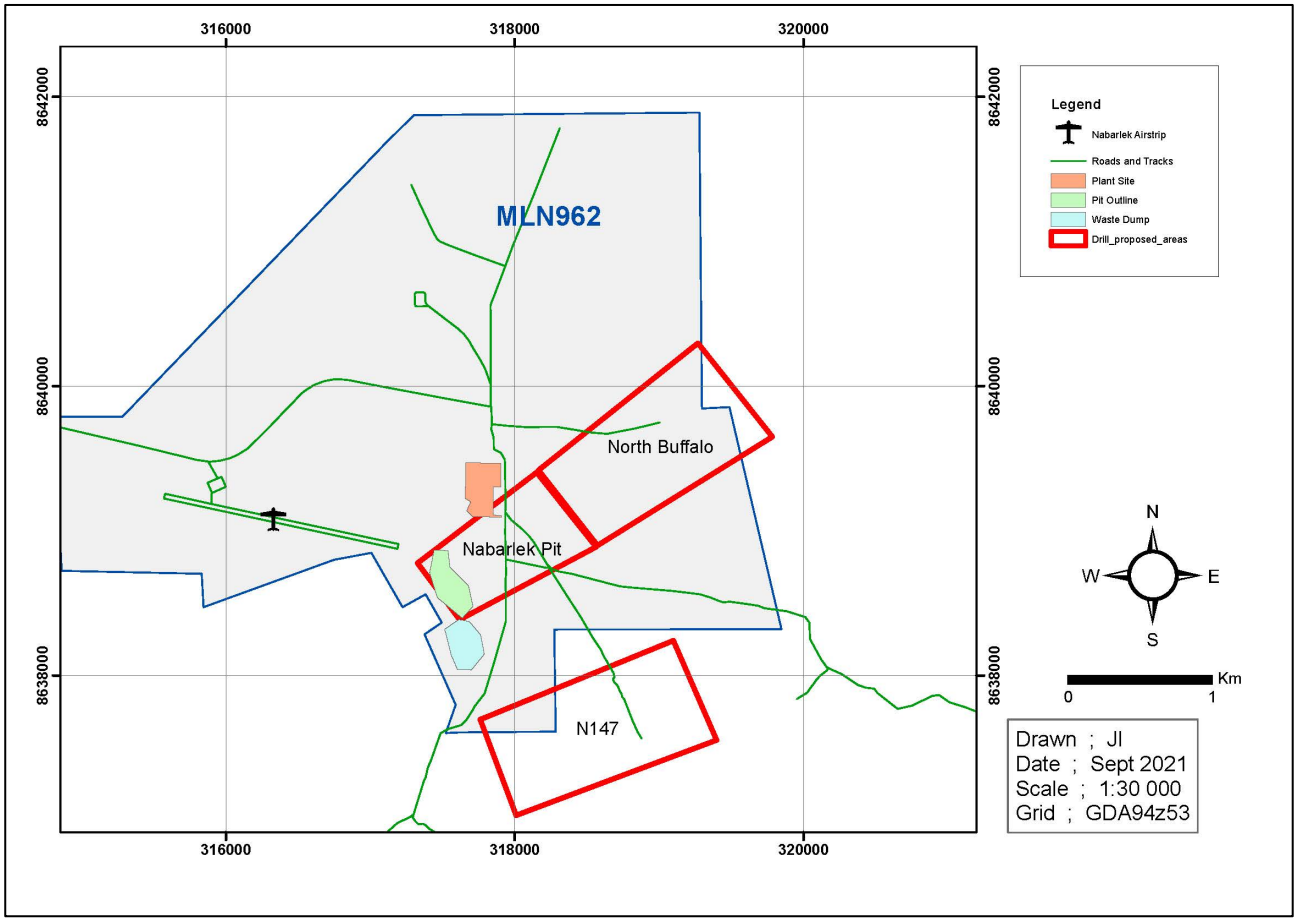



Figure 9: Exploration Prospect Location Plan

### 3.2.2. Rehabilitation

DevEx are preparing to rehabilitate the Radiological Anomalous Area (RAA) and Mill Run-Off Pond as per the approved plan submitted within this and the previous MMP. These works are scheduled to commence on the 12th July 2021.

In addition, during the reporting period, DevEx have carried out

a) Weed spraying of the areas highlighted within the Weed Mapping Report.

b) Water sampling of surface sites and ground monitoring bores.

Plans to progress a revegetation strategy with the Njanjma Aboriginal Rangers has been put on hold. All key Njanjma Aboriginal Ranger staff involved in the strategy are no longer with the ranger group. This strategy will require some restructuring over the next 12 months.

### 3.2.4. Workforce

Workers contracted for rehabilitation work will comprise a supervising field technician and a Traditional Owner to assist.

# 4. Current Project Site Conditions

## 4.1. Climate

The Nabarlek project is located within the tropical region of the Northern Territory. This tropical environment is characterised by two distinctive seasons, the 'wet' and the 'dry'. From October/November through to March/April, high rainfall and humidity brought on by monsoonal weather patterns are distinctive of the wet season. Much of the annual rainfall experienced in the region falls within these months. Cyclones and ex-cyclones can also be experienced within this time frame bringing high winds and increased rainfall.

The average and actual rainfall at Jabiru Airport (Bureau of Meteorology Station Number: 014198), is shown in Figure 10. This recording station has been used as it is the closest recording station to the Nabarlek Mine with a full set of records. Nabarlek does not have its own weather station.

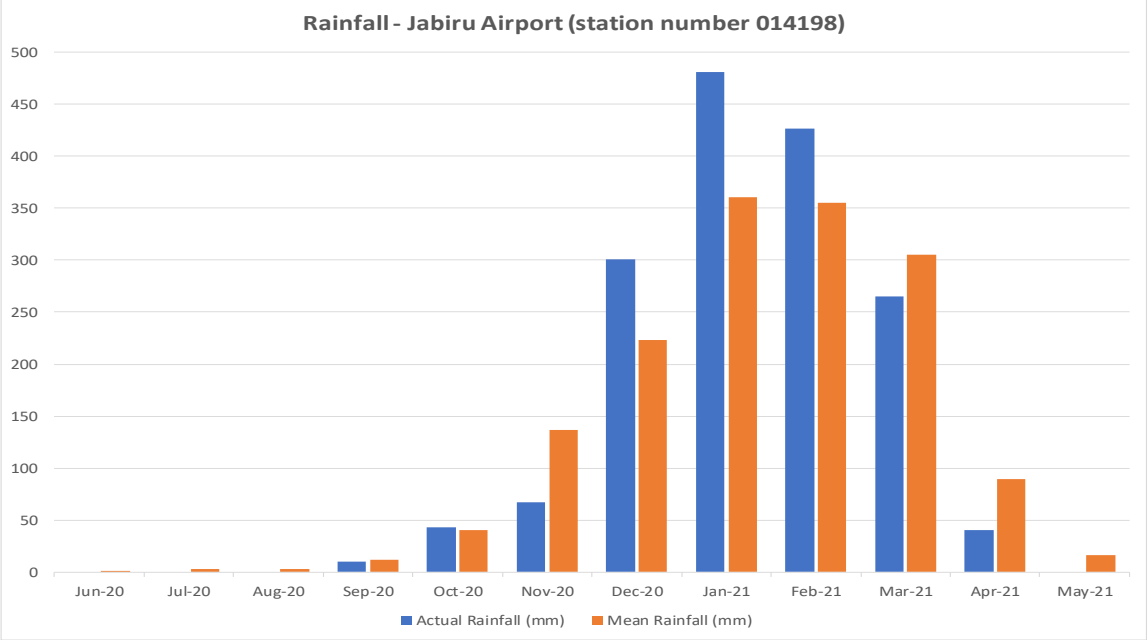



Figure 10 Average and Actual Monthly Rainfall (mm) during 2020/2021

## 4.2. Land Area Type and Geology

Nabarlek area is situated in gently undulating country, at the headwaters of the Cooper Creek catchment, in an embayment of the Arnhem Land sandstone plateau. The Nabarlek area is about 60 metres (m) above sea level and is some 70 kilometres (km) upstream of the flood plains. The project is located more than a kilometre from Cooper Creek on high ground. The project area is not subject to flooding and during dry seasons Cooper Creek ceases to flow. Vegetation in the area is open eucalypt forest and woodland typical of that found throughout the lowland country with ground cover consisting of annual grasses. There is good vehicular access throughout the region due to the pre-existing mine infrastructure.

Outcropping rock is poor within the area and most of what is known of the geology has been derived from previous drill programs and mapping in the old open pit area. The oldest rocks are a sequence of Early-Proterozoic metamorphosed sediments (semi-pelites) and amphibolites termed the Nourlangie Schist; this unit hosts the Nabarlek Deposit (Glass & Hollis, 2012).

The Nourlangie Schist is faulted against the Nabarlek Granite which has been intersected in two holes beneath the Nabarlek Deposit. This granite also outcrops a few kilometres to the northeast of MLN962 on adjacent EL10176.

In the mine area, the Nourlangie Schist is intruded by a 220m-250m thick dolerite (Oenpelli Dolerite) which comprises a significant part of sub-cropping rock immediately north of the open pit site.

Middle Proterozoic shallow dipping sandstone (Kombolgie Formation) unconformably overlies the sequences described above and outcrops to the immediate north, west and south of the old mine site. Drilling has shown that up to 50m of sandstone can occur beneath the ground surface in areas covered by lateritic soils and sands.

The Nabarlek Fault Zone (or Shear Zone) controls the mineralisation at Nabarlek and forms a NW–SE trending structure through the mineral lease (Figure 11).

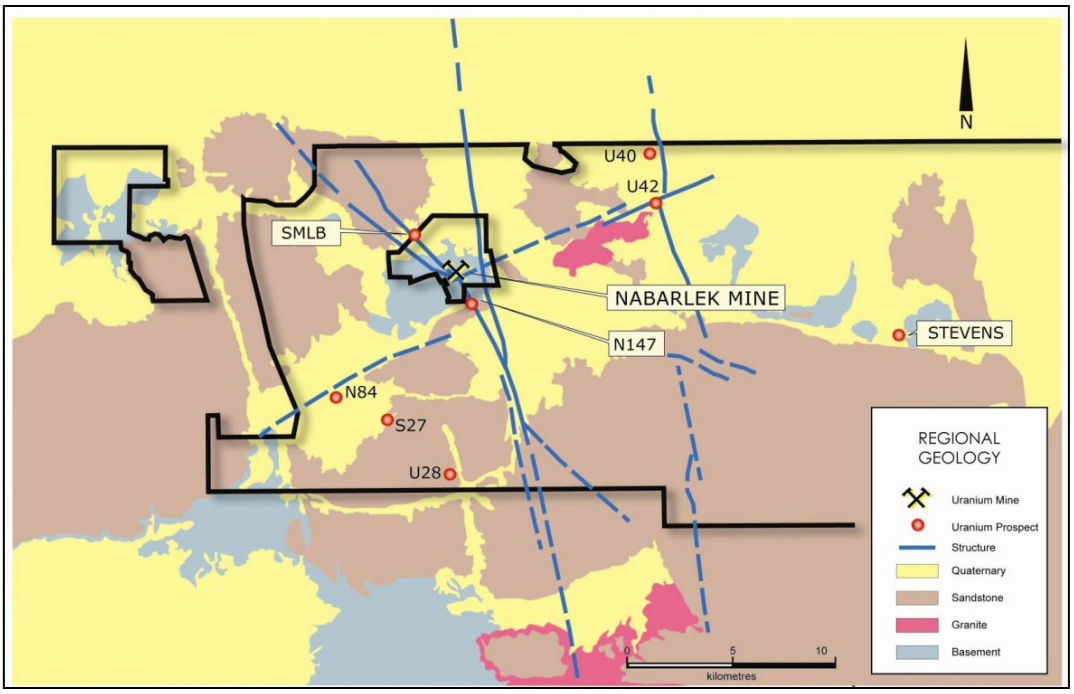



Figure 11: Regional Geological Framework

## 4.3. Hydrology

The major watercourses in the project area are the Cooper Creek and the Birraduk Creek which both flow to the northwest. There are two smaller creeks, Kadjirrikarmada and Buffalo, which run into Cooper Creek. In addition, there are several smaller drainages.

Stream flows are variable throughout the region, reaching peak discharge levels during the wet season months of February and March. Many of these drainages have pools until late in the field season. The first wet season floods flush the creek and billabong systems of stagnant and naturally eutrophic waters that build up during the dry season.

The mine site is elevated approximately 16m above the bed of Cooper Creek and has not been subject to stream flooding from the creek.

There are two aquifer systems at Nabarlek. The first aquifer system is a deeper aquifer that occurs under semi-confined conditions within a fractured rock aquifer system, which is housed in both the dolerite sill and Nimbuwah Complex Schists. The Nimbuwah Complex rocks are weathered to a depth of between 22 and 44 metres with fractures containing groundwater, occurring within the zone of weathering. This aquifer is generally overlain by a weathered clayey layer that behaves as an aquitard. The deep groundwater movement is along the fractures and at the boundary of the weathered and fresh rock where some secondary porosity has presumably been developed in the early stages of the weathering process.

The second aquifer system is relatively shallow and consists of soil, laterite and colluvium/alluvium overlying the weathered rock and is generally quite permeable. On elevated terrain this shallow aquifer is perched, but in some cases particularly in low lying zones, the two aquifers are well connected by a saturated aquitard. This is the case under the Forest Irrigation Area (FIA) to the north-west of the evaporation ponds with the shallow and deep aquifers considered to behave as one single unit (Parker 2000).

The fractured rock character of the deep aquifer of the dolerite and schist rock types means that preferred pathways are very important in controlling groundwater and solute movement, while significant heterogeneity can exist in the shallow aquifer also. It has been suggested by Salama and Verma (1985) that the deep aquifer may be subdivided by the nature of the bedrock in which it occurs into the following zones:

- Chlorite – a zone of chloritised schist surrounding the former orebody and of low transmissivity (1–10 $m^2$/day) (Salama 1986), behaving more as a slightly fractured aquitard;
- Dolerite – underlies parts of the mine site; and
- Schist – occurs north of the dolerite band and is overlain by Kombolgie sandstone.

Interpretation of any shallow aquifer groundwater flow has not been possible due to the limited data, both current and historical, that is available. Deep aquifer groundwater flow has been shown diagrammatically in Figure 12.

Groundwater measurements undertaken prior to the commencement of the project, while showing some seasonal variation, indicated that the groundwater is moderately soft with total dissolved solids ranging from 150mg/L to 235mg/L with the principal cations being magnesium and sodium, and anions being mainly bicarbonate, chloride and nitrate. Heavy metals such as copper, lead and zinc were all low, reflecting the low base metal content of the ore body. Radium and uranium, as expected, occurred in high levels within areas that contact the uranium ore, but appeared to decrease downstream of the deposit.

The Company and DPIR have monitored ground and surface waters throughout the project area since completion of operations. The results of this monitoring have been published annually. The present exploration activities are not expected to have an impact on the water resources of the area as only small amounts of water will be sourced for camp and drilling activities.

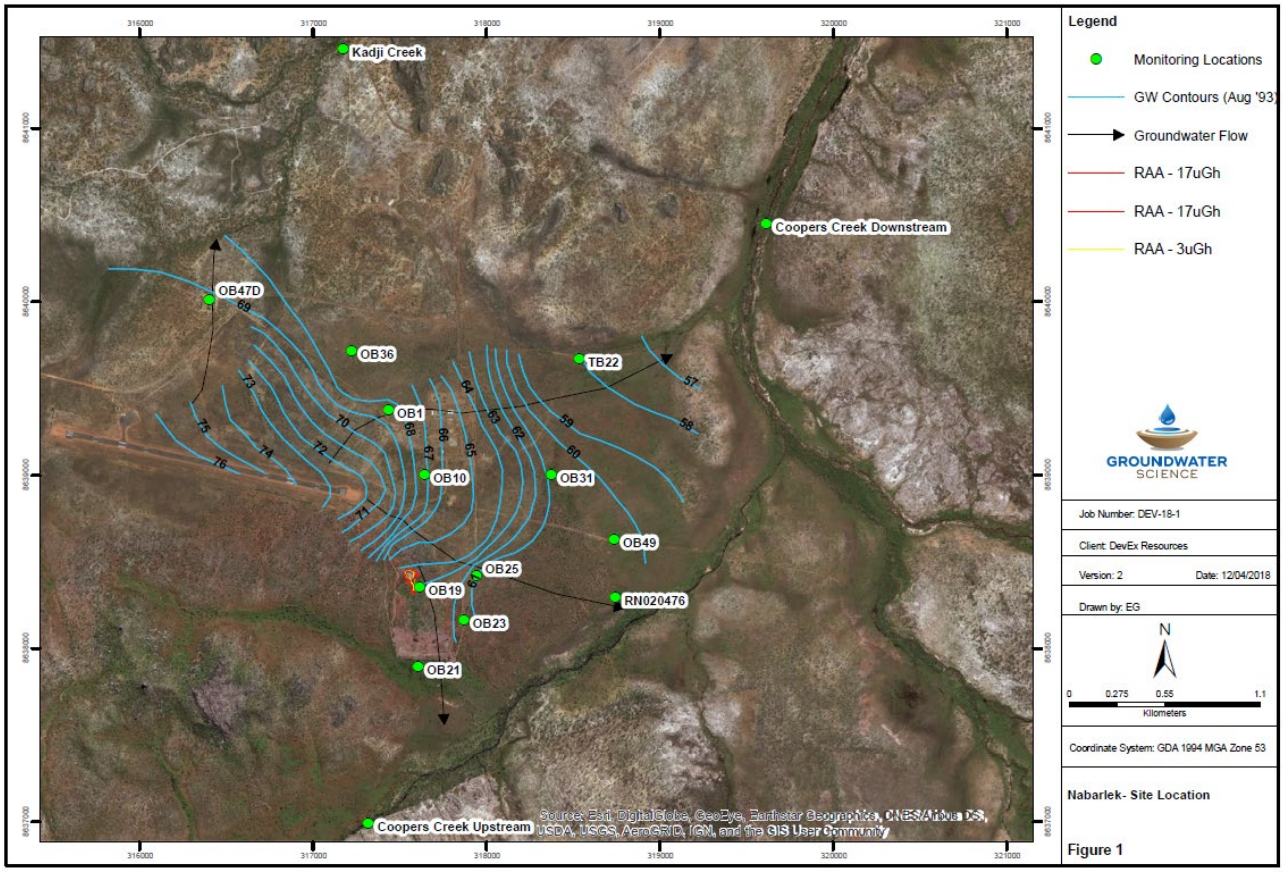



Figure 12: Groundwater flow is inferred to be to the east and south of the RAA and the mine pit, based on the water table elevation measured from an extensive suite of wells in August 1993 (QML 1993. Review of water and environmental monitoring: 1 Sept. 1992 to 31 Aug 1993)

Outcomes from the most recent 2020 ground water and surface water monitoring at Nabarlek is discussed in Section 5.7.5.

The only known users of the surface water resources that originate or pass through the Nabarlek Project area are the local Aboriginal people. Their usage is entirely related to cultural and recreational activities such as swimming and fishing in flowing creeks/rivers in the region. There is no evidence that flowing water is likely to be contaminated.

There is not considered to be any exposure risk to local Aboriginal people from groundwater on the Mineral Lease, as access to groundwater is limited. All water bores are capped and it is unlikely that people in transit through the Mineral Lease would attempt to extract water from random monitoring bores for consumption.

## 4.4. Flora and Fauna

The flora and fauna within the area has been assessed in a number of ways. A number of internet databases have been set up to assist in the identification of possible threatened or endangered species within any given area. These databases include the Environmental Protection and Biodiversity Conservation (EPBC), Protected Matters Search Tool and the Northern Territory Natural Resource Management (NT NRM) Infonet.

Each of these tools have been utilised to assess the presence of potentially endangered species. The EPBC search tool identified seven threatened species that may occur within the area. These are:

- Red Goshawk – *Erythrotriorchis radiatus*;
- Gouldian Finch – *Erythrura gouldiae*;
- Partridge Pigeon (eastern) – *Geophaps smithii smithii;*
- Brush-tailed Rabbit-rat – *Conilurus penicillatus;*
- Northern Quoll – *Dasyurus hallucatus;*
- Arnhem Rock-rat – *Zyzomys maini;* and
- Freshwater Sawfish – *Pristis microdon.*

The NT NRM Infonet database also identified threatened species that possibly inhabit the area. These include:

- Freshwater Sawfish – *Pristis microdon;*
- Arnhemland Egernia – *Egernia obiti;*
- Mertens' Water Monitor – *Varanus mertensi;*
- Yellow-spotted Monitor – *Varanus panoptes*;
- Emu – *Dromaius novaehollandiae*;
- Partridge Pigeon (eastern) – *Geophaps smithii smithii;*
- Red Goshawk – *Erythrotriorchis radiatus*;
- Australian Bustard – *Ardeotis australis;*
- Masked Owl – *Tyto novaehollandiae*;
- White-throated Grasswren – *Amytornis woodwardi;*
- Yellow Chat – *Epthianura crocea tunneyi;*
- Crested Shrike-tit – *Falcunculus frontatus whitei*;
- Gouldian Finch – *Erythrura gouldiae;*
- Northern Quoll – *Dasyurus hallucatus;*
- Northern Brush-tailed Phascogale – *Phascogale pirata*;

- Arnhem Leaf-nosed Bat – *Hipposideros inornata;* and
- Arnhem Rock-rat – *Zyzomys maini.*

Database searches through the Department of Natural Resources, Environment and the Arts (NRETA) and the Protected Matters Search Engine (Australian Department of the Environment and Water Resources) have been used to provide a full species list of flora and fauna and identify rare and endangered species in the area. The full report is provided in the EPBC and NRETA Infonet Database Searches (Appendix 3).

The main vegetation that occurred on-site prior to mining was eucalypt woodland forest dominated by *Eucalyptus tetrodonta, Eucalyptus Miniata, Corymbia bleeseri, Erythrophleum chlorostachys* and *Livistona humilis*, and other species common to these woodlands (Brock 1997 and Clark et al. 1987). Lower areas tended to be dominated by *Melaleuca spp*. including *Melaleuca viridiflora* and *Melaleuca leucadendra*.

The Company's Final Environmental Impact Statement (FEIS 1979) noted that there are no sensitive habitats in the vicinity of the site and no rare or endangered species of flora or fauna known to exist in the project area. Given the age of the FEIS, the Company commissioned a report on the likelihood of rare and endangered flora and fauna on the Nabarlek Mineral Lease and surrounding Exploration Licence area in September 2021. The Mines Branch – Mining Operations of the Department of Industry, Tourism and Trade (DITT) was provided with the report; *Assessment of Rare and Endangered Flora and Fauna* document (COOE, 2021) on 27 September 2021 in support of the Mining Management Plans (MMP) for DevEx Resources Limited (DevEx) West Arnhem Project. The document, which considers the risk of the likelihood of work impacting on a threatened species is integrated into the Company's drilling procedures documentation - Appendix 9.

Subsequently, Mining Operations (DITT) provided a request for additional information (RFI) on 8 March 2022. The request included:

- A revision of the likelihood assessment of threatened species (listed in Table 1 of the RFI) and an endangered ecological community, impact assessment of the proposed activities against the EPBC Significant Guidelines 1.1 for each at risk species/ecological community and inclusion of a management plan where relevant.
- Further information to demonstrate that the applicant has avoided impacts to Significant and Sensitive Vegetation and where required, adopted the minimum buffers recommended in the NT Land Clearing Guidelines.
- Details of how the siting of proposed target areas for disturbance (including proposed access tracks) and the pre-clearance survey will reflect any relevant management or planning requirements.

In response to Mining Operations RFI, DevEx commissioned COOE to research and compile a document providing the information requested; *DevEx West Arnhem Project MMP – Response to Department of Industry, Tourism and Trade Request for additional information*, dated 31 March 2022 (attached herewith as Appendix 14).

Traditional Owners have requested that the Company includes traditional food sources such as buchanania obovate in its revegetation plans. Revegetation is showing good progress, with variety of mature native plants, grasses and trees established and self-seeding throughout the Nabarlek Mine site. This is discussed below in the Nabarlek Rehabilitation and Closure Plan (Appendix2).

The Northern Territory Natural Resource Management (NT NRM) Infonet have been utilised to assess the presence of pest and potential pest animals that may occur within the area (Appendix 4: Nabarlek NRM Infonet Report), including:

- Cane Toad – *Chaunus marinus*;
- Asian House Gecko – *Hemidactylus frenatus*;
- King Quail – *Excalfactoria chinensis;*
- Eurasian Tree Sparrow – *Passer montanus;*
- House Mouse – *Mus musculus;*

- Black Rat – *Rattus;*
- Dingo / Wild Dog – *Canis lupus;*
- Cat – *Felis catus;*
- Horse – *Equus caballus;*
- Pig – *Sus scrofa*;
- Swamp Buffalo – *Bubalus bubalis;*
- Cattle – *Bos indicus / Bos Taurus;* and
- Goat – *Capra hircus.*

In addition, non-native grasses are common throughout the lease. Pasture species in the form of Mission Grass (*Pennisteum pedicellatum*) and to a lesser extent weeds such as Para Grass (*Urochloa mutica*) and Grader Grass (*Themeda quadrivalvis*) are found on rehabilitated areas throughout the Mineral Lease. DevEx has conducted wet season weed spraying campaigns on the Mineral Lease for the past six years and made significant progress in reducing weeds. The aim of these spaying campaigns is to reduce the existing weed/seed bank, progressively reducing the amount of viable weed seeds in the area and preventing further spread of weeds. This work is planned to continue in the 2018 wet season. The longer term aim of the program is to move progressively to burning as the primary weed management practice with spraying to supplement in areas of heavy infestation if required.

## 4.5. Current Land Use

Current use of the land surrounding the site includes hunting, gathering and cultural use by the Traditional Owners. Access by others is limited almost exclusively to government officers and Company employees which is controlled by a permit system managed by the Northern Land Council
.

# 5. Environmental Management System

DevEx understands that responsible environmental management is essential to sustainable business success and is committed to environmental best practice. Careful environmental planning and implementation of appropriate management measures will help minimise the potential environmental impacts and will enhance successful rehabilitation of disturbed areas.

DevEx's Environmental Management System (EMS) for all exploration activities are provided in this section. This EMS has been structured to comply with the requirements of the international EMS standard ISO 14001.

The COOE Pty Ltd report, *Assessment of Rare and Endangered Flora and Fauna* (provided under Drilling Procedures Appendix 9) together with the response to the RFI, *DevEx West Arnhem Project MMP – Response to Department of Industry, Tourism and Trade Request for additional information* (provided as Appendix 14), set clear guidelines and commitments that are to be taken over and above and in addition to all standard DevEx procedures set out in the body and appendices of this document. The most salient additional requirements under these documents are:

- Pre-clearance surveys by suitably qualified and experienced ecologist.
- Project wide speed restrictions of 60km/hr in daylight hours and 40 km/hr between and including dusk and dawn.
- No new water crossings.
- Sandstone ridges/escarpments and particular vegetation types avoided and NT Land Clearance Guidelines recommended clearance buffers applied.
- Fire management practises implemented including controlled 'cool burns' in consultation with TO's, DEMED and Bushfires NT.

Furthermore, DevEx is committed to ongoing education of its employees and contractors under its Environmental Policy, to elevate awareness of rare and endangered flora and fauna, and required management protocols.

## 5.1. Environmental Policy and Responsibilities

DevEx's commitment to the environment is defined in its *Environmental Policy*, which is shown on the next page.

# Environment Policy

DevEx Resources is committed to continuous improvement in our business operations to protect the environment, in accordance with the requirements of the law, our clients, and expectations of the general community.

DevEx Resources understands that responsible environmental management is essential to sustainable business success and is committed to a high standard of environmental management throughout its operations.

To achieve this DevEx will:

- Comply with all environmental laws and regulations as a minimum, with best practice environmental management our target;
- Ensure appropriate training for all employees and contractors to enable them to fulfil their environmental responsibilities;
- Communicate with relevant government agencies and communities on environmental issues and develop open relationships;
- Establish programs to control and manage environmental risks;
- Implement strategies to minimise and manage hazards; and
- Establish measurable environmental objectives to monitor and continuously improve our environmental performance.

Brendan Bradley
Managing Director

May 2021

## 5.2. Statutory and Non-Statutory Requirements

### 5.2.1. Statutory Requirements

The following dot points list all relevant legislation, codes and other statutory obligations related to the Project area. In certain circumstances, specifics of how it relates to the operation are also provided. DevEx will comply with all permits and conditions pertaining to the Project area.

- Aboriginal Land Rights (NT) Act (Commonwealth);

Permission to explore over Aboriginal Freehold land is gained via Exploration Agreements with the relevant Traditional owners under *ALRA*. The Joint Venture partners have an exploration agreement with the Northern Land Council (NLC). The project area lies within the Arnhem Land Aboriginal Reserve. All personnel entering the project area will be required to obtain the appropriate Northern Land Council (NLC) permit.

- Mining Management Act (NT) and Regulations;

Operational aspects of the West Arnhem Project will be regulated under the *MMA* through the annual submission of an MMP, and via the conditions of Authorisation. This MMP is being prepared and submitted as required under this Act. In addition this Act requires the calculation of financial security based on the actual cost of rehabilitation, (see Appendix 6: 2018 Security Calculation Form).

- Mineral Titles Act (NT) and Regulations;

Exploration operations will be conducted on the lease subject to the conditions of the *Mineral Titles Act*.

- Environmental Protection (Alligator Rivers Region) Act 1978;
- Radiation Safety and Control Act (NT) and Regulations;

Mining operations are specifically excluded from the *RSCA*, however DevEx endeavours to comply with the requirements of the Act wherever possible in the interests of good practice.

- Radioactive Ores and Concentrates (Packaging and Transport) Act (NT);

Under the ROCA, radioactive material may require a licence from NT Worksafe for transport off the Project area. Licences for sample transport will be sought as required.

- Atomic Energy Act (Commonwealth);
- Bushfires Act (NT);
- Environmental Assessment Act (NT);
- Environmental Offences and Penalties Act (NT);
- Environment Protection and Biodiversity Conservation Act (Commonwealth);
- Heritage Conservation Act (NT);
- Native Title Act (NT);
- Northern Territory Aboriginal Sacred Sites Act (NT);
- Public Health Act (Commonwealth);
- Soil Conservation and Land Utilisation Act (Commonwealth);
- Territory Parks and Wildlife Conservation Act (NT) and By-Laws;
- Waste Management and Pollution Control Act (NT);
- Water Act (NT);
- Weeds Management Act (NT);
- Workplace Health and Safety Act (NT);

- Radiation Protection Series G-1 (ARPANSA, Commonwealth);
- Radiation Protection Series G-2 (ARPANSA, Commonwealth);
- Radiation Protection Series C-1 (ARPANSA, Commonwealth);
- Code of Practice on the Safe Transport of Radioactive Materials (ARPANSA, Commonwealth);

DevEx have prepared a Radiation and Radioactive Waste Management Plan for all their exploration activities. This plan and its associated procedures ensure compliance with appropriate codes of practice. The Radiation and Radioactive Waste Management Plan is reviewed annually by the Company's Radiation Safety Officer.

- MLN962 Lease conditions;

Mineral Lease MLN962 was first issued as Special Mineral Lease (SML) 94.

The lease document contains five conditions, with sub-parts, and three schedules. The first schedule describes the land, the second schedule contains the "Environmental Requirements for the Nabarlek Uranium Mine Project" and the third sets out the method for calculation and payment of royalties.

- Environmental Requirements;

The Environmental Requirements for the Nabarlek Uranium Mine Project are set out in the second schedule of Mineral Lease MLN962. These are the Commonwealth requirement for uranium mining and are set out in legislation as Schedule 2 section 17(B) of the Uranium Mining (Environmental Control Act) 1979 (Northern Territory). The majority of these requirements are not valid to proposed activities on the lease.

DevEx have a Surface Water Extraction Licence #8211003 for the Nabarlek area (expiry 14 June 2026).

### 5.2.2. Non-Statutory Requirements

DevEx's subsidiary QMPL has made agreements over time with the NLC, as representatives of the traditional owners of the land, with respect to management and rehabilitation criteria for the site.

A mining agreement between the NLC and QML was entered into on the 22nd March 1979 (Mining Agreement).

The Nabarlek Settlement Deed (Settlement Deed) was agreed to by QMPL and NLC on 23 November 1993. The Agreement was approved by the Minister for Aboriginal and Torres Strait Islander Affairs.

The Rehabilitation and Closure Plan for MLN962 (Appendix 2) has been prepared with these Agreements taken into consideration and are discussed further within this document.

## 5.3. Induction and Training

Each staff member and contractor will be trained with the Nabarlek Exploration Induction before they can commence work on site. As standards and practices change, staff will be made aware and trained in new practices.

The Nabarlek Exploration Induction outlines environmental & cultural issues relevant to exploration activities and items of particular importance covered by the induction include:

- Cultural awareness;
- Weed Management;
- Vegetation and Land Clearance;
- Waste Management;
- Hydrocarbon/Hazardous Materials and Radiation Management; and

- Fire Management

Records will be kept of all staff and contractors that undertake the induction. It is expected that any person entering site to work will undertake this induction.

## 5.4. Identification of Environmental Aspects and Impacts

The key environmental aspects considered to be important in the assessment of future environmental impacts for the Nabarlek operations/activities are outlined in Table 5. Environmental impacts were identified from the results of environmental audits, workplace inspections, risk assessment and from a working knowledge of day-to-day operational activities.

The risk rating was assigned by conducting a small group session and assessing the magnitude or severity of environmental impacts using the DevEx Risk Matrix (Table 7) for each environmental aspect and assigning a score. Mitigating factors were taken into consideration to assign a Mitigated Risk Rating.

Table 5: Nabarlek Environmental Aspects and Impacts Register for Exploration Activities

| Environmental Aspect | Environmental Impact | Risk Rating | Management Measures (Refer to listed section below) | Mitigated Risk Rating |
|---|---|---|---|---|
| Clearing of drill pads, drill sumps and access tracks | Damage to or loss of native vegetation | 19 | 5.4.1 | 22 |
| | Disturbance of threatened/listed species | 13 | 5.4.2 | 17 |
| | Loss of faunal habitat | 13 | 5.4.2 | 17 |
| | Loss or damage to aboriginal heritage sites | 8 | 5.4.4 | 12 |
| | Dust emissions disturbing vegetation and/or fauna | 10 | 5.4.5 | 15 |
| | Change in shape, location and profiles of water courses | 9 | 5.4.8 | 13 |
| | Erosion and increased turbidity in local drainage lines | 14 | 5.4.8 | 18 |
| Construction of drill sumps | Damage to or loss of native vegetation | 13 | 5.4.1 | 21 |
| | Disturbance of threatened/listed species | 13 | 5.4.2 | 21 |
| | Loss of faunal habitat | 13 | 5.4.2 | 21 |
| | Loss/damage to aboriginal sites | 12 | 5.4.4 | 16 |
| Access to drill targets by drill rigs and associated equipment/vehicles | Damage to or loss of native vegetation | 10 | 5.4.1 | 14 |
| | Disturbance or loss of fauna from contact with vehicles | 14 | 5.4.2 | 18 |
| | Spread of weeds | 5 | 5.4.3 | 13 |
| | Damage to aboriginal heritage sites (e.g. significant aboriginal paintings) from vehicular dust emissions | 2 | 5.4.4 | 11 |
| | Dust emissions disturbing vegetation and/or fauna | 10 | 5.4.5 | 15 |
| Drill rigs operating in the field | Disturbance to fauna including becoming trapped in unplugged drillholes or sumps | 9 | 5.4.2 | 18 |
| | Dust emissions disturbing vegetation &/or fauna &/or surface water | 9 | 5.4.5 | 18 |
| | Noise emissions disturbing fauna | 14 | 5.4.5 | 19 |
| | Draw down of groundwater | 21 | 5.4.7 | 21 |

| Environmental Aspect | Environmental Impact | Risk Rating | Management Measures (Refer to listed section below) | Mitigated Risk Rating |
|---|---|---|---|---|
| | Groundwater coming to surface | 10 | 5.4.7 | 15 |
| | Cross contamination of groundwater aquifers | 18 | 5.4.7 | 21 |

Table 6: West Arnhem Environmental Aspects and Impacts Register for Exploration Activities

| Environmental Aspect | Environmental Impact | Risk Rating | Management Measures (Refer to listed section below) | Mitigated Risk Rating |
|---|---|---|---|---|
| Drill rigs operating in the field | Disturbance to fauna including becoming trapped in unplugged drillholes or sumps | 9 | 5.4.2 | 18 |
| | Dust emissions disturbing vegetation &/or fauna &/or surface water | 9 | 5.4.5 | 18 |
| | Noise emissions disturbing fauna | 14 | 5.4.5 | 19 |
| | Draw down of groundwater | 21 | 5.4.7 | 21 |
| | Groundwater coming to surface | 10 | 5.4.7 | 15 |
| | Cross contamination of groundwater aquifers | 18 | 5.4.7 | 21 |
| | Contamination of surface water or groundwater from hydrocarbon or hazardous material spillages | 12 | 5.4.7, 5.4.8, 5.4.9.4 | 21 |
| | Spread of domestic or industrial waste | 14 | 5.4.9.1, 5.4.9.2, 5.4.9.3 | 22 |
| | Contamination of soil from hydrocarbon or hazardous material spillages | 5 | 5.4.9.2, 5.4.9.4 | 14 |
| | Contamination of surface water or groundwater from spillages of liquids containing radioactive materials intersected during drilling | 14 | 5.4.9.3 | 22 |
| | Contamination of soil from radioactive dust and/or spilt radioactive drill cuttings | 14 | 5.4.9.3 | 22 |
| | Hydrocarbon spill or leak resulting in contamination of soil | 8 | 5.4.9.4 | 18 |
| Fuel storage | Hydrocarbon spill or leak resulting in contamination of surface water or groundwater | 12 | 5.4.7, 5.4.9.4 | 21 |

| | | | | |
|---|---|---|---|---|
| | Fire as a result of incorrect usage, storage and transport | 8 | 5.4.9.4 | 12 |
| | Hydrocarbon spill or leak resulting in contamination of soil, surface water or groundwater | 8 | 5.4.7, 5.4.9.4 | 17 |
| Hazardous Waste Management | Spread of domestic and or industrial waste | 14 | 5.4.9.1, 5.4.9.2 | 22 |
| Domestic Waste | Domestic waste attracting fauna and feral animals | 10 | 5.4.9.1 | 19 |

Table 7: DevEx Risk Matrix Used to Determine the Risk Rating and Mitigated Risk Rating

| Consequence | | | | | | |
|---|---|---|---|---|---|---|
| | | Catastrophic | Major | Serious | Medium | Minor |
| Safety | | Permanent damage or fatality | Long Term Injury with severe irreversible damage | Lost Time Injury | Medical treatment | First Aid |
| Environment | | Permanent damage and ecosystem never recovers | Impairment of ecosystem function & leaving major residual damage that requires long term recovery (many years) | Serious Harm and requiring long term recovery from impact (typically years) | Material Harm and recovery from impact typically a month | Minor effects and reversible (typically within a week) |
| Cultural Heritage | | Irreparable damage to site or item of high cultural significance | Irreparable damage to site or item of moderate cultural significance | Repairable damage to site or item of moderate cultural significance | Irreparable damage to site or item of low cultural significance | Repairable damage to site or item of low cultural significance |
| Property Damage | | >$10M | $1M – 10M | $100k – 1M | <$100k | Minor |
| Likelihood | Hazard occurring: | | | | | |
| Almost Certain | Weekly | 1 | 3 | 6 | 10 | 15 |
| Likely | 1 mth – 1 yr | 2 | 5 | 9 | 14 | 19 |
| Moderate | 1-10 yrs | 4 | 8 | 13 | 18 | 22 |
| Unlikely | 10-100 yrs | 7 | 12 | 17 | 21 | 24 |
| Rare | 100-1,000 yrs | 11 | 16 | 20 | 23 | 25 |

Critical Risk = 1-3, High Risk = 4-10, Moderate Risk = 11-15, Low Risk = 16 – 25

The environmental aspects and impacts detailed in Table 5 require appropriate management to ensure that the impact on the environment as a result of exploration activities on the Nabarlek Project are minimised. The following section provides details of those management principles.

### 5.4.1. Vegetation Management

The principle objective for managing the future disturbance to vegetation is to minimise the area of disturbance, avoid known priority flora locations and to ensure effective progressive rehabilitation. Management practices to be employed include:

- Minimising the area cleared for each access track to only that required for safe access;
- Use old and existing tracks where possible, and minimise the number of new tracks constructed;
- Avoid clearing established trees and dense stands of vegetation when constructing access tracks and drill pads;
- Limiting the size of the drill pad to only that required for the safe and efficient operation of the drill rig;
- Use of blade up clearing of drill pads, where it is possible to obtain an even and safe surface without clearing and soil stripping;
- Windrow the cleared vegetation and topsoil to be used later in rehabilitation; and
- Rehabilitate the disturbed area as soon as practicable.

Topsoil management is critical to rehabilitation success. Management practices include:

- Removing and/or stripping any topsoil or vegetative material during the clearing process;
- Stockpiling topsoil material separately to any other soils. Stockpiles will be located away from work areas so that they are not mistakenly driven over;
- Topsoil stockpiles will be laid out in strips no more than 1 metre in height as close as possible to where they are to be used in future rehabilitation work; and
- Using the stockpiled topsoil during rehabilitation works.

### 5.4.2. Fauna Management

The objective of fauna management is to minimise disturbance to native fauna from exploration activities. Fauna management will include:

- Minimising disturbance to vegetation and potential fauna habitats;
- Employing management measures to minimise impact on watercourses;
- Educating people on the importance of not killing or disturbing native wildlife;
- Limiting vehicle speeds to reduce the potential for road kills;
- Construction of drill sumps with an egress of 45 degrees to allow fauna to ascend out of the sump;
- Capping of open drill holes;
- Managing refuse to prevent attraction to feral animals; and
- Culling feral animals in consultation with traditional owners. If culling of feral animals has been required, DevEx has contacted the appropriate Aboriginal Ranger Group to conduct any culling activities.

### 5.4.3. Weed Management

Weed management on the Mineral Lease involves work to both prevent the spread of established weeds and prevent the introduction of new species. A weed management program focusing on the reduction of weeds on legacy areas has been developed as part of the Rehabilitation and Closure Plan for MLN962 (Appendix 2).

In addition to legacy weed reduction programs, active management is required to prevent potential spread during the dry season exploration programs. Weed management for exploration activities during the field seasons includes:

- Training of key personnel in weed awareness and control procedures;

- The requirement for wash down of heavy equipment and inspection for weed seed prior to mobilisation to site;
- Pre-planning of drill track and pad installation to avoid known weed infestation areas;
- The usage of a weed wash down station established at the edge of the airstrip apron to help reduce the spread of weeds off site as a result of vehicle traffic. All weed seed is captured in a bund and periodically treated with chemicals and/or fire;
- The requirement for all heavy vehicles to be washed down at the weed wash down station and inspected for weed seed prior to de-mobilising from site. A clearance certificate system is operated to ensure compliance with this requirement;
- The requirement for the wash down of all light vehicles each time before leaving site to travel to Jabiru, Oenpelli or Darwin. A log book is located at the weed wash down station for compliance with this requirement;
- Controls on purchasing to minimise the potential for introduction of new weed species;
- An early burn of as much of the fenced area as possible;
- Chemical spraying of roads around lease and areas used during exploration activities; and
- Final burn of entire fenced area to reduce fuel load prior to dry season. This minimises the potential for late dry season hot burns fuelled by weeds that can damage the native vegetation.

### 5.4.5. Noise and Air Quality Management

All drilling contractors and DevEx staff in close proximity to the drilling rig will wear the appropriate hearing protection and dust safety equipment.

Noise generated from drill rigs and associated vehicles may result in negligible impacts to fauna in the immediate drill area. As there are no residences or townships close to the proposed exploration operations, no noise impacts will be experienced by members of the public.

The objective for dust control and management is to ensure that dust generated from exploration activities does not cause contamination of water and soil or impact on vegetation or fauna. Management measures to ensure environmental dust emissions are minimised include:

- Dust extraction equipment to suppress dust from drill rigs;
- Limiting vehicle speeds whilst driving on site; and
- Minimisation of vegetation clearing.

### 5.4.6. Fire Management

Uncontrolled wildfires are an annual feature of the region, particularly from mid to late dry season. The Nabarlek region has been subject to wildfires in the past with adverse effect on the native vegetation and fauna, particularly in areas of high weed infestation.

To minimise the opportunity for a fire to be accidentally lit as a result of exploration activities controlled 'cool burns' are undertaken in the late wet to early dry season. These are conducted in consultation with Traditional Owners, DEMED and Bushfires NT.

Temporary campsites will check for, and observe any, fire bans before lighting campfires. Campfire size must be kept small and manageable with a minimum of 1m radial clearing around the fire. No campfires are to be left unattended. Fire extinguishers must be readily available and located proximal to portable generators and inside all vehicles at the campsite.

Fire management measures include:

- Provision of firefighting equipment at the camp and in vehicles, including water trailers, vehicle mounted fire fighting units, fire extinguishers and fire fighting nap-sacks;
- Restrictions on where hot-work can be conducted;
- Training of employees in fire prevention and basic fire fighting;
- Fire breaks maintained around the perimeter of the site;
- Induction for all personnel in the use of the water trailer; and
- Provision of vehicle mounted fire fighting units for use during loader operations.

### 5.4.7. Ground Water Management

The objective for ground water management is to minimise both contamination and drawdown.

Ground water monitoring is conducted at various bores around the Nabarlek site. If any degradation in water quality or draw-down effects is detected, it will be investigated and managed.

Any groundwater that comes to the surface as a result of exploration drilling will be contained in sumps and left to evaporate. The sumps used to contain groundwater are not lined. The sumps may contain groundwater and any mud or rock material that is brought to the surface during drilling operations. After allowing the contained materials to dry, the sediment is buried during sump rehabilitation by backfilling with stockpiled material during the drill site rehabilitation.

Pollution caused by spillages of hydrocarbons or from radioactive material has the potential to impact groundwater. Measures that will be implemented to ensure that spillages of hydrocarbons and other hazardous materials are minimised include:

- Ensuring that there is constant supervision of the rig at all times;
- Provision of a spill kit at the drilling rig; and
- Ensuring that any spills are cleaned up and the contaminated area is rehabilitated.

There is currently provision for the use of up to but not exceeding the threshold allowance of 5ML per year of groundwater according to the Northern Territory of Australia Water Act, Water Legislation Amendment Act 2018. DevEx do not intend to exceed this permitted amount.

### 5.4.8. Surface Water Management

The main objective for surface water management is to ensure that exploration activities do not lead to contaminants entering water courses and being carried off site.

Surface water management measures include:

- Ensuring all pumps and fuel/hydrocarbon containers are placed on self-bunding pallets during all drilling operations;
- Excavating two sumps for each drillhole to contain any drilling fluids and/or groundwater. If fluids cannot be contained within these sumps then drilling will be discontinued until further provision for the drilling fluids can be made;
- Ensuring spillages are cleaned up and rehabilitated;
- Reducing dust emissions from drilling rigs and vehicles; and
- Best practice drill rig pad management, including topsoil and vegetation management and construction of small bunds to divert surface runoff around disturbed areas and access tracks.

The other objective of surface water management is to minimise erosion of surface water bodies. Management techniques include:

- The minimisation of vehicle crossings over drainage lines where existing crossings do not already exist; and
- Rehabilitation of access tracks crossing drainage lines after significant/erosive flood flow.

DevEx submitted an application in January 2020 for the right to extract surface water at a rate of 0.5ML per year (Northern Territory Of Australia Approved Form 11 (25/01/2011) Application For Grant Or Renewal Of Licence To Take Or Use Surface Water Pursuant to section 45 of the Water Act). The assessment is ongoing.

### 5.4.9. Waste Management

There is a range of waste generated from exploration activities. Each waste stream has specific management techniques which are described below.

#### 5.4.9.1. Domestic Waste

Domestic waste is produced at both the Nabarlek camp and the exploration sites within the West Arnhem area.

The types of camp wastes produced include:

- Organic debris (i.e. food scraps); and
- General refuse including scrap metal, cardboard and plastics.

The objective of waste management in the camp is to minimise the amount of waste that needs to be disposed of in land fill. DevEx have implemented a domestic waste segregation system where all waste that can be recycled is transported back to Darwin at the end of the field season and all domestic refuse is burned in a pit on site. Domestic waste generated from temporary campsites will also comply with this management plan.

Recyclable wastes include:

- Plastics;
- Cans;
- Glass; and
- Scrap Metals.

Non-recyclable wastes such as aerosols and batteries are placed in separate containers at the camp and are also taken back to Darwin at the end of the field season. An inventory system has not been implemented.

Domestic refuse such as food scraps, organic debris and burnable rubbish (paper and cardboard) is transported to the domestic refuse pit which is located at a distance from the camp to minimise the number of feral animals attracted to either location. Each time that domestic refuse is deposited in the pit it is burned. The pit has been fenced to prevent access by larger feral animals and sloped to allow egress of any trapped native animals.

### 5.4.9.2. Exploration Waste

The types of exploration wastes produced include:

- Inert waste such as rubble from excavations;
- Hazardous wastes such as waste oils;
- General refuse including scrap metal, cardboard and plastics; and
- Sludges, sediments and drill cuttings bought to the surface during drilling, some of which may contain small quantities of naturally occurring radioactive material. At this stage of the drilling, it is not known whether the drill cuttings/sediments/sludges contain any radioactivity and therefore this exploration waste cannot be distinguished from the radioactive waste.

The objective of waste management at the exploration sites is to minimise the potential for soil and water contamination from the various waste streams. Management includes:

- Any sludges, sediments and drill cuttings bought to the surface during drilling are contained within the drill sump, allowed to dry and buried in the sump upon completion;
- All hydrocarbons and hazardous materials are stored and handled to ensure that spillages are minimised and if they do occur are cleaned up and the area rehabilitated; and
- All domestic and hard wastes are returned each night to the camp for appropriate segregation and management.

No operational waste is generated through geophysical surveying as this technique is carried out on foot with battery-powered instruments. Any personal waste (e.g. food scraps, disposable batteries) from the crew will be kept and disposed of appropriately as per the procedure listed in section 5.4.9.1.

### 5.4.9.3. Radioactive Waste

Uranium exploration activities can generate very low quantities of radioactive waste with drilling being the only activity that generates any radioactive waste materials. Possible radioactive drilling waste streams include:

Solid Waste

- Drill cuttings from mineralised zones;
- Miscellaneous waste material that has contacted mineralised material (e.g. gloves, rags, etc.); and
- Radioactive contaminated drilling equipment.

Liquid Wastes

- Spillages of groundwater containing radioactive materials intersected during drilling; and
- Spillages of water used for drilling that intersect mineralised zones.

Airborne Wastes

- Airborne dusts generated during percussion drilling.

DevEx has a Radiation and Radioactive Waste Management Plan (RRWMP) for the company's exploration activities (see Appendix 7: RRWMP). The objective of this plan is to minimise these various radioactive waste streams from entering the environment and causing contamination.

Management measures detailed in the RRWMP include:

- Dust suppression on drilling rigs to minimise the spread of dust from mineralised zones;
- Containing all water from drilling in the sump;
- Spillages of liquids containing radioactive materials will be minimised as much as practicable utilising the following practices:
    - Earthen bunds will be placed around work areas that may contain liquid radioactive material;
    - Use of properly maintained equipment;
    - Education and training of workers in the importance of minimising spillages and prompt reporting of incidents; and
    - Core sample handling areas will be earthen bunded to catch all liquids and sludge's produced.
- At the completion of drilling each hole will be plugged and rehabilitated and the following radioactive waste management will occur:
    - Any possible surface contamination including spilt drill cuttings or drill samples will be returned to the drill hole or sump;
    - Any water from drillholes contained in the sump will be allowed to dry before being buried beneath clean soil;
    - Any radiological material intersected in drill cuttings or drill samples will be returned to the drill hole or where this is not possible, placed in the drill sump and buried with at least one metre of compacted soil cover, in accordance with uranium exploration industry best practice standards (Australian Uranium Association, 2009, Best Practice Guidelines for Uranium Exploration); and
    - No anomalous radioactive contamination will be left at drill sites; each will be checked after rehabilitation with a scintillometer.
- At the completion of drilling activities at a particular site all drill rigs and equipment will be thoroughly cleaned;
- Before leaving site all drill rigs and equipment will be checked for radioactive contamination. Any contaminated equipment found will be cleaned and re-checked prior to being released from the site; and
- Retaining mineralised samples in a locked and secure container with appropriate signage.

### 5.4.9.4. Hazardous Wastes and Hydrocarbon Waste

A variety of hazardous materials and hydrocarbons are stored on the Mineral Lease within the dangerous goods container and the fenced compound area. These include:

- Diesel fuel;
- Oils and lubricants;
- Glyphosate (herbicide).
- Previously Aircraft fuels (Jet A1, avgas)

It is expected that small quantities of hydrocarbons, including diesel, oils and lubricants will be used during drilling and other exploration activities and these will be stored in the securely fenced bunded compound of the Mineral Lease (MLN962).

Management measures to ensure that spillages of hydrocarbons and other hazardous materials are minimised during storage and transportation include:

- The storage of hazardous materials and hydrocarbons in a securely fenced bunded area or in self-bunded tanks/containers;
- Transportation in accordance with applicable regulations and codes (if required);
- Firefighting equipment in the near vicinity of the storage area;
- Cleaning up of any spills and the remediation of contaminated areas; and
- Disposal of unused hazardous waste substances in a manner that minimises any potential impacts, including disposal to registered disposal sites where required.

Management measures to ensure that spillages of hydrocarbons and other hazardous materials are minimised during drilling include:

- Ensuring all pumps and fuel/hydrocarbon containers are placed on self bunding pallets during all drilling operations;
- Ensuring that there is constant supervision of fuelling of the rig at all times;
- Provision of a spill kit at the drilling rig;
- Ensuring that any spills are cleaned up and the contaminated area is rehabilitated;
- The construction of sumps at drill sites to contain any hydrocarbon contaminated water from drilling; and
- Placing plastic sheeting under drill rigs while operational to capture any hydrocarbon spills.

Management measures to ensure that spillages of hydrocarbons and other hazardous materials are minimised at the temporary campsite include:

- Storing all hydrocarbons within a plastic bunded spill enclosure;
- Provision of a spill kit at the campsite;
- Firefighting equipment in the vicinity of the storage area; and
- Refuelling using nozzle attachments on jerry cans.

### 5.4.9.5. Asbestos Waste

Asbestos Contaminated Material (ACM) was removed from the old camp and mill sites and disposed in a purpose built pit during 2010. A full report on the asbestos clean-up was included in the 2011 Nabarlek MMP when it was lodged with the DPIR.

The extents of the pit containing the ACM were surveyed with the coordinates detailed in Table 8.

Table 8: Coordinates of Purpose Built Pit for Disposal of ACM at Old Camp Site

| Point | GPS Coordinates (WGS 84) | |
|---|---|---|
| | Easting | Northing |
| SW corner | 317366 | 8640659 |
| NW corner | 317366 | 8640684 |
| NE corner | 317435 | 8640690 |
| SE corner | 317438 | 8640660 |

## 5.5. Emergency Procedures and Incident Reporting

DevEx requires that all environmental incidents, near misses and hazards are reported to a supervisor immediately. Specific environmental incidents that require reporting include:

- Hydrocarbon spillage;
- Animal injuries or deaths
- Wildfire;
- Cyclone or intense rain event;
- Unplanned vegetation disturbances;
- Breaches of the environmental policies or procedures; or
- Other unforeseen events.

All incidents will be recorded on an Environmental Incident Register. All environmental incidents will also be reported to the Mining Compliance division within the Department of Primary Industry and Resources on the Notification of an Environmental Incident form as per section Section 29 of the Mining Management Act.

Emergency procedures have been developed to ensure appropriate management of potential incidents. Generic environmental incident management includes:

- Supervisor to immediately inspect the area and implement temporary control;
- Immediate internal notification to management and subsequently to regulatory authorities as required;
- Use a risk based approach to determine severity and root cause of incident;
- Identify corrective actions to be undertaken to mitigate any adverse consequences;
- Follow up to ensure corrective actions are implemented;
- Identify changes to work practices to ensure the incident does not reoccur; and
- In the case of a reportable incident, provide relevant authorities with a final report stating any long term initiatives proposed to manage residual impacts.

DevEx's emergency procedures are provided in Appendix 8.

All environmental incidents are reported in accordance with Section 29 of the *Mining Management Act*.

## 5.6. Environmental Audits, Inspections and Monitoring

On 20 November 2019, Departmental Officers and representatives from the Supervising Scientist Branch (SSB) inspected areas on the Nabarlek Uranium Mine. The main objective was to assess several of the exploration and rehabilitation activities planned for the 2019 dry season as detailed in the operator's 2018 Mining Management Plan. The inspection focused on rehabilitation of drilled holes, condition of the security fence, weed control management and general site conditions. Several minor observations were made and were reported in a memorandum dated 2 December 2019. DevEx intend to address the observations at the earliest possible opportunity.

On 27-28 June 2019, members of the Department of Primary Industry and Resources (DPIR) and Northern Land Council (NLC) conducted a site visit to the Nabarlek Mine. The objectives were to verify DevEx's compliance with management systems described in the 2018 Mine Management Plan, review the condition of the camps on site and the re-establishment of vegetation on the site and to undertake an aerial photograph survey of the site. It was concluded that DevEx appear to be mostly compliant with their management systems. As drilling was occurring at the time of the visit suggestions were made to improve environmental outcomes on the site which DevEx adhered to where possible. The site visit was reported in the document Site Inspection Report – Nabarlek Uranium Mine and West Arnhem project, document number MDOC2019/03804.

### 5.6.1. Documentation

All DevEx documents are subject to document control to prevent unauthorised alteration and to ensure that all employees have access to and can easily identify the most up to date versions and enable effective management of reviews. A document register ensures the effective management of documents. These include, but are not limited to, management plans and procedures, environmental policies, procedures and forms, monitoring records and data, incident reports and investigations, inspections and audits.

Documents are kept on site at Nabarlek. However regular break-ins have seen vandalisation of the office facilities, including destruction of documentation. Documents have been relocated to the lockable storage containers in the hope to protect these documents and ensure availability.

## 5.7. Environmental Performance

### 5.7.1. Objectives and Targets

The monitoring programme has been divided into the following categories:

- Vegetation
    - Weed Mapping
    - Revegetation
- Exploration Drilling (2015 and 2019)
- Erosion
- Surface waters;
- Ground waters;

The proposed monitoring programme has been summarised in the Table 9 below. Results of this monitoring programme along with details of methodology are reported annually in the Mining Management Plan.

Table 9: Summary of Monitoring Programme for the Nabarlek Mineral Lease

| Topic | Details | Location | Frequency |
|---|---|---|---|
| Vegetation | Sampling survival & growth monitoring<br>Record number of planted saplings<br>Ascertain the need for additional tube stock | WRRP<br>Plant Runoff Pond<br>Evaporation Pond | Annually<br>(late June/ early July and generally at same time as EMU) |
| | Weed mapping | MLN 962 | Every 3 years |
| Drilling | Exploration Drilling from 2015 | MLN 962 | RAA<br>NMRD001 to 006 |
| Erosion | Visual inspection of site and mapping of erosion<br>Monitoring of downstream erosion of the RAA | MLN 962 | After wet season |
| Surface Water | Grab sample analysed for temperature, pH, salinity (as conductivity), Bicarbonate, Nitrate, Ammonia, SO42-, Cl, Ca, Mg, Al, Mn, U. | Coopers Creek | Annually (late June/early July & generally at same time as EMU) |
| | | Coopers Ck Upstream | |
| | | Kadji Creek | |
| | | Ck over Nabarlek Rd | |
| Ground Water | Sample in accordance with<br>USEPA Standard Operating Procedure for Groundwater Sampling (2003); and<br>Complying to AS /NZS 5667.11:1998.<br><br>Monitoring for<br>SWL, pH, salinity (as conductivity), Cl, Ca, Mg, SO42- Mn, Al, U. | OB1D | Annually<br>(late June/ early July and generally at same time as EMU) |
| | | OB2S | |
| | | OB10D | |
| | | OB19 | |
| | | OB20 | |
| | | OB21 | |
| | | OB23 | |
| | | OB25 | |
| | | OB31 | |
| | | OB36 | |
| | | OB47D | |
| | | OB49 | |
| | | TB22 | |
| | | RN020476 | |

### 5.7.2. Weed Monitoring

In the Northern Territory, a declared weed is a species of plant identified for eradication, control, or prevention of entry in all or part of the Territory under section 7 of the Northern Territory Weeds Management Act 2001 (the Act). A weed may be declared as

1) Class A: To be eradicated

2) Class B: Growth and spread to be prevented

3) Class C: Not to be introduced to the Territory [All Class A and Class B weeds are also considered to be Class C weeds]

DevEx's primary purpose of the weed mapping and subsequent control management is to reduce areas of significant weed density and resulting high combustible load, so giving the native revegetation the opportunity to take hold without the risk of significant wildfires destroying their development.

Weed mapping took place in February 2019. Weed locations were digitally recorded including the radius of the weed patch and its level of intensity under the density category provided in the Northern Territory Weed Data Collection Manual (2015).

Density Categories

1 = Absent, no weeds of this species in this area

2 = <1%, Very few, not many weeds eg:single plant, perhaps with seedlings

3 = 1-10%, More than one or two isolated plants but not a lot

4 = 11-50%, A lot, up to half the area covered

5= >50%, Dominant cover is weed, more than half covered

No "Class A" weed species were identified in the mapping within the Security Fence.

Four species of Class B weed species were identified within the Security Fence and these are listed in Table 10 and presented in Figure 14 to Figure 17.

Other plant species such as Para Grass, Seca Stylo, Phasey Bean, Setaria and Rattle Pod were recorded within the digital data set. These are not declared as weeds. Weed control of the Class B declared weeds will also manage the non-declared plants by default.

Table 10: Species of Declared Weeds recorded within the Nabarlek Security Fence

| Weeds Mapped | Class |
|---|---|
| Sida Acuta | Class B Weed |
| Grader Grass | Class B Weed |
| Mission Grass | Class B Weed |
| Hyptis | Class B Weed |

#### 5.7.2.1. Weed Management 2020

A series of polygons were created for each declared weed species outlining areas of significant infestations. These were combined to generate a weed spraying priority map for Nabarlek for the early 2021 wet season (see Figure 14 to Figure 17).

Additional weed mapping is recommended for February 2023 once several campaigns of weed spraying have taken place. The plan is to target hotspot areas where mapping shows weeds to be accumulating.

The most recent phase of weed spraying took place in February 2021. By all accounts weed spraying successfully covered all priority hot spots indicated in Figure 14 to Figure 17.

Further detail pertaining to weed mapping and management can be found in Appendix 12.

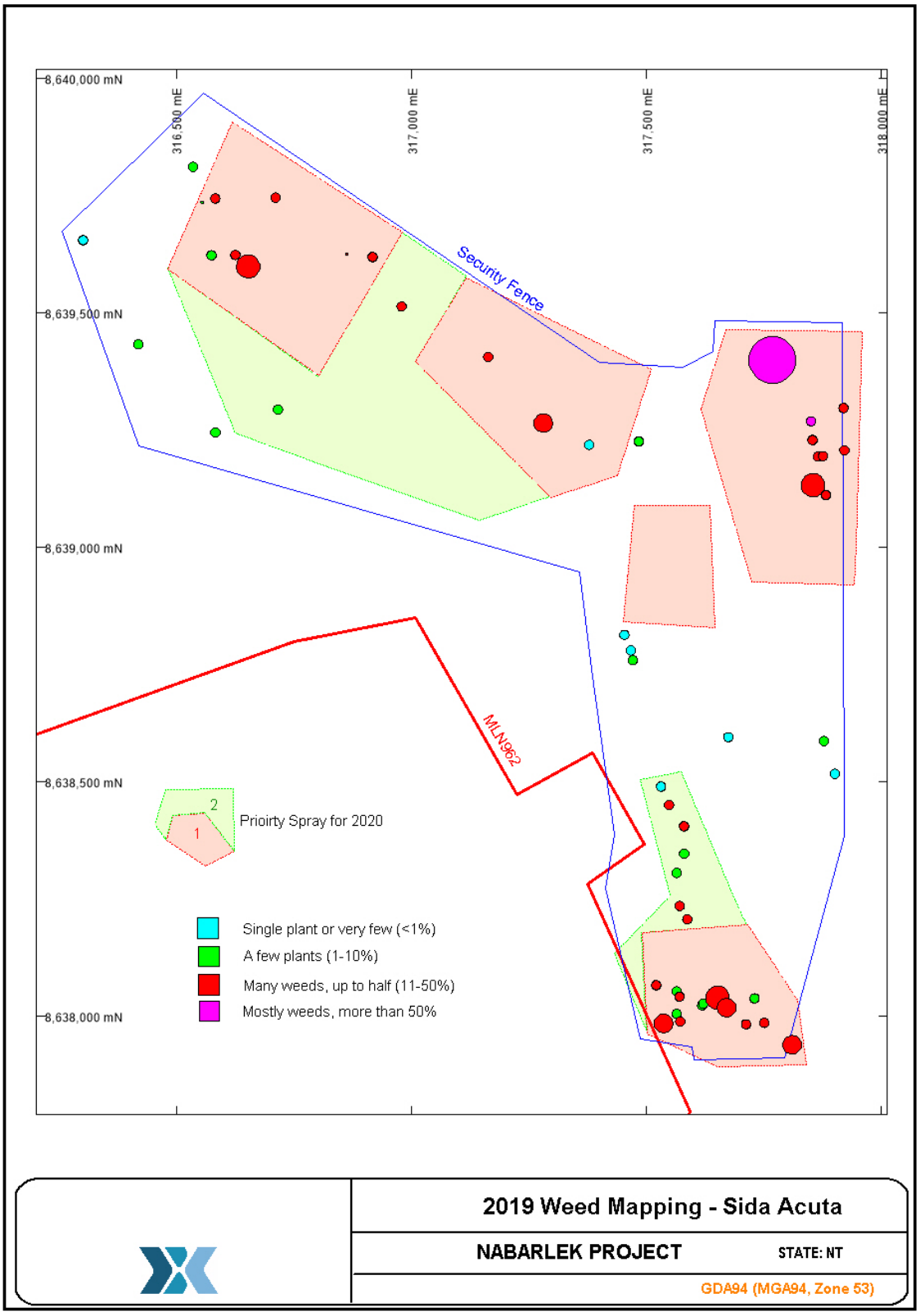



Figure 13: Recorded locations of Sida Acuta within the Nabarlek Security Fence and priority areas planned for weed control

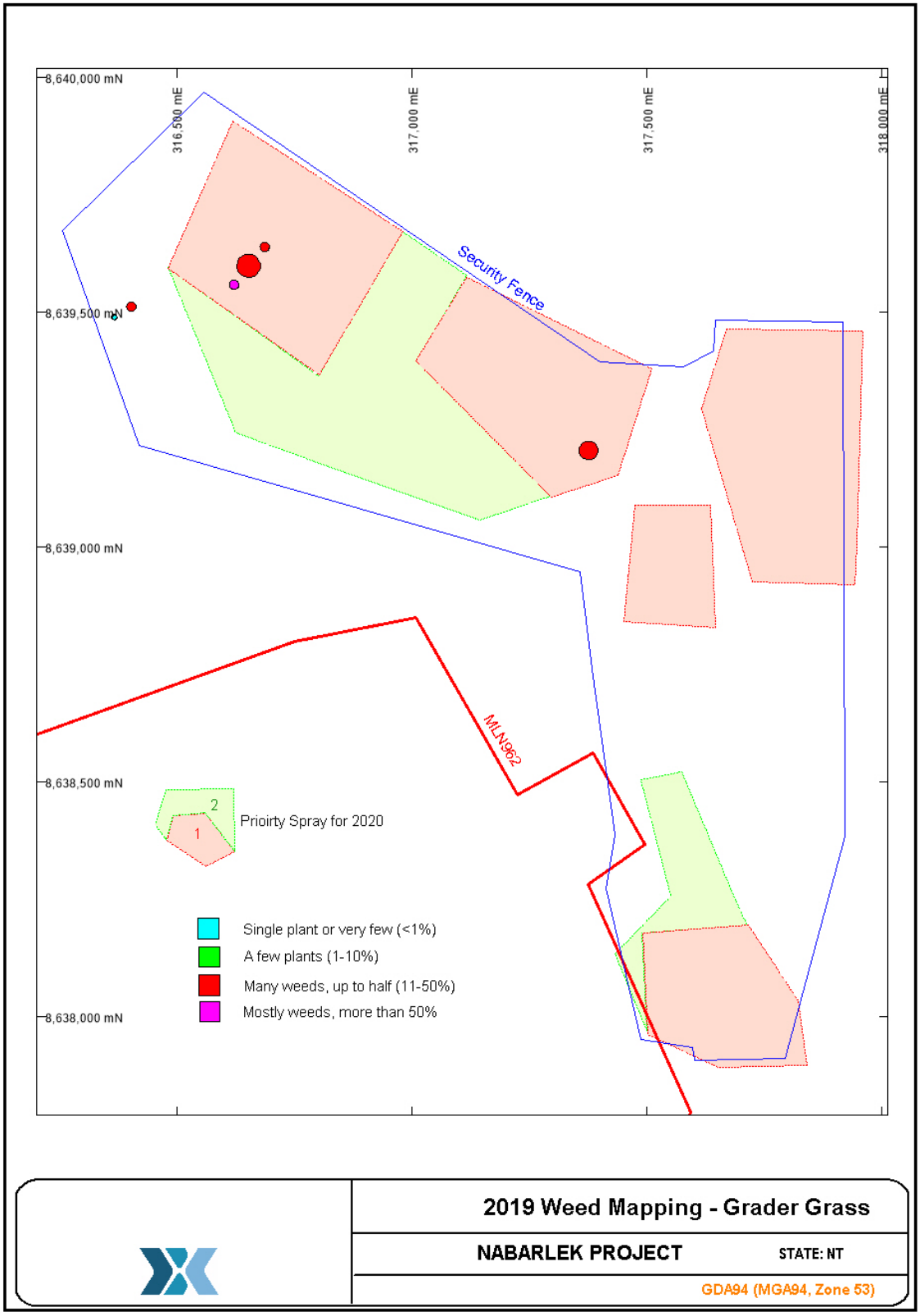



Figure 14: Recorded locations of Grader Grass within the Nabarlek Security Fence and priority areas planned for weed control

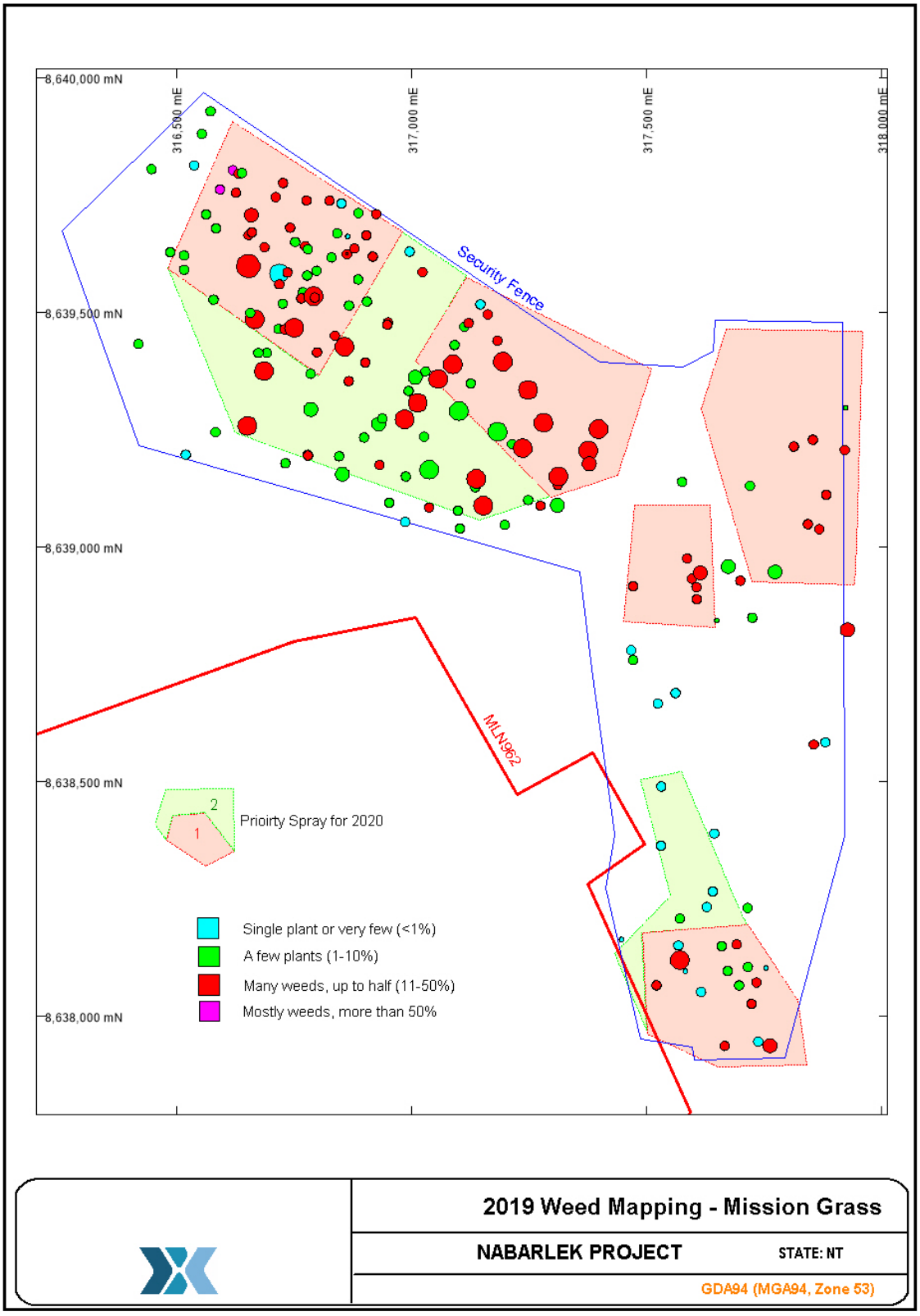



Figure 15: Recorded locations of Mission Grass within the Nabarlek Security Fence and priority areas planned for weed control. No distinction between annual and perennial mission grass was made.

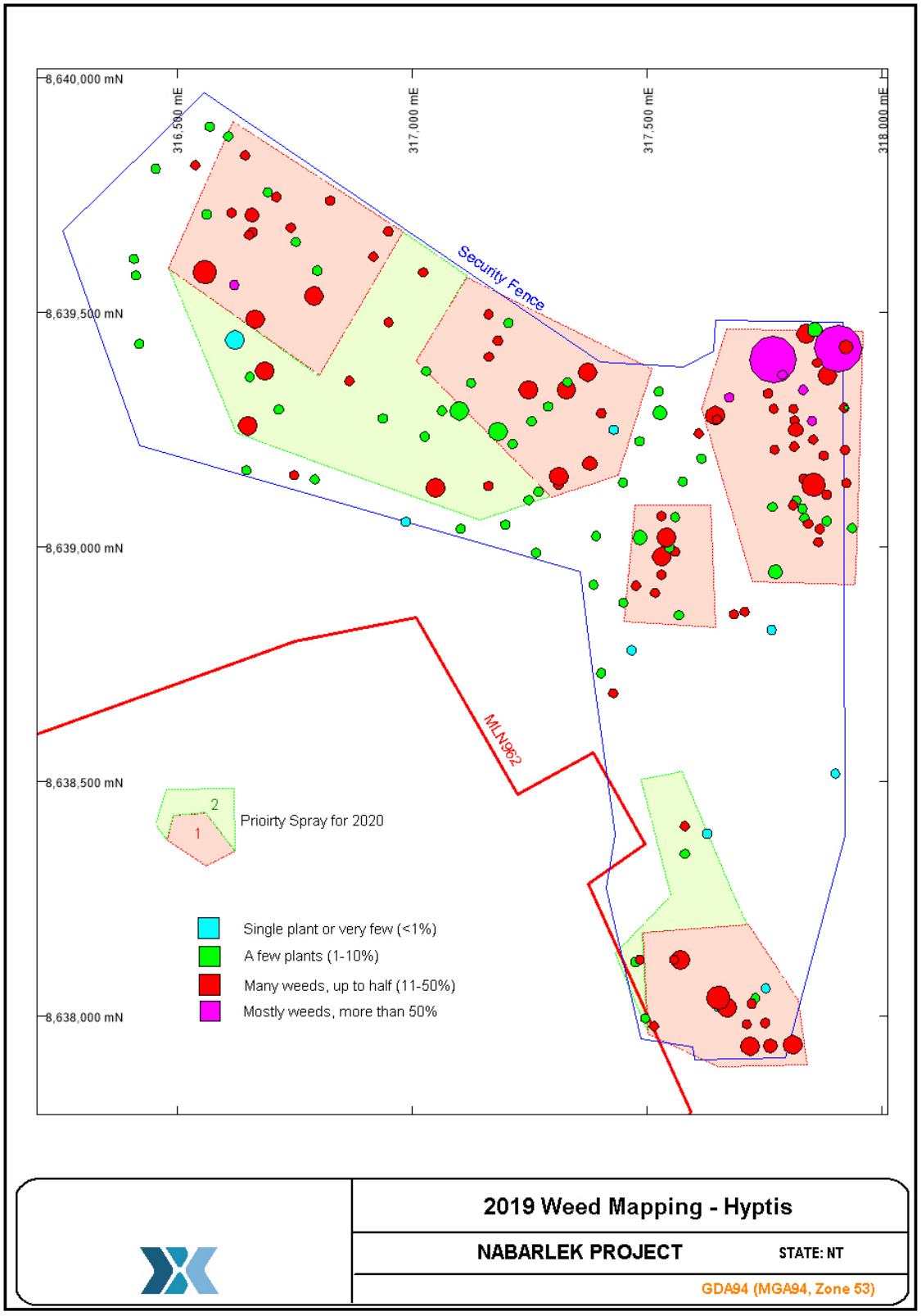



Figure 16: Recorded locations of Hyptis within the Nabarlek Security Fence and priority areas planned for weed control. No distinction between annual and perennial mission grass was made.

### 5.7.3. Re-Vegetation and Monitoring

Since conclusion of mining and milling operations the Company has been required to establish appropriate ground cover plants in accordance with the directions of the Supervising Authority and fence, protect and, if necessary, renew the establishing vegetation as may be necessary to bring about the rapid restoration of stable vegetation native to the region.

Revegetation is showing good progress and is well evidenced by progressive air photo time shots shown within this document. A mixed variety of mature native plants, grasses and trees are now self-seeding throughout the Nabarlek Mine site and progression towards a self-sustaining open wood lands in the region appears achievable for most areas - provided that feral animals and fire prone weed species can be controlled over the next several years. This is in line with Traditional Owners expectations that revegetated areas will consist of open woodland communities of natural species that will blend in with plant communities of the region, over which they will forage as per their current practice. Foraging will involve day trips for plant foods and fauna and access to the revegetated area, and occasional overnight camping.

Several areas remain unvegetated within the Nabarlek Project where revegetation has not been successful and open areas remain (detailed in the sections below). These areas include:

a. The Evaporation Pond (6.53ha)
b. The Waste Rock Runoff Pond Area (1.49ha)
c. North of the Mine Office (0.73ha)
d. The Plant Runoff Pond (0.12ha)
e. The RAA (0.7ha)

Details of these areas is provided in the Rehabilitation and Closure Plan for MLN962 (Appendix 2).

No planting of tube stock and seedlings took place during the recent MMP Period. Monitoring of existing revegetation during the 2020 year did not take place due to access restrictions following the onset of the COV-19 Pandemic.

Planned weed spraying of the WRRP and Evaporation Pond, trialling sulfometuron, is now planned for early 2021 (February).

In November 2018, the Company held on-site meetings with Traditional Owners, NLC representative, Kakadu Native Plants and Njanjma Aboriginal Rangers to discuss a new revegetation strategy. Discussions are aimed at exploring the potential to establish a longer term working relationship between Kakadu Native Plants Pty Ltd, the Company, Traditional Owners and the Njanjma Aboriginal Rangers by establishment of suitable tube stock and seed storage north of Cahills Crossing within the township of Gunbalanya (Oenpelli) sourcing seeds from the Nabarlek area. Although plans are preliminary, they have been well received by all parties and provide a realistic framework for future programmes and active Traditional Owner involvement.

A recent follow up meeting between DevEx and the Njanjma Aboriginal Rangers in April 2021 has revealed a complete turn over of all ranger staff involved and a loss of knowledge in the concept.

The high staff turnover within the region poses a heightened risk that any establishment of a native plant nursery at Gunbalanya (Oenpelli) will not be properly maintained.

A modified strategy will need to be considered in the coming 12 months.

#### 5.7.3.1. Evaporation Pond Area

Earlier in the mines revegetation history predominant pioneering species planted as part of the revegetation were Acacias (Acacia mimula). Once established this dominance was blended by revegetation efforts concentrated on planting of the original Eucalypt species in small pods around the site.

A walk through of the Evaporation Pond Area (Figure 18) reviewing revegetation variety and density took place in May 2018. A variety of mature families and species can be readily observed at the Evaporation Pond Area and the following points can be observed:

1. Several canopy and mid story species have established including Acacias, Melaleuca, Eucalypts, Brachychiton sp., Buchanania obvata, Pandanus spiralis and Corymbia bleeseri.
2. Nutrient cycling was evident with extensive areas of organic matter observable.
3. Fauna have begun to populate the rehabilitated area, the best evidence of this is the anthills observed on rehabilitated areas)
4. Inter tree spacing was variable. The majority of the rehabilitated area appeared to show a density similar to the open woodland surrounding the site or are well underway with self-seeding evident.
5. Native grasses (spear grass) dominate the western portion of the Evaporation Pond area.
6. Juvenile saplings are regularly seen in the Evaporation pond area. Regrowth of saplings in open areas is also observed suggesting possible regrowth after fire.
7. Inter tree spacing was variable. Most of the rehabilitated area appeared to have a density similar to the open woodland surrounding the site.

However, pasture and weed species are prevalent in the Evaporation Pond area and ongoing weed control is still required (cool burns and selective weed spraying) to allow regrowth and new self-vegetation to take hold in several areas. The dominant weed species consisted of Mission Grass, Stylo, Hyptis, Sida, Grader. Seedlings are establishing, but there is an absence of juvenile native suggesting of around 2 to 5 years of age – caused by either fire damage or destruction from grazing by feral animals, especially the horses. Pest management will be key to allow juvenile species to grow.

On the north side of the Evaporation Pond Area a strip of open grass land is observable (Figure 18). An area of approximately 6.53ha requires additional revegetation by tube stock planting over the coming years. This area is noticeable for its mission grass density (knee height) and weed and feral pest control here is considered a priority.

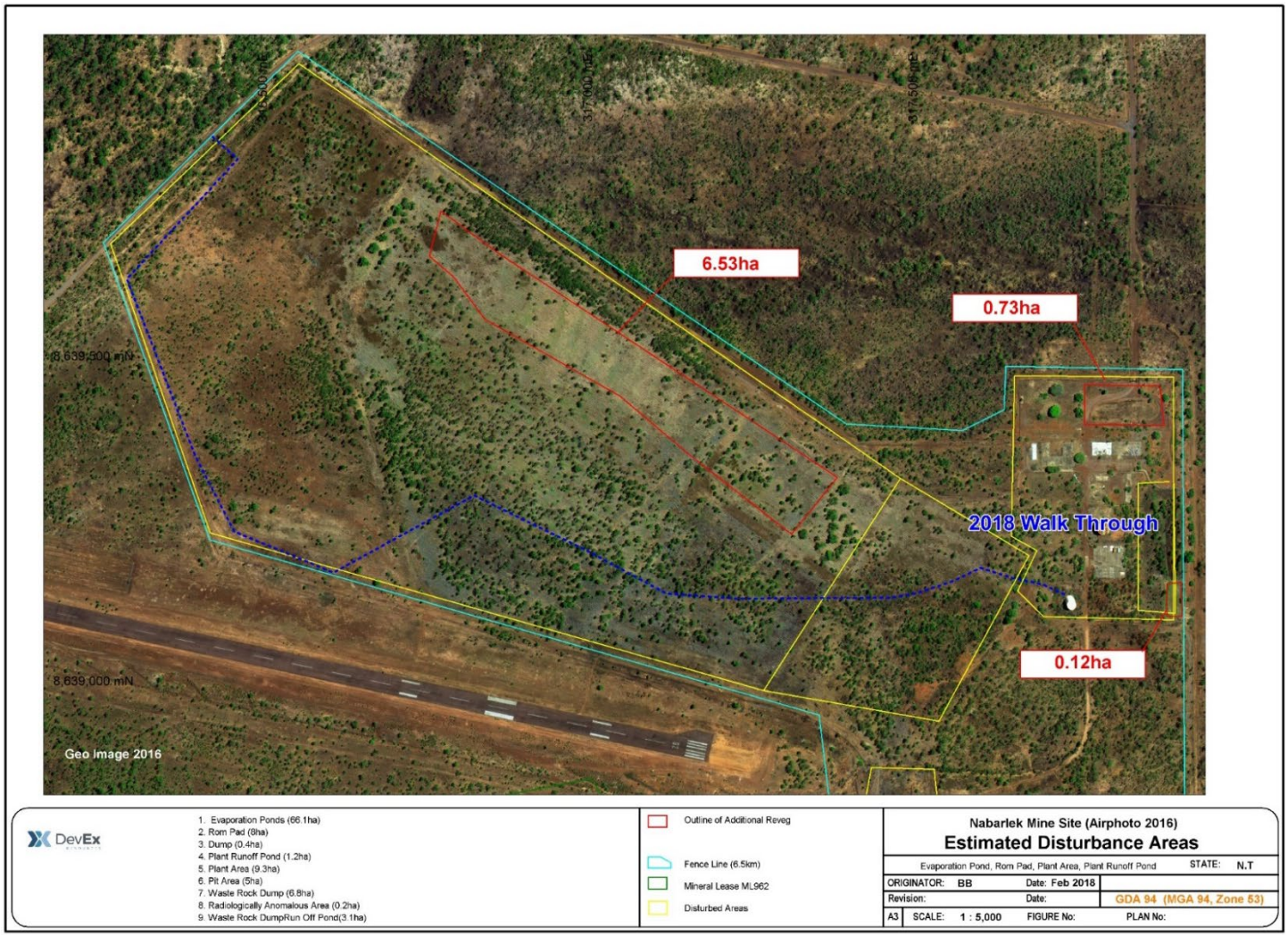



Figure 17: Evaporation Pond Area Revegetation Progress as viewed from Geo Image 2016 - and 2018 Walk Through. Several areas identified where previous revegetation has not been successful and work is planned.

### 5.7.3.2. Plant Runoff Pond

QMPL carried out rehabilitation of the Plant Area following decommissioning of the Plant and operations. At the time of this activity the Plant Runoff Pond was left in place. The plant runoff pond contains water runoff in a 1.2ha area during the wet season, providing a suitable habitat for para grass. Traditional Owners, have requested that the Plant Runoff Pond be backfilled and the runoff area graded so that water doesn't collect.

A 2013 Revegetation Programme at the Plant Runoff Pond has shown good survival rates of greater than 90%. The 2017 review of the area has found that vegetation has continued to thrive since 2016 (Figure 19 and Figure 20) and is attributed to the higher availability of water in the area. No further work is planned for this area until recontouring takes place.

In May 2018 the Company visited the Plant Runoff Pond area with a civil earth moving contractor and environmental consultants COOE Pty Ltd to assess and to quote the work required to back fill the pond and recontour the drainage so to avoid damaging the revegetation and avoid future ponding. Drainage north of the current Plant Runoff Pond will be redirected at the northern limit of the pond to the south east (see arrow in Figure 20) to prevent a loss of melaleuca populations. A stockpile of soil from the original digging at the pond is located outside of the perimeter fence east of the pond, this material can be returned to the pond. Previously identified para-grass in the same area appears to be significantly reduced. The redirection of drainage so as not to pond will have the added advantage of reducing para-grass.

To take advantage of similar earth moving equipment, the recontouring activities at the Plant Runoff Pond is planned to take place at the same time as remediation of the RAA.

Following these activities, it is estimated that an area of 0.12ha will require revegetation. The number of tube stock plants requiring revegetation will be addressed as part of the same Rehabilitation Strategy for the Evaporation Pond and the WRRP.

A review of the GeoImage (2016) airphoto for the Nabarlek area also identified open areas to the north of the historical mine office buildings and near the mine gate entrance (0.73ha). It is recommended that the Company revegetates this area also.

Figure 18: Plant Runoff Pond 2017 (and 2018) Photos

Figure 19: Plant Run-off Pond Revegetation Comparison between black and white Airphoto (2009) and colour Geo Image (2016) showing good revegetation of the area. Arrow indicates redirection of drainage leading into the pond following recontouring and filling in the pond.

#### 5.7.3.3. Waste Rock Dump Run-Off Pond

Following recontouring of the Waste Rock Runoff Pond [WRRP] in 2008, revegetation on the southern limits show good regrowth when comparing the 2009 Air photo against the recent Geo Image (2016) for the same area (Figure 21 and Figure 22).

However, the 2013 tube stock planting of the main portion of the recontoured WRRP has not fared as well. A 2016 inspection of this area showed a low survival rate of less-than 5% of the 395 tube stocks originally planted in 2013. Reasons for this low survival rate are unclear.

In 2017, no significant change in vegetation was observed during the field inspection. Inspection of the soil in the region suggests reasonable moisture holding capacity. It's possible that feral animals may have impacted on previous planting. Additional mixed tube stock planting is recommended to improve density and progress the area towards becoming a woodland suitable for occasional hunting. A walk through of the area in May 2018 indicated that weeds were not in high densities and we now intermixed with native grasses in the region. A May 2018 cool burn of this area was carried out to ensure weeds did not take hold.

As shown in Figure 21 and Figure 22 approximately 1.49ha requires renewed revegetation with tube stock planting once feral animals and weeds are brought under control.


Figure 20: 2009 Airphoto of the Waste Rock Run Off Pond Area showing recent recontouring


Figure 21: Geo Image (2016) imagery of the Waste Rock Run Off Pond Area showing revegetation progress and an estimated area of 1.49ha requiring additional revegetation

Figure 22: Waste Rock Dump 2017 Photo

### 5.7.4. Exploration Drilling

During 2019 six holes were drilled for a total of 1,490.4m which comprised 1,118.8m of diamond (NQ and HQ) and 371.6m of RC. All holes were rehabilitated in October 2019. This work included cutting the collar 20cm below ground level and inserting a plug, removal of all plastic bags to a waste disposal facility and scarifying of pads. A review is still required to assess if revegetation by tube stocks is required. Photography of the drill sites post-rehabilitation are included in Appendix 1.

Two site visits have been made since the drilling began in 2019 by the DPIR (reported in the document Site Inspection Report – Nabarlek Uranium Mine and West Arnhem project, document number MDOC2019/03804) and the SSB (reported in Memorandum dated 2 December 2019). Observations were made in both reports which have since been addressed.

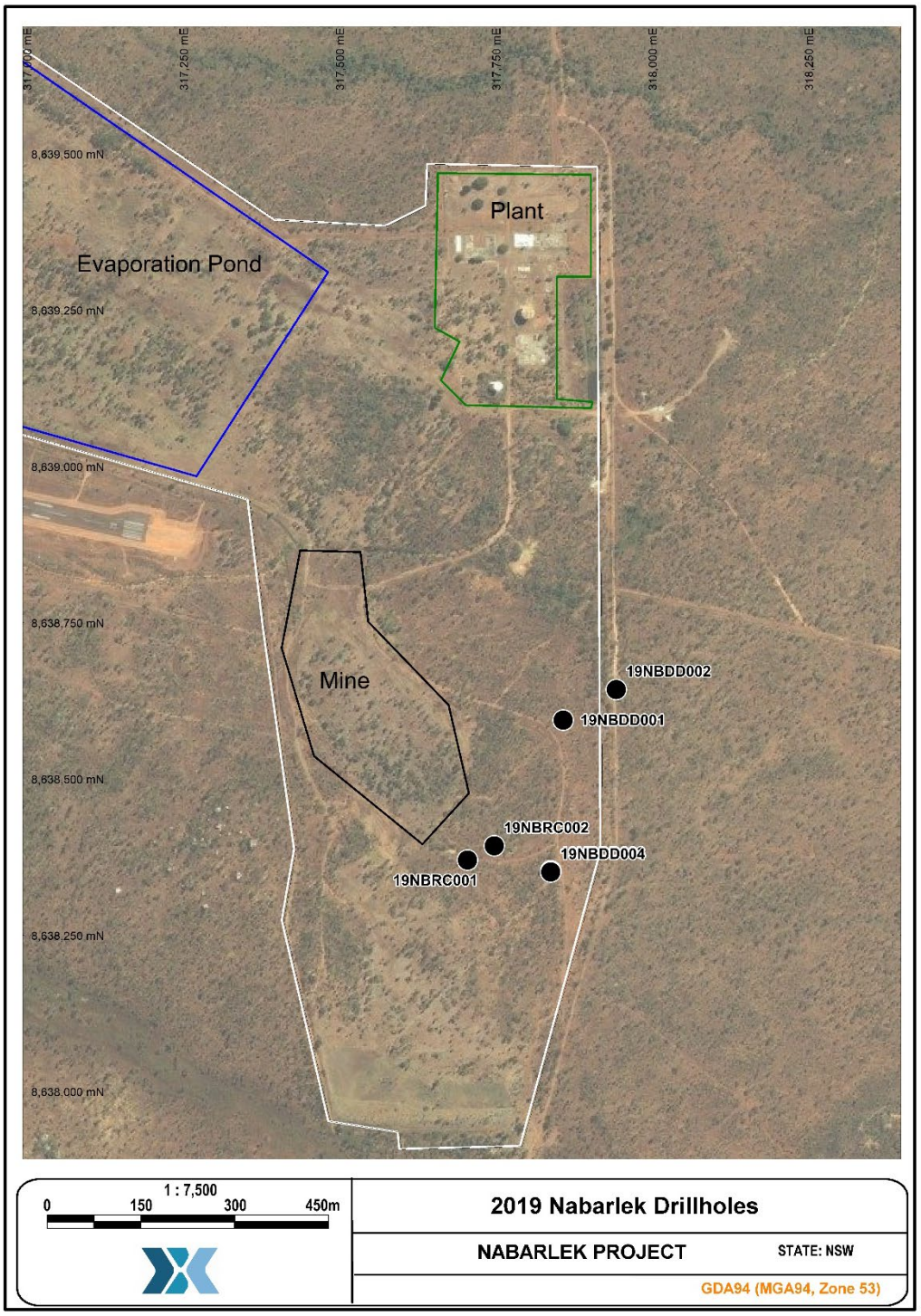



Figure 23: Location of 2019 drilling within the Nabarlek Project requiring photo monitoring

### 5.7.5. Surface and Groundwater Monitoring

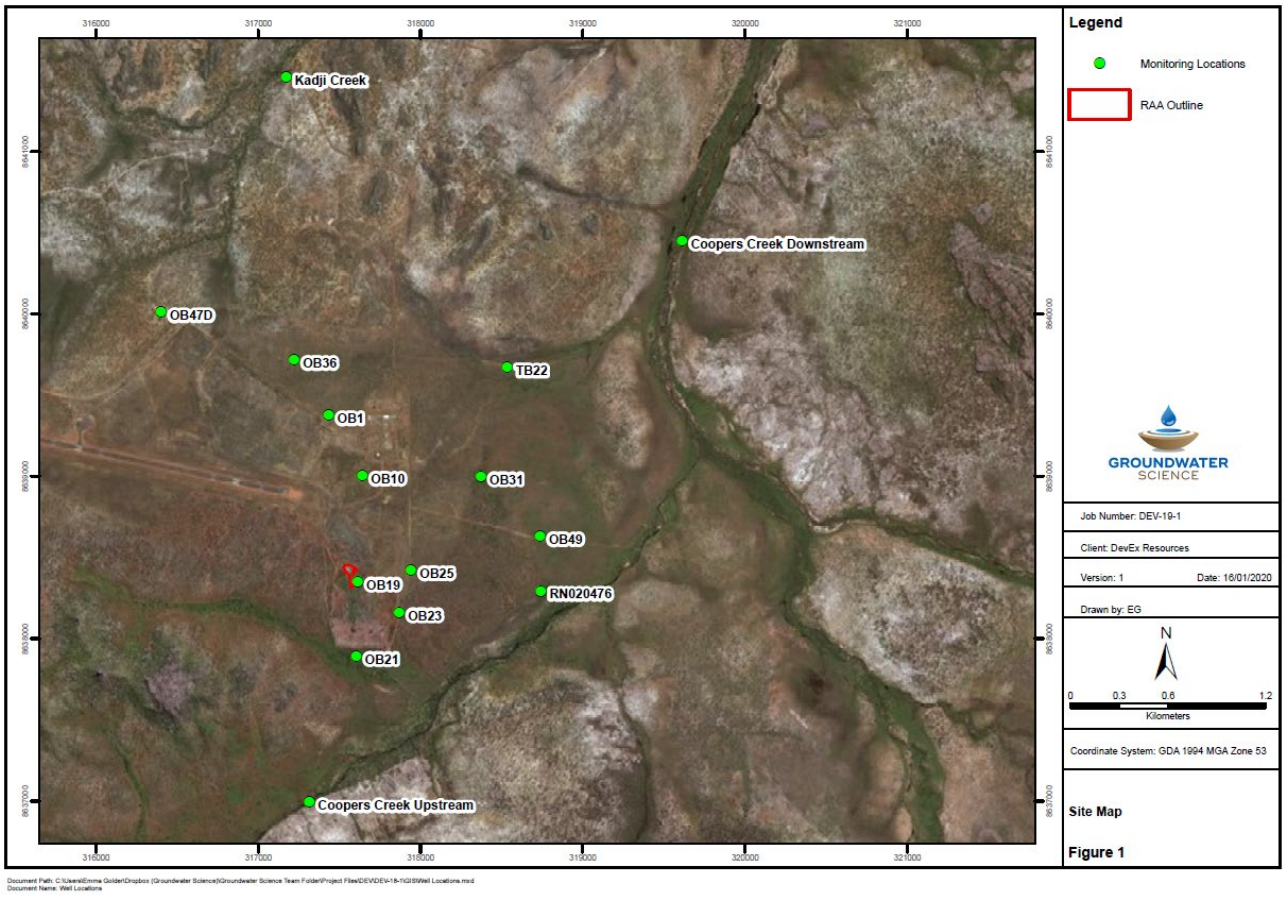
Sampling event for surface and groundwater monitoring was conducted on the 4th and 5th of November 2020. Data was provided to Groundwater Science by Intertek NTEL Laboratories.

The laboratory assay suite for 2020 did not include electrical conductivity. Electrical conductivity has been calculated from laboratory assayed salinity values by dividing Salinity (in mg/L total dissolved solids) by 0.64.

Sampling locations are shown in Figure 25.

A comparison of 2020 monitoring data to baseline and the ANZECC guidelines has been completed and shows:

Figure 24: Location of 2020 ground and surface water monitoring locations




### 5.7.5.1. Groundwater

Pre-mining baseline groundwater data for the Nabarlek site showed neutral pH, low EC, high uranium and low sulphate. Pre-mining groundwater uranium concentration exceeded drinking water guidelines. shows:

**Groundwater**

- One groundwater sample exceeds the livestock drinking water guidelines for any parameter.
  - OB19 reports sulphate concentration of 2090 mg/L that exceeds the stock use guidelines of 1000mg/L.
- All Groundwater Samples are below stock use guideline concentrations for uranium, EC and pH.
- All Groundwater Samples exceed baseline parameters for Electrical Conductivity and Sulphate concentrations.

A summary of pH, EC, uranium and sulphate monitoring data to baseline and ANZECC guidelines is presented in Table 11.

Table 11: Summary Comparison of monitoring data to baseline and guideline values – Groundwater

| Groundwater Site | Meets Stock water guidelines | At or near pre-mining baseline |
|---|---|---|
| OB01 | Y | N (Elevated EC, S) |
| OB10 | Y | Y |
| OB19 | N (Sulphate exceeds) | N (Elevated EC, S) |
| OB21 | Y | Y |
| OB23 | Y | N (Slightly elevated EC, S) |
| OB25 | Y | N (Elevated EC, S) |
| OB31 | Y | N (Slightly elevated EC, S) |
| OB36 | Y | N (Slightly elevated EC, S) |
| OB47 | Y | N (Low pH) |
| OB49 | Y | Y |
| TB22 | Y | Y |
| RN20476 | Y | Y |

Trends in the 2020 data include:

- **OB01** – Since 2015 EC and sulphate has decreased.
- **OB19 and OB23 -** The 2017 results showed an anomalous drop in Uranium, EC and SO4 possibly due to surface water ingress due to flooding or well casing failure. The 2018 and 2020 results are returning to the pre 2017 results.
- **OB25 –** 2018 and 2020 results show an increase in EC and SO4 concentrations where previous results had been stable for 8 years. Both values are still within the livestock water guideline.

#### 5.7.5.2 Surface water

Surface water monitoring data collected from the Nabarlek site has been compared to:

- Baseline Data: Average pH, EC, sulphate and uranium of monitoring data from the Coopers Creek upstream site. While baseline surface water data is discussed briefly in the EIS, no data is presented. For the purpose of evaluating the ongoing impact of the Nabarlek site on the Coopers and Kadji creeks, this is considered an appropriate baseline.
- ANZECC 2000 guidelines for drinking water and 95% trigger values for freshwater ecosystems

Results from 2020 sampling were:

- ph at Cooper Creek Downstream and Kadji Creek is below drinking water guidelines for aesthetics.
- Aluminium concentration at Cooper Creek Upstream exceeds ANZECC 2000 guidelines 95% trigger values for freshwater ecosystems. This monitoring site is upstream of the Nabarlek site and not impacted by the Nabarlek mine.

- Electrical Conductivity, sulphate concentrations and uranium are all within drinking water guidelines at all surface water monitoring sites.

A summary of pH, EC, uranium and sulphate monitoring data to baseline and ANZECC guidelines is presented in Table 12.

Table 12: Summary Comparison of monitoring data to baseline and guideline values- Surface Water

| Surface Water Site | Meets drinking water guidelines | Meets guidelines for 95% protection of freshwater ecosystems | At or near CC Upstream Baseline |
|---|---|---|---|
| Coopers Creek Upstream | Y | Y | NA |
| Coopers Creek Downstream | N (just below lower limit for pH) | Y | N (Lower pH) |
| Kadji Creek | N (just below limit for pH) | Y | Y |

Trends in the 2020 data include:

- **Cooper Creek DS -** The 2017 surface water data exhibited an anomalous, high EC result for Cooper Creek DS that indicated sample contamination or other effect such as sampling from a stagnant (non-flowing) pool that has been subject to evaporation. 2018 and 2020 results have returned to pre 2017 concentrations.

### 5.7.6. Data Quality Assurance and Quality Control

#### 5.7.6.1. Historic Data

The water monitoring data set has been assembled since project inception by a number of project owners,
culminating in DevEX Resources the current lease holder. The historic data set is accepted as-is with anomalies in the data noted in the analysis reported previously. The Full historic dataset is presented as Attachment 2 and includes many bores no longer included in the monitoring program.

The historic data presented as Attachment 2 comes from three sources (Ryan 2011):

- QML/UEL historical reports where results were extracted from quarterly, six-monthly and annual reports;
- DoR annual monitoring program for Nabarlek where the results of the bore water analysis have been used; and
- The SSD annual bore water sampling program that concentrates on radionuclide analysis at their Darwin laboratory facilities.

The historic data set excludes groundwater data obtained from sampling undertaken by ECOZ Pty Ltd from
2002 to 2010 due to discrepancies between this data set and samples taken by DOR and ERIS, and time series trends as described in earlier groundwater reviews Ryan (2011).

#### 5.7.6.2. DevEx Resources Data

Sampling undertaken by DevEX entails purging the bores by pumping three well volumes and retaining
samples in clean sealed containers. The samples are submitted to a NATA certified Laboratory (Northern
Territory Environmental Laboratory's, NTEL, now owned by Intertek). Data is received electronically to reduce data transposition errors and accompanied by laboratory certificates of analysis which are filed to retain the record. The DevEx data set is presented in full as Appendix 11.

### 5.7.7. Discussion and conclusions

Mining at the Nabarlek site resulted in impacts on water quality through three main mechanisms:

- Land application of wastewater
- Leakage from evaporations ponds
- Disposal of tailings to the mined-out pit.

The current monitoring dataset demonstrates that the site is rehabilitated. Groundwater and surface water is suitable for the planned post mining land use and can be returned to the Aboriginal Traditional Owners in a condition so that it is safe for people to access the area to carry on traditional activities such as hunting, wild food gathering and occasional overnight camping (Waggitt and Hughes, 2002).

Surface water quality parameters are at or within the ANZEC guidelines for 95% projection of freshwater ecosystems in 2020, with exception of the aluminium result for the Coopers Creek Upstream site. This monitoring site is upstream of the Nabarlek site and not impacted by the Nabarlek mine.

Groundwater has returned to near pre-mining baseline conditions. All samples are suitable for stock use except for one point, OB19, located immediately adjacent to and down-gradient of the

rehabilitated mine pit, which reports sulphate that exceeds stock use limits. Notably uranium does not exceed stock water guidelines at any groundwater sampling point and is below the pre-mining baseline reported in the project EIS.

The continued low rate of change in sampling results, and the fact that the site is not subject to active mining or management supports the previous recommendation to reduce the sampling frequency to every 2 years.

Mine closure criteria for groundwater should be developed for the site. The NT government's guideline for mine closure objectives (NTDOR, 2006) detail the following objectives related to water quality following mine closure.

- The quality of water leaving the site should be such as to cause no significant deterioration of water quality to the downstream beneficial use.
- Production of polluted water (e.g. acidic or caustic runoff from pits, stockpiles, waste rock or tailings) should be minimized, and trends should indicate improvement;
- Continuing active intervention should not be required for site water management;

# 6. Performance Objectives

DevEx, through its *Environmental Policy*, is committed to achieving best practice in environmental and safety management. To track its performance in these areas it has developed a number of performance indicators with associated targets (Table 14). DevEx is committed to continuous improvement in its environmental and safety performance

Table 13: Environmental and Safety Performance Indicators for 2020-2021

| Performance Indicator | Current Measure | Target |
|---|---|---|
| SAFETY | | |
| Number to Lost Time Injuries per year | 0 | 0 |
| Number of Medical Treated Injuries per year | 0 | 0 |
| Number of First Aid Treatments per year | 0 | 0 |
| Number of incidents per month | 0 | 0 |
| Percentage of drill rigs inspected | 100 | 100 |
| | | |
| Number of reportable environmental incidents | 0 | 0 |
| Number of environmental incidents per month | 0 | 0 |
| Number of native fauna deaths from operations | 0 | 0 |
| Number of un-authorised environmental disturbances | 0 | 0 |

DevEx has developed performance objectives for both its exploration activities and the rehabilitation of legacy uranium mining areas. The objectives have been selected to ensure continual improvement in its environmental management of exploration activities. Specific objectives are given in Table 15.

Table 14: DevEx 2020 Performance Objectives

| No | Overall Objective | Target for 2021 | When |
|---|---|---|---|
| 1 | No reportable environmental incidents | Zero | 2021 |
| 2 | Update and submit MMP | Annually | May 2021 |
| 3 | Rehabilitate exploration disturbance areas | Continue photo monitoring of 2015 and 2019 rehabilitated drill holes and rehabilitate any new disturbances | 2021 |

# 7. Mine Site Rehabilitation

In 2017 and 2018 the Company completed a review of current rehabilitation obligations for Nabarlek and these are summarised in Table 16 and provided in Figure 26 for reference. These rehabilitation obligations are outlined in the section below and detailed in the Rehabilitation and Closure Plan for MLN 962 (Appendix 2).

Details of planned rehabilitation activities for the 2020-2021 year have been provided above in Section 3.2 Proposed Activities and further in the Rehabilitation and Closure Plan for MLN 962 (Appendix 2). The high priority area for remediation is the RAA

Table 15: Summary of Remaining Rehabilitation Requirements at Nabarlek

| Location | Disturbance (ha) | Summary of Requirements |
|---|---|---|
| Plant | 0.85ha | Remove diesel contaminated soil<br>Re-contour Plant runoff pond<br>Revegetate Plant Runoff pond (0.12ha) and open area north of old office blocks near mine entrance (0.73ha) |
| Pit Edge | 0.7ha | Remediate the Radiological Anomalous Area (0.5ha)<br>Additional revegetation with tube stock of the RAA (0.7ha) |
| WRRP | 6.8ha | Weed management<br>Additional tube stock revegetation of open (1.49ha) |
| Evaporation Ponds | 6.53ha | Weed Management – Spray and Cool Burns<br>Additional revegetation with tube stock in open areas (6.53ha) |
| Misc. | n/a | Remove 6.5km of fence<br>Miscellaneous rubbish around site<br>Monitoring of Ground Water and Surface Water<br>Plug and abandon 40 monitoring wells |
| RAA | 0.7ha | Bury the RAA in-situ, removing radiation exposure risks in relation to public health, environmental protection, site stability, hunting and gathering needs, and aesthetics in the future. |

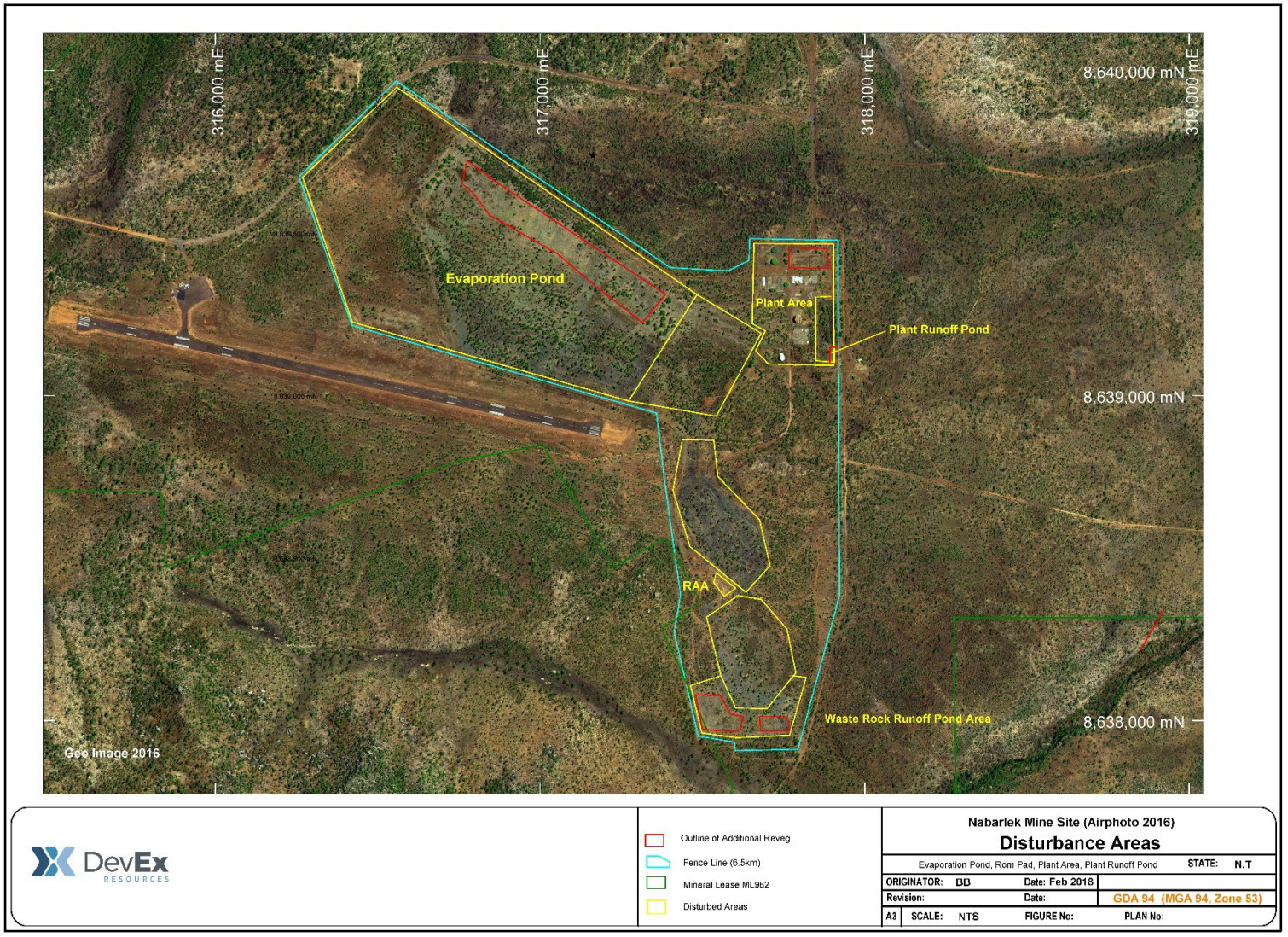



Figure 25: Nabarlek Mine Site Layout over GeoImage (2016)

## 7.1. RAA Rehabilitation

An area of approximately one-hectare immediately adjacent to the western side of the historical Nabarlek pit is reported to have elevated radiation levels as a result of historical mining activities. This site was named the Radiological Anomalous Area (RAA) and the Supervising Authority requested the Company provide details of the remediation plans for the RAA under Variation of Authorisation 0435-01 on the 13th May 2019.

In 2017 and 2018, DevEx investigated several options to identify the best method of remediating this area and presented the framework proposal to the Supervising Authority during the Nabarlek Mine Site Technical Committee meeting on the 31st May 2018 for the remediation of the RAA.

It was determined; the preferred remediation option was to leave the radioactive material in-situ and undisturbed under a cover sequence of nominally 0.5 metre containing rock armouring and installing diversion drains to ensure the covered material remains stable over time.

This Final Remediation Plan for the RAA provides;

- Details on the RAA and associated landforms
- Environmental engineering design
- Radiological assessment
- Hydrogeological conditions
- Cover sequence design
- Native vegetation
- Implementation of the Remediation Plan
- Post remediation monitoring and maintenance
- Environmental management to deliver the required environmental outcomes.

The RAA after remediation will comprise of the following landforms;

1. The main RAA anomaly
2. The RAA tail where radioactive material has shed on the southern slope to form a dispersion tail.
3. The proposed cover comprising of waste rock material from backfilling of the historical Nabarlek pit located adjacent to the RAA
4. Dispersion drains, two drains will direct surface run-off from the north around the RAA
5. Toe bund, at the southern end of the remediation area.

The remediation proposal for the RAA and dispersion tail is to cover the radioactive area in-situ using waste rock material so that no radiological material is disturbed.

### 7.1.1. Topographical Survey

A LiDAR survey was offered by the Office of the Supervising Scientist to assist with the engineering remediation design. The LiDAR survey covered the northern portion of the RAA, therefore a subsequent topographic survey was commissioned by DevEx in 2019 to capture the entire RAA and dispersion tail.

On 10th September 2019 a qualified Remote Pilot Licence (RePL) conducted a topographical survey of the RAA and surrounding areas to provide a ground surface Digital Terrain Model (DTM) for the application of the engineering design. The survey has an expected accuracy of +/- 30 mm. This survey only covered half of the RAA site and the Company organised a follow-up survey to cover the entirety of the RAA.

For the purposes of the engineering design, the DTM file was imported into the engineering software Maptek Vulcan and the data was gridded using a 1 m by 1 m surface grid.

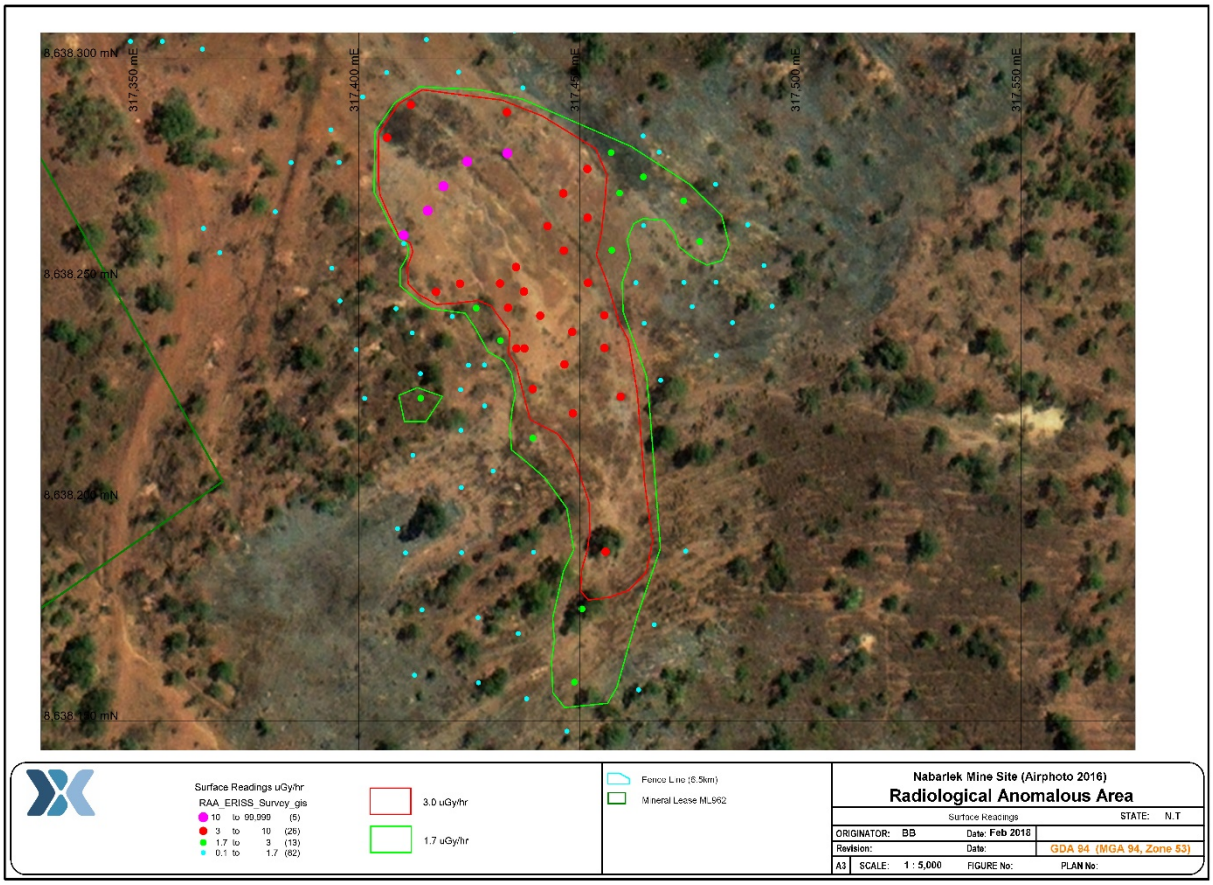



Figure 26: RAA radiological surface readings, 3.0 µGy/hr (red line), 1.7µGy/hr (green line)

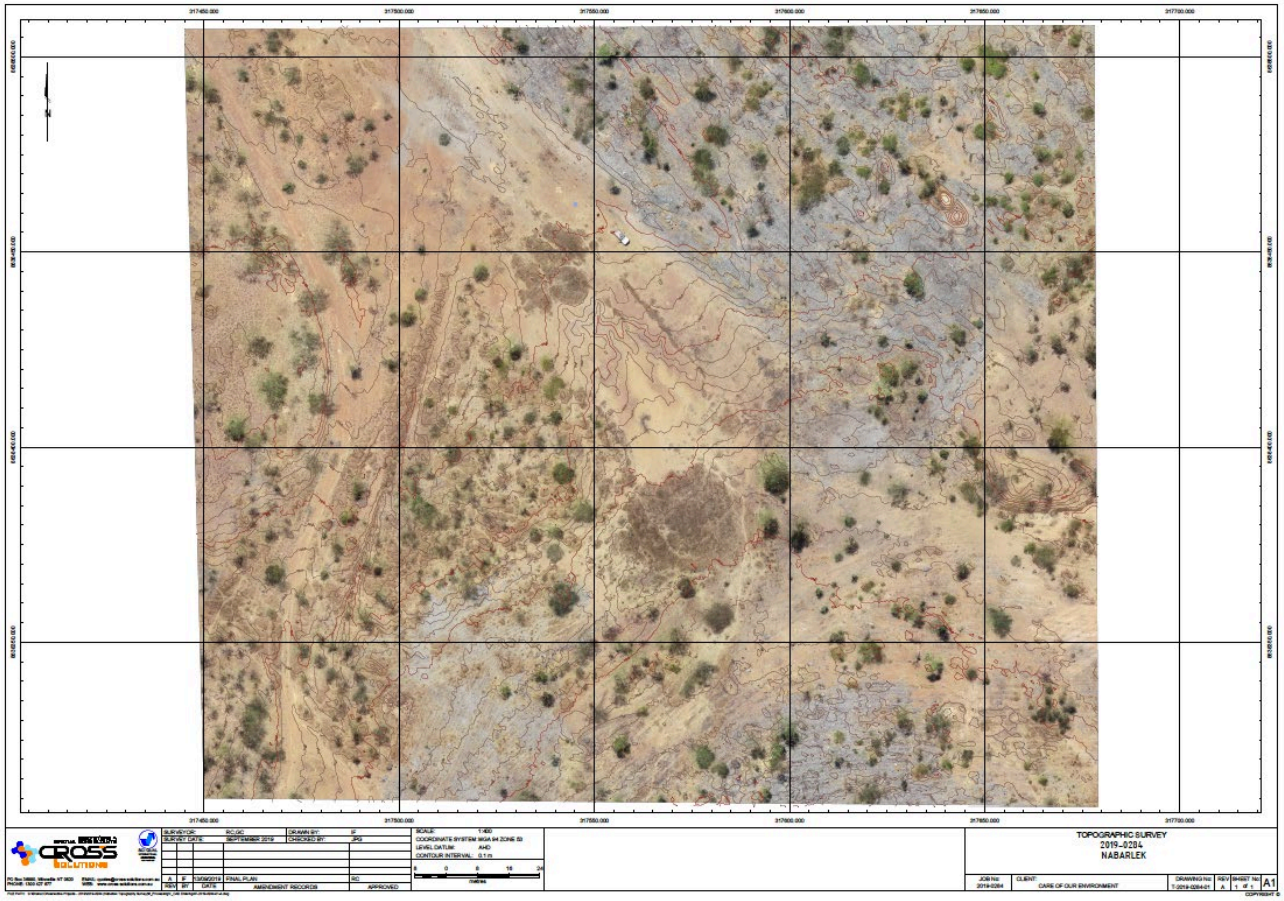



Figure 27: Topographical survey area, data collected September 2019

### 7.1.2. Remediation Proposal – Cover RAA and Tail In-situ

The proposed remediation encompasses covering the RAA core and the dispersion tail in-situ, so that no radiological material is disturbed. The total footprint of covered area will be 4,227 $m^2$, shaded magenta (Figure 29).

#### 7.1.2.1. Cover Sequence

The RAA and dispersion tail would be covered in-situ with 0.5 m of waste rock sourced from the adjacent Nabarlek pit. This waste rock sits above the original topography pre-mining. Excavation of cover material will be to a depth of 0.4 m, the area of excavation has been designed 1-4% larger to allow for variability in bulk density and swell factor. The RAA cover will be contoured to allow for surface water shedding and prevent surface water ponding, as illustrated in Section A-A Figure 30 and Section B-B Figure 31.

#### 7.1.2.2. Dispersion Drains

Two runoff interception and dispersion drains will be constructed to the north of the RAA to prevent cover erosion and subsequent exposure of the underlying RAA. Surface drains have been designed at 0.5 m below the surface and 2 m wide with a batter of 1 in 2 (26.6°).

#### 7.1.2.3. Toe Bund

A toe bund will be constructed at the southern tip of the dispersion tail to provide contingency for an unpredictable catastrophic rain event, as shaded red in Figure 29. The toe bund dimensions will be 0.5 m high, 3 m wide base at a 3:1 slope.

Table 16 summarises the volumes, tonnes and footprint of the landform features discussed. Tonnage assumes a bulk density of 2.3 t/$m^3$ (average between 1.6 and 3.0 for a mixture of soil and rock) for BCM material and 1.84 t/$m^3$ for ECM (at a swell factor of 1.25). Excavated batter angles and fill angles have been designed at a slope of 1 in 5 (11.3°).

Table 16. Volumes, tonnes and footprint (cover RAA and dispersion tail in-situ)

| Landforms | Volume ($m^3$) | Tonnes (tonnes) | Footprint ($m^2$) |
|---|---|---|---|
| Containment cover material excavated to 0.4m depth | 1,985 (BCM) | 4,566 | 6,663 |
| Containment cover material placement to a height of 0.625m (0.5m settled) | 2,501 (ECM) | 4,601 | 4,227 |
| Surface Drain East | 109 | 251 | 398 |
| Surface Drain West | 75 | 173 | 289 |
| Toe Bund South | 34 | 62 | 133 |

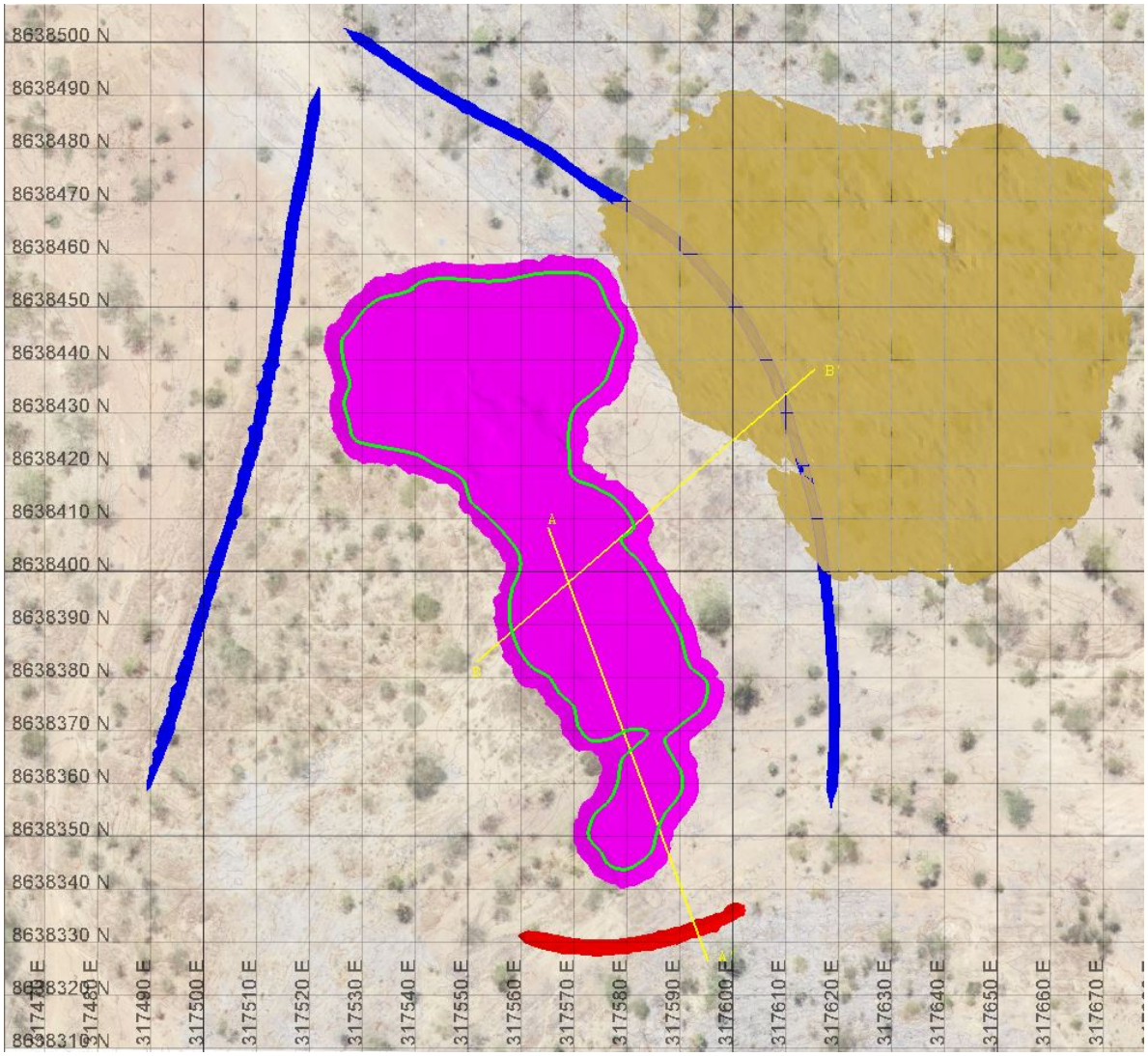



Figure 28: Remediation schematic (cover RAA and dispersion tail in-situ) RAA and tail in situ (green outline), cover (magenta), cover source (brown), diversion drains (blue), toe drain (red); section lines (yellow).

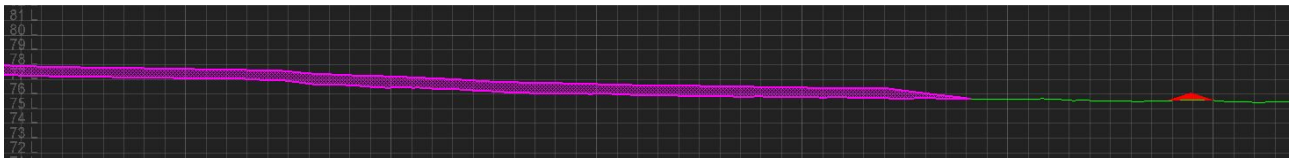


Figure 29: Section A-A

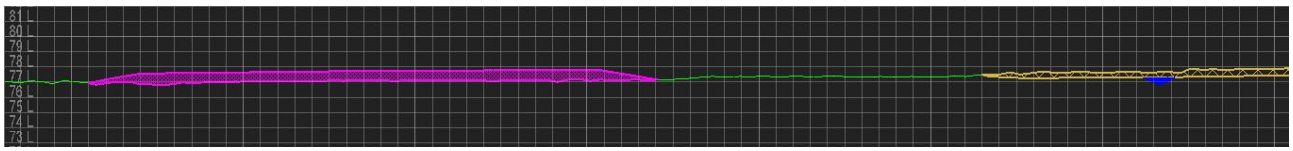


Figure 30: Section B-B

### 7.1.3. Discussion and Future Work

Work and remediation has been impacted by access constraints resulting from COVID19 travel restrictions through 2020 and 2021. The remediation of the RAA will be reported in the next annual MMP and will include the radiological records and initial photo-point monitoring. The progress of revegetation, weed control, photo-point monitoring and the establishment of vegetation will be reported in subsequent annual MMP reports.

A full, detailed report Final Remediation Plan for the Radiological Anomalous Area (Environmental and Engineering), compiled by COOE Pty Ltd in September 2020 is available in Appendix 13.

## 7.2. Plant Runoff Pond Rehabilitation

Traditional Owners, and MTC Stakeholders have expressed a view that the Plan Runoff Pond should be filled in as soon as possible. With work planned to remediate the nearby RAA, it would be advantageous to also rehabilitate the Plant Runoff Pond at the same time.

On May 2018 the Company visited the Plant Runoff Pond area with a civil earth moving contractor and environmental consultants COOE Pty Ltd to assess and to quote the work required to back fill the pond and recontour the drainage so to avoid damaging the revegetation and avoid future ponding. Drainage north of the current Plant Runoff Pond will be redirected at the northern limit of the pond to the south east (see arrow in Figure 20) to prevent a loss of melaleuca populations. A stockpile of soil from the original digging at the pond is located outside of the perimeter fence east of the pond, this material can be returned to the pond. Previously identified para-grass in the same area appears to be significantly reduced. The redirection of drainage so as not to pond will have the added advantage of reducing para-grass.

It is planned that historical photo monitoring concrete cylinders will also be removed and placed into the Plan Runoff Pond and then covered.

Following these activities, it is estimated that an area of 0.12ha will require weed management and revegetation.

As the site requires drainage redirection away from the old pond to the south east (Figure 20), remediated contouring achieving this will require an annual drainage and erosion assessment for a period of three years.

# 8. Exploration Rehabilitation

The objective of exploration rehabilitation is to reinstate the site to as near as original condition as possible and to leave it in a state where revegetation can occur after the completion of exploration activities. Rehabilitation activities for exploration work programs are summarised in Table 18 and detailed in the *Post-Drilling Procedure* (see Drilling Procedures in Appendix 9).

Topsoil management is critical to rehabilitation success. Proposed measures applicable to preservation of topsoil include:

- Any topsoil or vegetative material removed during the clearing process will be stockpiled for use during rehabilitation;
- Topsoil material will be stripped and stockpiled separately to any other soils; and
- Topsoil stockpiles will be laid out in strips no more than 1 metre in height as close as possible to where they are to be used in future rehabilitation work. Stockpiles will be located away from work areas so that they are not mistakenly driven over.

At the completion of exploration rehabilitation, the land will be left to naturally regenerate. If monitoring (see Section 6.1) shows natural revegetation to be ineffective then seeding with provenance species and/or weed control measures will be undertaken.

Existing tracks are closed off for the wet season, prior to DevEx leaving site. PVC piping and associated earthworks over creek crossings are removed and erosion control measures, such as spur drains or contour banks, are placed at suitable regular intervals. Natural drainage lines are checked to ensure that they are not blocked and any obstructions are removed. Any windrows that have developed along the tracks are flattened to prevent preferential flow paths.

All rehabilitation works will be recorded on the Nabarlek Drillhole Rehabilitation Register (Appendix 1) which will be implemented by DevEx as drilling works are initiated. Comparison between scintillometer reading noted prior to drilling and post drilling is provided in the Nabarlek Drillhole Rehabilitation Register. No significant variations are noted.

## 8.1. Photo Monitoring

Photo monitoring of all drillhole sites before and after drilling is undertaken to allow comparison of the rehabilitated site to the original undisturbed site. A Drillhole Photo Monitoring Procedure (Appendix 10) has been developed to ensure consistency for all drill site photo monitoring, with a photo-monitoring station established for each drillhole enabling replication at defined time intervals after rehabilitation (immediately after, 12 months and 24 months). Information associated with each photo (photo-monitoring station coordinates, azimuth of photo, date and photo ID) is recorded on a Pre-Drilling Data Form and Post-Drilling Data Form.

## 8.2. Current Rehabilitation Status: Exploration

All disturbed areas resulting from exploration work programs were rehabilitated at the completion of each field season.

Table 17: Rehabilitation Activities for Exploration Work Programs

| Disturbance | Rehabilitation Activities | Schedule (Timing) | Closure Objectives | Monitoring |
|---|---|---|---|---|
| Drill holes | Plug each drillhole below the surface and backfill to the surface.<br>Remove any mineralised uranium material from the drill hole site. | Immediately after drilling | All drillholes plugged and safe prior to the end of the field season.<br>Ensure revegetation is progressing and weeds have not established at the 12 month inspection. | Photographs taken before drilling, post-rehabilitation and at the 12 month inspection.<br>Enter rehabilitation data onto Nabarlek Drillhole Rehabilitation Register.<br>Follow up any sites which require further work. |
| Drill sumps | Sample bags emptied into the sump.<br>Empty sample bags burnt at the Nabarlek domestic refuse pit. | At completion of drill Programme | All sumps backfilled prior to the end of the field season.<br>Ensure revegetation is progressing and weeds | Photographs taken before drilling, post-rehabilitation and at the 12 month inspection.<br>Enter rehabilitation data onto Nabarlek |

| Disturbance | Rehabilitation Activities | Schedule (Timing) | Closure Objectives | Monitoring |
|---|---|---|---|---|
| | Drill cuttings placed into the drill sump.<br>Backfilled with excavated material.<br>Recontoured to the original contour.<br>Respread with stored topsoil. | | have not established at the 12 month inspection. | Drillhole Rehabilitation Register.<br>Follow up any sites which require further work. |
| Drill pads | All rubbish removed, including sample bags, wooden pegs, etc<br>Recontoured to original contour and compacted areas scarified.<br>Stockpiled topsoil respread over the site.<br>Cleared vegetation spread across the site.<br>Final radiation reading taken and recorded on Post-*Drilling Data Form.* | At completion of field season | All drill pads clean and recontoured.<br>Ensure revegetation is progressing and weeds have not established at the 12 month inspection.<br>Ensure there is no radiological contamination of the surface soils by comparing the final radiation reading with the initial radiation reading at each work site. | Photographs taken before drilling, post-rehabilitation and at the 12 month inspection.<br>Enter rehabilitation data onto Nabarlek Drillhole Rehabilitation Register.<br>Follow up any sites which require further work. |
| Access tracks | Any compacted areas to be ripped.<br>Any windrows to be flattened to prevent preferential flow paths developing and leading to erosion.<br>PVC piping and associated earthworks over creek crossings removed and erosion control measures (eg spur drains or contour banks) placed at suitable regular intervals.<br>Check that any natural drainage lines are not blocked and any obstructions from creek crossings are removed.<br>Stockpiled topsoil respread over the track.<br>Any cleared vegetation to be respread. | At the completion of the field season. | All new tracks rehabilitated prior to the end of the field season.<br>All existing tracks closed off for the wet season.<br>Ensure revegetation is progressing and weeds have not established at the 12 month inspection. | Follow up any sites which require further work. |

## 8.3. Exploration Rehabilitation Register

DevEx's rehabilitation register related directly to drill holes and associated activities and is referred to within this document and provided in Appendix 1.

## 8.4. Costing of Closure Activities

The calculated Security for rehabilitation and exploration on the Nabarlek Project is consistent with the previous MMP Security Calculation. Details of remaining rehabilitation obligations are discussed in this report and also within the Rehabilitation and Closure Plan for MLN962 (Appendix 2).

A summary of the Security Calculation is provided in Table 19 and in detail within Appendix 6.

The Company has presented it plans, within this report, to remediate the Radiological Anomalous Area (RAA). The Security for remediation of the RAA will remain the estimate imposed by the Supervising Authority.

With assistance from the NLC, DevEx actively employees senior Traditional Owners from the area to work on both exploration and remediation at Nabarlek. Remediation plans across the Mineral Lease is actively discussed and their involvement is encouraged.

# 9. References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