

# Exploration Operations Mining Management Plan and Public Report

# NORTHERN STAR (TANAMI) PTY LTD TANAMI REGIONAL EXPLORATION PROJECT (TRE) VARIATION Request for Additional Information MR2017/0336

# DECEMBER 2017

Document Distribution List: NT Department of Primary Industry and Resources

**Central Land Council** 

Tanami Gold NL

Northern Star Resources Ltd

I, MICHAEL MULRONEY – CHIEF GEOLOGICAL OFFICER 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.

SIGNATUR

DATE: 11/12/2017.

## Contents

1. AMENDMENTS	3
1.0 Operator Details	4
1.1 Executive Summary	5
2.0 Project Details	6
2.1 Proposed Activities	11
2.1.1 Air Core (AC) / Rotary Air Blast (RAB) Drilling	11
2.1.2 Track Clearing	12
3.0 Current Project Site Conditions	13
3.1 Environment	
3.2 Aboriginal and Heritage Sites	
4.0 Exploration Rehabilitation	21
4.1 Exploration Rehabilitation Register	
4.2 Costing of Closure Activities	
Table of Figures	
Figure 1 Cave Hill	
Figure 2 Farrands HillFigure 3 Gardiner, Boulder Ridge and Browns Range	
Figure 4 Central	9
Figure 5 Regional Sites of Botanical Significance	19
List of Tables	
Table 1 Variation Summary	
Table 2 Work Program Summary Table 3 Key ecological attributes	
Table 3 Key ecological attributes Table 4 Summary of relevant environmental management	ent measures17
Table 5 Disturbance summary	22

### 1. AMENDMENTS

A Mining Management Plan (MMP) for the Tanami Regional Exploration Project (TRE) submitted by Northern Star (Tanami) Pty Ltd (NST), a wholly owned subsidiary of Northern Star Resources Ltd (NSR), was approved by the Department of Primary Industry and Resource (DPIR) on 13 April 2017 under Authorisation 0916-01.

The request for Security was received on 11 April and a receipt of the security, under Authorisation 0916-01, was received and commencement of activities was authorised by DPIR on 2 May 2017.

This document forms a Variation to the approved Authorisation 0916-01 and associated work programs.

All previous approvals remain current unless stated otherwise in this Variation. A summary of the variations contained in this document can be found in Table 1 below.

**Table 1 Variation Summary** 

Variation	Details
Tenements	Amendment to add additional tenements. (Appendix 2)
Authorisations	Application for Authorisation Form and Nomination of Operator Form are provided in (Appendix 2)
Work Programs	Proposed work programs over Farrands Hill, Central Tanami, Gardiner, Boulder Ridge and Browns Range.
Environmental	Details of the latest Environmental survey and changes implemented due to findings/recommendations. (Updated several appendices).
Security	Updated Security calculation to reflect the new proposed work programs.
Environment Recommendations	Updated recommendations to include Grey Falcon, Great Desert Skink and all conservation significant plants (including data deficient and near threatened)  Additional fauna and flora controls added to Disturbance Permit
	and Disturbance Permit Procedure (Appendices 16 and 17)

### 1.0 Operator Details

**Operator name:** Northern Star (Tanami) Pty Ltd

(ABN: 88 603 860 831)

Address: Level 1, 388 Hay St

Subiaco. WA 6008

PO Box 2008

Subiaco. WA 6904

**Contact details:** Tel +6 8 6188 2100

Fax +6 8 6188 2111 Email info@nsrltd.com

www.nsrltd.com

Key contacts:

Dale Annison

Senior Exploration Geologist - Tanami

Tel +61 8 6188 2132

Email dannison@nsrltd.com

Jamie Rogers

Exploration Manager Tel +61 8 6188 2191

Email jrogers@nsrltd.com

Michael Mulroney

Chief Geological Officer

Tel +61 8 6211 2606

Email <u>mmulroney@nsrltd.com</u>

Kathryn Todd

Senior Land Officer
Tel +61 8 6211 2610
Email ktodd@nsrltd.com

### 1.1 Executive Summary

This Mine Management Plan (MMP) details the additional proposed work activities over the Tanami Regional Exploration Project (TRE) NST with to undertake. Within this MMP, several sources or associations may be observed between the Central Tanami Project (CTP) and TRE. The CTP is a Northern Star (Tanami) Pty Ltd mine site and is a permanent facility. Some documents referenced in this MMP also relate to the CTP, these documents may be generic procedures, management plans or otherwise which NSR utilises for all work activities across the Northern Territory. Only details or appendices which have been changed or varied have been included in this amendment submission, all previously submitted documentation remains current for Authorisation 0916-01.

### 2.0 Project Details

**Authorisation No:** 0916-01

**Project Name:** Tanami Regional Exploration

Location: The Project is located approximately 650km northwest of Alice Springs and

850km southwest of Darwin.

Site Access: The Project is accessible from the public Tanami Road that passes through

MLS153 within 2km of the CTP camp and treatment plant. Access to the Groundrush pit is via a sealed haul road from the Central Tanami mine site. All site supplies and plant are transported to site via the Tanami Road. Access to other parts of the project area, is via well formed, and in part sealed, private mine haul roads, pastoral station roads and exploration tracks.

**NST Mining Interests:** Tenements to be added under this Variation are detailed in Appendix 2.

**Title Holders:** There are a number of title ownership status' for tenure in this MMP Variation:

 Tanami (NT) Pty Ltd 75% (ACN 141 658 933), a wholly owned subsidiary of Tanami Gold NL ("TGNL") and Northern Star (Tanami) Pty Ltd 25% (ACN 603 860 831) ("NST"), a wholly owned subsidiary of Northern Star

Resources Ltd ("NSR")

• 100% Northern Star Resources

• Northern Minerals Ltd

Further tenement details are included in Appendix 2.

Nomination of Operator form has previously been submitted for the Operator Form:

Nomination of Operator form has previously been submitted for the 75% TGNL / 25% NST tenure, nominating Northern Star (Tanami) Pty L

75% TGNL / 25% NST tenure, nominating Northern Star (Tanami) Pty Ltd as the operator under the original MMP approval, this is held by the Department. Nomination of Operator form for EL29594 held by Northern Minerals Ltd appointing Northern Star (Tanami) Pty Ltd as Operator is included with this

Variation.

**Location Maps and** 

Site Plans: Cave Hill (Figure 1),

Farrands Hill Tenure (Figure 2),

Gardiner, Boulder Ridge & Browns Range Tenure (Figure 3)

Central (Figure 4)

Figure 1 Cave Hill

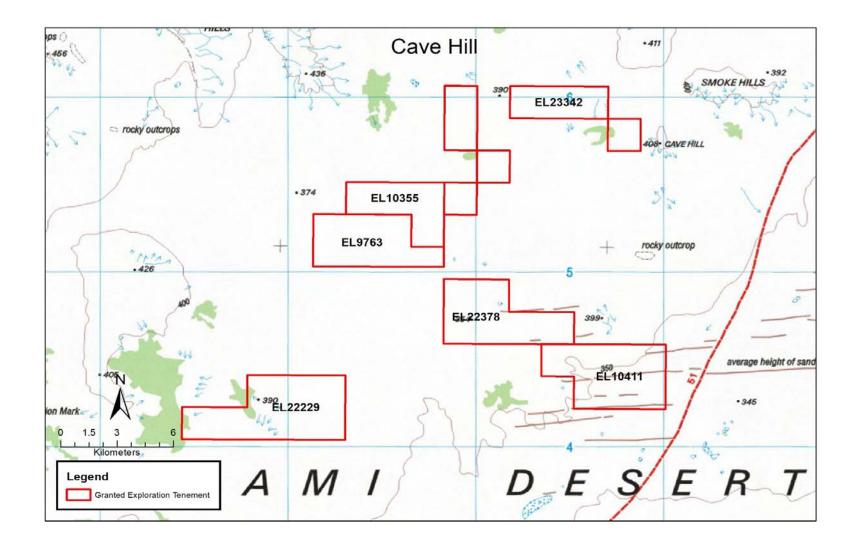


Figure 2 Farrands
Hill

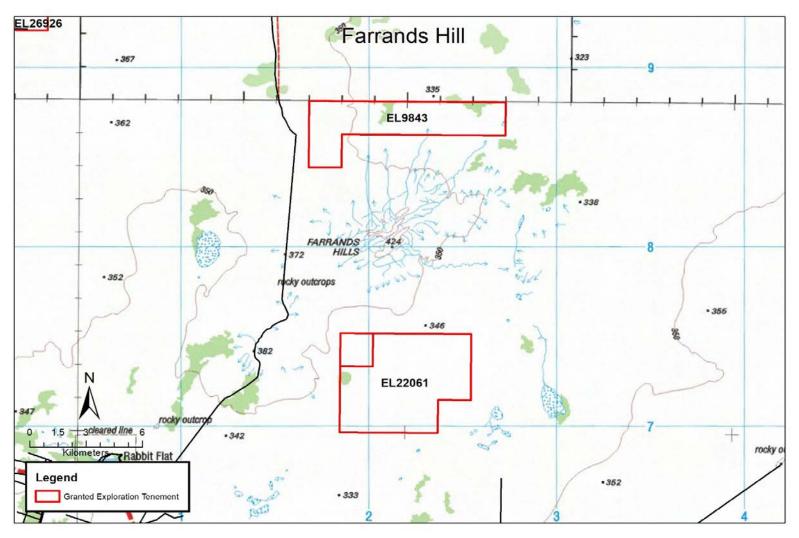


Figure 3 Gardiner, Boulder Ridge and Browns Range

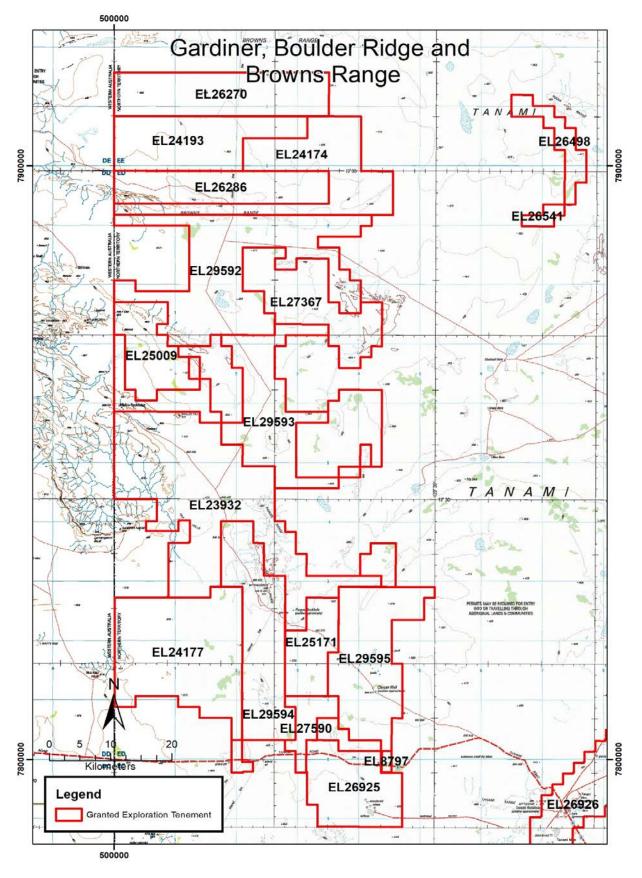
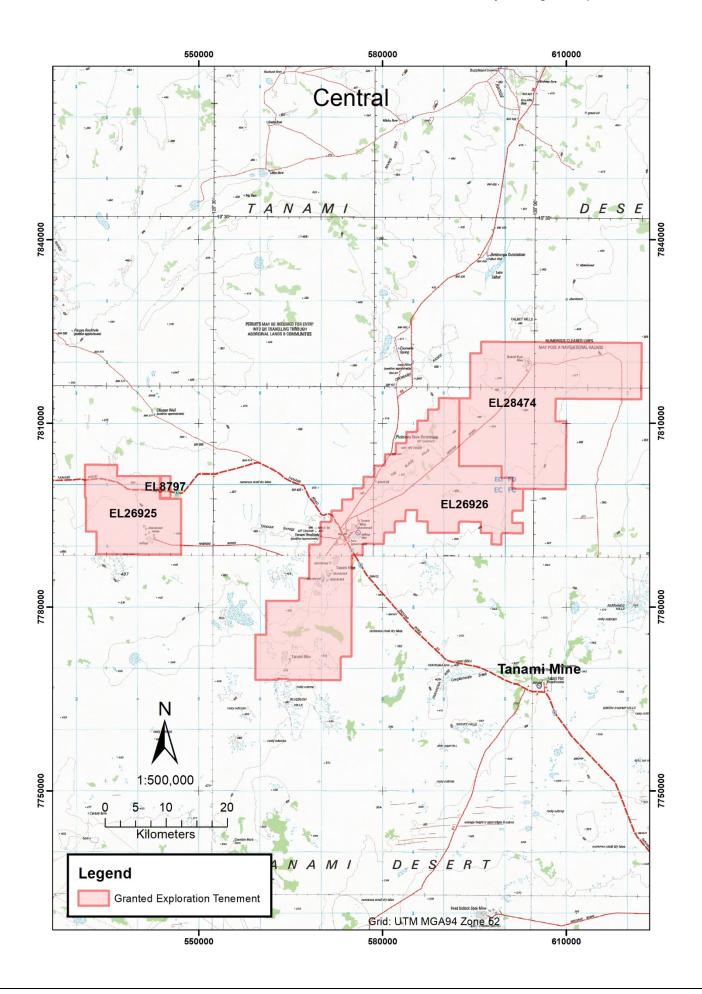


Figure 4 Central



### 2.1 Proposed Activities

As part of NSR's 2017-18 exploration strategy for the Tanami regional tenure, several drilling programs are proposed to test the region's prospectivity for gold mineralisation and assist in constraining lithological and stratigraphic interpretations.

### 2.1.1 Air Core (AC) / Rotary Air Blast (RAB) Drilling

Air Core (AC) drilling is a technique employed to test sub-surface material beneath transported cover where conventional manual soil or auger sampling is ineffective. Drilling can achieve depths up to 150m using a bladed drill bit usually constructed of hardened steel or tungsten to cut through the unconsolidated material of the regolith profile. Compressed air is used to transport drill cuttings up through the inner tube to surface for analysis.

NSR utilises AC drilling techniques as an initial, reconnaissance exploration method over areas with deep weathering profiles and with the proposed programs below aims to:

- 1. Assess concealed bedrock for Au mineralisation and prospectivity.
- 2. Analyse and record the regolith profile.
- 3. Validate and improve, existing government and private geological mapping from the region.

Due to the reconnaissance nature of this drilling method, drill holes are typically designed on geometric grids with tracks connecting neighbouring holes in a common orientation to keep track distance to a minimum. AC drilling is proposed to be undertaken on a variety of grid dimensions, ranging from prospect scale 40m x 80m, to regional scale 400m x 400m. NSR conducts AC drilling activities on raised blade-cleared, <4m single-use bush tracks to reduce the total amount of disturbance. A 4m x 5m sump is dug adjacent to the drill collar location to capture any ground water that may be intersected. Drill samples are placed besides the track adjacent to drill holes, this typically requires an area approximately 4m by 5m in dimensions. A standard drill collar will therefore have a 40-square metre disturbance area.

Access to work areas is generally good, either via haul roads or established bush tracks, however in some cases temporary bush tracks will need to be established to access the drill areas as outlined above (<4m width). All relevant guidelines and procedures determined by Northern Star and the Northern Territory Government will be utilised before and during the installation of these tracks. Planned tracks will provide NSR and its contractors the ability to efficiently and safely access sample sites whilst also reducing the likelihood of incidental tracks being established within the work areas. Following drilling and final use of tracks, scarification and rehabilitation will be undertaken as per NSR procedures. This work will be carried out in adherence to Northern Territory rehabilitation guidelines and its commitments under the Tanami Regional Exploration Mining Management Plan and the relevant Deeds for Exploration.

NSR is proposing AC drilling at nine key areas within its regional tenure. Maps of each target area can be found in Appendix 21. These areas have been proposed as polygons in lieu of specific collar point locations, and total disturbance area will be adhered to within the polygons. The use of polygons will assist NSR in achieving the best possible collar locations as further geological knowledge becomes available. Being able to correctly locate drill lines and adjust collar locations along those lines as the program is carried out will significantly enhance the prospect of success at each drill target, and prevent the unnecessary disturbance of ground in the case that an area becomes unsuitable for drill testing. Spatial datasets of the proposed areas of disturbance have been provided in electronic format (ArcMap), they can be found in Appendix 22).

Table 2 summarises the work to be conducted within each area including planned drill holes, drilling disturbance (including drill sump), new track length, new track area and total disturbance.

**Table 2 Work Program Summary** 

Tenement	Group	Work Area	Work Area (ha)	Number of AC Drill Holes	Drilling disturbance (ha)	Access Track Length (km)	Access Track Area (ha)	Total Disturbance (ha)	
EL26926		1	643	100	0.40	25.0	10.00	10.40	
EL26926	Central Tanami	2	859	100	0.40	12.5	5.00	5.40	
EL26926	Project	3	578	100	0.40	9.0	3.60	4.00	
EL26926		4	2260	80	0.32	14.8	5.92	6.24	
EL28474		5	3078	120	0.48	156.0	62.40	62.88	
EL29593		-	-	-	-	6.7	2.68	2.68	
EL29592		-	-	-	-	7.3	2.92	2.92	
EL27367		-	-	-	-	7.3	2.92	2.92	
EL23932	Gardiner	6	92.3	220	0.84	100.0	41.2	40.84	
EL24177	Boulder Ridge	O	98.2	220	0.04	100.0	41.2	40.04	
EL29595	Boulder Ridge		17.7						
EL27590	Boulder Ridge	7	34.1	650	2.60	135.0	56.28	56.60	
EL25171	Boulder Ridge	,	112.7	030	2.00				
EL29594	Boulder Ridge		45.9					1	
EL22061	Farrands Hill	8	25.7	70	0.3	30	12	12.3	
EL9843	Farrands Hill	9	32.1	150	0.28	46	18.4	19	
Total			7876.7	1590	6.34	528.3	223.32	226.18	

### 2.1.2 Track Clearing

Included in the disturbance figures in Table 2 is sufficient track length over Boulder Ridge tenements to install deviations to existing tracks to avoid exclusion zones, as requested by the CLC. These deviations take the shortest possible route and will be installed to a maximum width of 4m. These proposed tracks are shown on Map 4 (Appendix 21) and are included in the security calculation.

Not included in Table 2 disturbance figures are two access tracks proposed for the Farrands Hill tenements EL 9843 and EL 22061. These tracks are proposed to be established over non-NSR tenure and extend for 5.2km, requiring disturbance of 2.08ha. In accordance with Section 83.1 of the Mineral Titles Act, NSR would like to establish the shortest reasonable access routes to both Farrands Hill tenements. This disturbance has been included in the NSR TRE security calculation (Appendix 10), as such NSR will be liable for rehabilitation of this disturbance.

### 3.0 Current Project Site Conditions

### 3.1 Environment

In anticipation of the proposed work programs, NSR engaged Biota Environmental Sciences in June 2017 to complete low-level flora and fauna studies across the tenements within its TRE project. Six main regions were targeted during the study; Boulder Ridge, Browns Range, Cave Hill, Farrands Hill, Suplejack and Central Tanami. The purpose of the surveys was to provide guidance on the likely key ecological factors relevant to exploration activities, and related management measures that can be implemented. This information has, and will be valuable in the planning of future exploration works, particularly around positioning of disturbance areas. The final Biota (2017) report has been attached as Appendix 20.

The study area was categorised into seven broad land units, primarily defined by geology, landform, vegetation and soils (Biota, 2017):

- Low Lateritic Rises;
- Stony Hills and Slopes;
- Colluvial Plains;
- Isolated Mulga (Acacia aneura) Stands;
- Drainage Systems
- Alluvial Floodplains; and
- Ephemeral Wetlands and Saline Flats.

There were no flora species of conservation significance identified during the survey, though two weed species were recorded; \*Flaveria trinervia (Speedy Weed) and \*Calotropis procera (Rubber Bush). Both were confined to one region, with Speedy Weed identified around the Farrands Hill region, and Rubber Bush identified in the Suplejack region. Speedy Weed has been added to the Tanami Weed Field Guide and Weed Management Plan.

Evidence of three fauna species of conservation significance were identified throughout the survey; Bilby (*Macrotis lagotis*), Brush-tailed Mulgara (*Dasycercus blythi*) and Spectacled Hare-wallaby (Lagorrchestes conspicillatus), all recorded as vulnerable in the NT. Multiple secondary evidence (digging, burrows or scats) of the Bilby were recorded within the study area during the field survey (Biota, 2017). Mulgara diggings were recorded from a single location within the Cave Hill region. Both the Disturbance Permitting Procedure and Permit document have been updated to reflect the presence of these species, including preclearance inspections to be undertaken prior to any disturbance activities.

Table 3 Key ecological attributes

	Region								
Ecological Attribute	Boulder Ridge	Browns Range	Cave Hill	Farrands Hill	Suplejack	Jims (Galifrey)	Jims South	Jims (Camelbore)	Typhoon
BOCS affinity vegetation - Mulga			Х	Х					
BOCS affinity vegetation – Ephemeral wetlands	х	х		х					
Threatened Fauna - Bilby	Х		Х	Х			Х		
Threatened Fauna – Brush-tailed Mulgara			х			Х			Х
Threatened Fauna – Spectacled Harewallaby						Х			
Introduced Flora - Speedy Weed				Х					
Introduced Flora – Rubber Bush					Х				

<sup>\*</sup>BOCS = Botanical Site of Conservation Significance

### 3.1.1 Recommendations

Biota (2017) provided ten key recommendations based on the results of the survey. Changes to processes and procedures that NSR have undertaken to address these recommendations have been included below.

While a range of key ecological attributes and related land units occur across the TRE tenure, summarised in Table 3, many of the potential impacts of exploration activities remain similar in nature. Consequently, appropriate environmental management measures are also common across the regions including;

- 1. Avoidance of key ecological attributes: the known locations of flora species of conservation significance, and the landform types that support these species, should be considered in the design of exploration programmes, and avoided wherever practicable.
  - Broad, pre-clearance inspections will be completed prior to disturbance to identify any species of conservation significance. The intensity of these surveys will be in accordance with the type and intensity of planned disturbance activities. Any identified conservation significant populations will be avoided where practicable. The avoidance of conservation species may result in a higher disturbance profile as deviations are made around areas.
  - Landform type summaries and their respective significant flora/fauna have been added to the NSR Disturbance Permit Procedure (Appendix 17) to ensure individuals understand the key features they must observe during pre-clearance inspections.
- 2. Pre-clearance targeted threatened fauna surveys and management: targeted searches for Bilby, Mulgara and Great Desert Skink evidence should be undertaken once planned track access and exploration programmes have been designed. Searches for Grey Falcon nesting sites should also be included. Should evidence of the species' occurrence be recorded, then the design of that part of the sampling programme should be revised to avoid ground disturbance in the area. Should this not be possible within the constraints of the project, a fauna management plan, will need to be developed and implemented prior to the commencement of ground disturbance.
  - Specific reference to the Bilby, Mulgara, Great Desert Skink and Grey Falcon have been added to the Disturbance Permitting Procedure and permit document (Appendices 17 and 16), specifically with regards to exploring for evidence of habitat.
- **3. Pre-clearance targeted weed management:** Should planned track access and sampling for the exploration programme require ground disturbance in the locations of these known weed records, it would be advisable to control the existing infestations prior to commencing ground disturbance to minimise risks of spreading the weeds.
  - This has been added to the standard Weed Management Plan.
- **4. Minimum footprint access planning:** all clearing of vegetation for track access and sampling for the exploration programme should be kept to the minimum possible for safe vehicle and plant movement.
  - This is already incorporated into the Drill Site Preparation Procedure (previously provided).

- **5. Minimum soil disturbance for temporary access:** wherever feasible within each land unit, consideration should be given to the use of scrub-rolling or other low-intensity methods to create access where conditions permit, or the blade depth on mobile plant should be kept to a minimum.
  - This is already incorporated into the Drill Site Preparation Procedure (previously provided).
- **6. Weed hygiene protocols:** existing weed hygiene protocols identified in Northern Star's Mining Management Plan (Northern Star (Tanami) Pty Ltd 2017) should be implemented for all activities.
- **7. Vegetation clearing controls:** Prior to the commencement of ground disturbance, these should be demarcated in the field, by means of GPS or other surveying equipment to ensure spatial and extent accuracy.
  - This is already incorporated into the Drill Site Preparation Procedure (previously provided).
- **8. Vehicle speed limits:** reduced speed limits should be enforced on any tracks traversing land units containing habitat for Bilby. These should be in force from one hour prior to dusk until one hour after dawn.
  - Speed limits and restrictions are already covered under the CTP Induction; however, they have also been added to the recently developed NSR HSEC Booklet, further details are contained herein.
- **9. Fire risk management and contingency response:** measures to reduce the risk of bushfires commencing because of the exploration programme should be developed and implemented.
  - Fire and associated risks are already covered by the CTP Induction, however additional information has been provided in the HSEC booklet.
  - Remote Site Inductions have been developed for temporary field camps and are designed to educate all personnel about the risks associated with those specific work programs.
- **10. Environmental inductions:** all aspects of management measures 1 to 9 above that are relevant to the wider on-site workforce should be incorporated into site environmental inductions.
  - All the above recommendations are hereby addressed through the CTP Site Induction, the recently developed HSEC Regional Exploration booklet and the Remote Site Induction.

The Biota Survey report (Appendix 20) includes maps showing the location of land units throughout each of the five regions within the TRE project. Table 4 summarises management measures in relation to the various land units.

Table 4 Summary of relevant environmental management measures

	Applicable Land Unit							
Management Measure	Low Lateritic Rises	Stony Hills and Slopes	Colluvial Plains	Isolated Mulga Stands	Drainage	Alluvial	Ephemeral	
					Systems	Floodplains	Wetlands &	
							Saline Flats	
1. Avoidance of key ecological attributes	Х		x	x	х	х	Х	
2. Pre-clearance targeted threatened fauna surveys and management:	х		х				х	
3. Pre-clearance targeted weed management					х		Х	
4. Minimum footprint access planning	х	Х	х	х	х	Х	Х	
5. Minimum soil disturbance for temporary access	x	х	х			х	х	
6. Weed hygiene protocols:			х	х	х	Х	Х	
7. Vegetation clearing controls:	Х	Х	х	х	х	Х	Х	
8. Vehicle speed limits	Х		х				Х	
9. Fire risk management and contingency response	х	х	х	х	х	х	х	
10. Environmental inductions	х		х	х	х		х	

Based on the findings and recommendations of the survey, NSR have implemented several changes to various processes and procedures. These changes are summarised below.

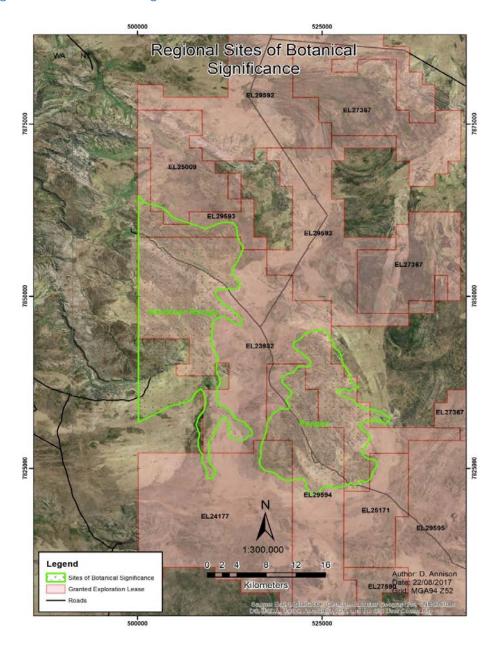
- 1. Developed a Health, Safety, Environment and Community (HSEC) booklet for regional exploration work programs (Appendix 18). Includes information on:
  - Emergency contacts for NSR and other local authorities/points of contact.
  - Environmental information pertaining to landform types and associated flora/fauna.
  - Significant/endangered flora/fauna, including photos.
  - Significant weeds, including photos.
  - Travelling by vehicle in the field (i.e. speed limits/restrictions).
- 2. Developed a Temporary Field Camp site induction, suitable for all temporary remote operations (Appendix 19).
  - Provides response plans in the event of an emergency including bush fires etc.
  - Ensures all staff understand the risks associated with fire, surface disturbance and the impacts both can have on native flora/fauna and cultural sites.
- 3. Updated Disturbance Permitting Procedure and relevant permit document (Appendix 17).
  - Updated Procedure to include thorough pre-clearance inspections for both flora/fauna (Bilby and Mulgara in particular), water ways and surface features.
  - Updated the permit application to specifically reference evidence of Bilby and Mulgara species.
  - Noted that evidence of any significant fauna will require disturbance work to cease and a fauna management plan be developed for that species and area. May involve species relocation and/or work program adjustment.
- 4. Updated Weed Field Guide (Appendix 7).
  - Added Speedy Weed (Flaveria trinervia)
- 5. Updated NSR NT Weed Management Plan (Appendix 4).
  - Added Speedy Weed (Flaveria trinervia)
  - Noted that a pre-disturbance weed extraction program is to be completed prior to work activities if required.

### 3.1.2 Sites of Significance

Tenure that is being amended to the current Authorisation does not reside under the South West Tanami Desert Site of Conservation Significance (SWT-SOCS). However, NSR has previously recognised, and maintains recognition of, the fact that other regional tenure at Cave Hill, Farrands Hill and Central Tanami reside within the SWT-SOCS. NSR understands the key role it has in ensuring the integrity and biodiversity of the SWT-SOCS.

Two Sites of Botanical Significance (SOBS) are located to the north of the SWT-SOCS, over tenements EL23932, EL25009, EL29593, EL29594 and EL24177. These are the Pargee and Gardiner Range SOBS. Error! Reference source not found.6 illustrates the Pargee and Gardiner SOBS in relation to tenure included in this MMP variation. NSR recognise the importance of preventing the invasion of weed species, mitigating the impact of feral animals and general management of these significant bioregions. It is the NSR belief that the processes and procedures the company has put in place, or have improved using recent environmental survey data, will allow NSR to mitigate any potential impact to these bioregions.

Figure 5 Regional Sites of Botanical Significance



### 3.2 Aboriginal and Heritage Sites

NSR is currently awaiting confirmation of several Sacred Site Clearance Certificate (SSCC) applications, submitted for proposed work contained in this MMP variation. No work under this MMP variation will be undertaken until CLC provides approval for the proposed work programs. The information in respect of Exclusion Zones advised in the Sacred Site Clearance Certificates is provided on a strictly confidential basis and the CLC have advised that NSRT do not have approval to include any information, co-ordinates or plans provided by the CLC in our MMP.

It is noted that Sacred Site Clearance Certificates do not indemnify the operator from prosecution under the Northern Territory Aboriginal Sacred Sites Act.

An "Abstract of Records Inspection" was conducted through the Aboriginal Areas Protection Authority (AAPA) for the additional Exploration Licences covered by this MMP. Appendix 24 is a summary of all new AAPA search results. The records inspection showed no registered sites.

A search has also been conducted using the online NT Heritage Register based on the following Lot numbers that relate to amended NSR Tanami tenure; no records were noted for any lot:

- Lot 1740 EL26498, EL26635, EL26926, EL29594, EL29595
- Lot 3872 EL24193
- Lot 3972 EL26270
- Lot 3973 EL23932, EL25009, EL25171, EL27590, EL29594, EL29595, EL8797, EL29593
- Lot 4198 EL24174, EL26286, EL27367, EL29592, EL29593
- Lot 4199 EL24177

NSR consulted the Department of Tourism and Culture Heritage Branch to confirm this status and requested a further search of the NT Heritage Register and the Aboriginal Archaeological Sites Database. Confirmation was received that there are no declared heritage sites within the NT Portions listed above and there are no previously recorded Aboriginal archaeological sites of note. Email correspondence between NST and the Heritage Branch of the Department of Tourism and Culture is attached as Appendix 23.

### 4.0 Exploration Rehabilitation

All rehabilitation of exploration disturbance will be undertaken in accordance with the processes and procedures previously submitted under this MMP authorisation.

### 4.1 Exploration Rehabilitation Register

NSR maintains records of all drill holes drilled by NST on the Tanami leases within its drilling and GIS databased. The way in which this data is stored has been updated since all previous NSR MMP submissions. Rehabilitation status data that is now provided includes all drill collars from 2011 onwards, the date from which Tanami Gold NL took ownership of the project. Records for each drill hole include:

- Drill hole I.D.
- Tenement
- Hole type
- Date completed
- Maximum depth
- Project/prospect name
- Geologist supervising
- Drilling contractor
- Coordinates (easting, northing and RL)
- Survey method and date
- Rehabilitation status (e.g. hole capping, plugging, sumps backfilled, bags removed, preand post-rehab photographs taken, post rehab inspection/audit undertaken)

The Rehabilitation Data Sheet provided in *Appendix 1* details the rehabilitation status of all drill sites, the rehabilitation methods used and evidence of rehabilitation (before and after photos).

### 4.2 Costing of Closure Activities

The estimated closure and rehabilitation cost for the Tanami Regional Exploration disturbance has been determined using the NT DPIR Exploration Operations Security Calculation Tool. The liability calculation considers obligations for protecting the environment under Part 3 of the Mining Management Act relating to the rehabilitation, maintenance and monitoring of exploration disturbance.

In accordance with DPIR Guidance, information on the calculated security is confidential and is included separately as Appendix 10, to be excluded from any publicly available version of this MMP.

The revised security calculation for proposed works contained in this MMP is detailed in the attached Security Calculation spreadsheet. Table 5 is a summary detailing previous disturbance, rehabilitation completed and the proposed disturbance contained in this MMP.

**Table 5 Disturbance summary** 

Whole of site summary	Total Area (ha)	Progressively rehabilitated area (ha)	Remaining area (ha)	
Lease surface area				
Disturbed operational area	246.39	7.60	238.79	
Disturbance type				
Camp and other infrastructure	6.20	0.20	6.00	
Drill pads and sumps	6.36	0.00	6.36	
Costeans/pits	0.00	0.00	0.00	
Tracks/gridlines	230.72	7.40	223.32	
Weed erosion monitoring	3.11			
TOTAL	246.39	7.60	238.79	