ALKANE
RESOURCES LTD
ABN 35 000 689 216

ANNUAL ENVIRONMENTAL MANAGEMENT REPORT

for the

PEAK HILL GOLD MINE

2020

Prepared by:

Alkane Resources Ltd
ABN: 35 000 689 216
Ground Floor 89 Burswood Road
BURSWOOD WA 6100

Telephone: (08) 9227 5677
Facsimile: (08) 9227 8178
Email: msutherland@alkane.com.au

25 February 2021

ALKANE
RESOURCES LTD
ABN 35 000 689 216

ANNUAL ENVIRONMENTAL MANAGEMENT REPORT

for the

PEAK HILL GOLD MINE

2020

Peak Hill Gold Mine Waste Rock Emplacement and open cut highwall 8 January 2021

Peak Hill Gold Mine

Annual Environmental Management Report 1 January to 31 December 2020

Name of Mine: Peak Hill Gold Mine

MOP Commencement Date: 1 July 2014

MOP Completion Date: 17 January 2022

Mining Authorisations (Lease / License No.): MLs1351, 1364, 6036, 6042, 6277, 6310, 6389, 6406, 1479, GL5884

Land Owner/Occupier: Alkane Resources Ltd

Tenure: Freehold (Lot 81) and leasehold

Pre-mining Landuse; Lot 81 – Agriculture with remainder mining 1889-1917 and easements in favour of Parkes Shire Council

Name of Authorisation / Authorisation holder(s): Alkane Resources Ltd

Name of Mine Operator (if different): N/A

Name and Contact Details of the Mine Manager (or equivalent):

Michael Sutherland

General Manager NSW

PO Box910

Dubbo, NSW, 2830

Phone: (02) 6882 2866 Mob: 0427 691733

Name and Contact Details of Environmental Representative:

As above

Name of Representative(s) of the Authorisation Holder(s): Michael Sutherland

Title of Representative(s) of the Authorisation Holder(s): General Manager NSW

Signature of Representative(s) of the Authorisation Holder(s):

Due Date 1 March 2021 Final

Version: 1

CONTENTS

Page

1. INTRODUCTION

1.1. SCOPE AND FORMAT

1.1.1. Scope

This Annual Environmental Management Report (AEMR) for the Peak Hill Gold Mine ("the Mine") has been prepared by Alkane Resources Ltd ("the Company") following the EDG12 Small Mine AEMR Guide (2012).

The reporting period for the Peak Hill Gold Mine AEMR is 1 January to 31 December.

A letter from NSW Planning & Environment (dated 8 May 2017) established a due date for reporting as 1st March.

The mine has an approved (30 March 2016) Mining Operations Plan 2014-2022 for the Peak Hill Gold Mine (MOP) to take the site through to relinquishment or renewal by 17 January 2022.

The Mine is located immediately east and northeast of the township of Peak Hill, in the Central West of NSW (**Figure 1** and **Plan 1A**).

The Mining Leases (MLs) were issued in 1993, 1994, 1995 and 2001. The key MLs for the Peak Hill Gold Mine were issued to Alkane by the Minister for Mineral Resources in 1993 (see **Plan 1C**). As additional resources were identified through exploration drilling, additional MLs were granted to form a contiguous area for mining and gold processing for the purpose of this document the area covered by MLs is referred to as the "Mine Site". Freehold agricultural land (now Lot 81 in DP 12155789) was purchased to accommodate the mine infrastructure

Consent Conditions Development Application 648/93, issued by the Parkes Shire Council on 2 September 1993 are contained in Appendix II of the MOP.

The MOP incorporates the Rehabilitation Management Plan as required under Condition 3(53) of new Project Approvals.

1.1.2. History of Operations

The Peak Hill Gold Mine operated as a drill and blast open cut gold mine between 1996 and 2002. Gold was extracted using heap leach cyanide technology until 2005 - when the last gold was poured on 20 December 2005.

The Waste Rock Emplacement, ROM Pad and haul roads were rehabilitated in December 2002 before the Macmahon Contractors mining fleet demobilised from site (**Plan 2**).

When gold production ceased from the heap leach in November 2005, that landform was reshaped and rehabilitated by McCutcheons Earthmoving and the Soil Conservation Service designed and built the downslope structures.

All but 8.5Ha of the mine site was rehabilitated by 2005 and the site has essentially been under care and maintenance since then. A site Supervisor, based in Peak Hill, maintains the mine site.

The final steps in rehabilitation of the site will be taken between 2021 and 2022 as outlined in the approved MOP (2015).

Gold Production from the Peak Hill gold mine from October 1996 to December 2005 was 153,657 fine ounces.

The Open Cut voids are a feature of a tourist mine, operated by Parkes Shire Council offering free access to the public during opening hours. A Tourist Mine Permit was issued by the Minister in 2003.

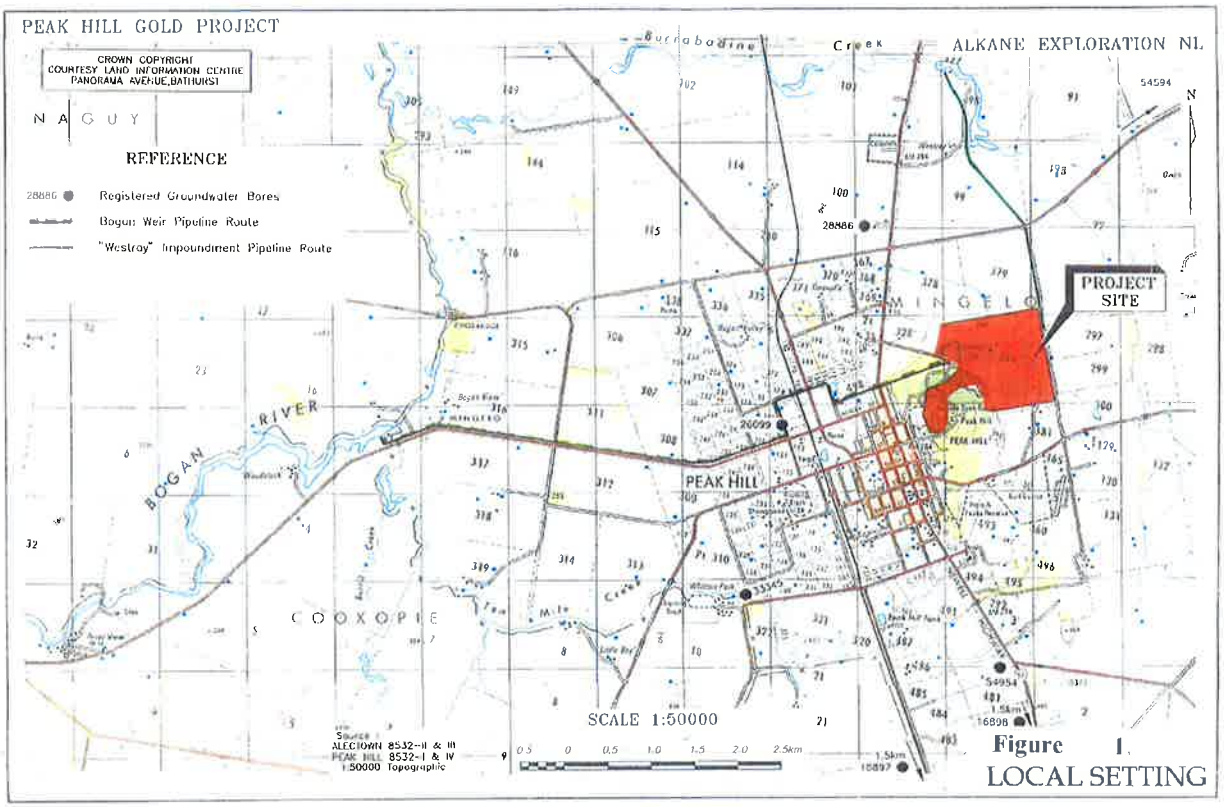
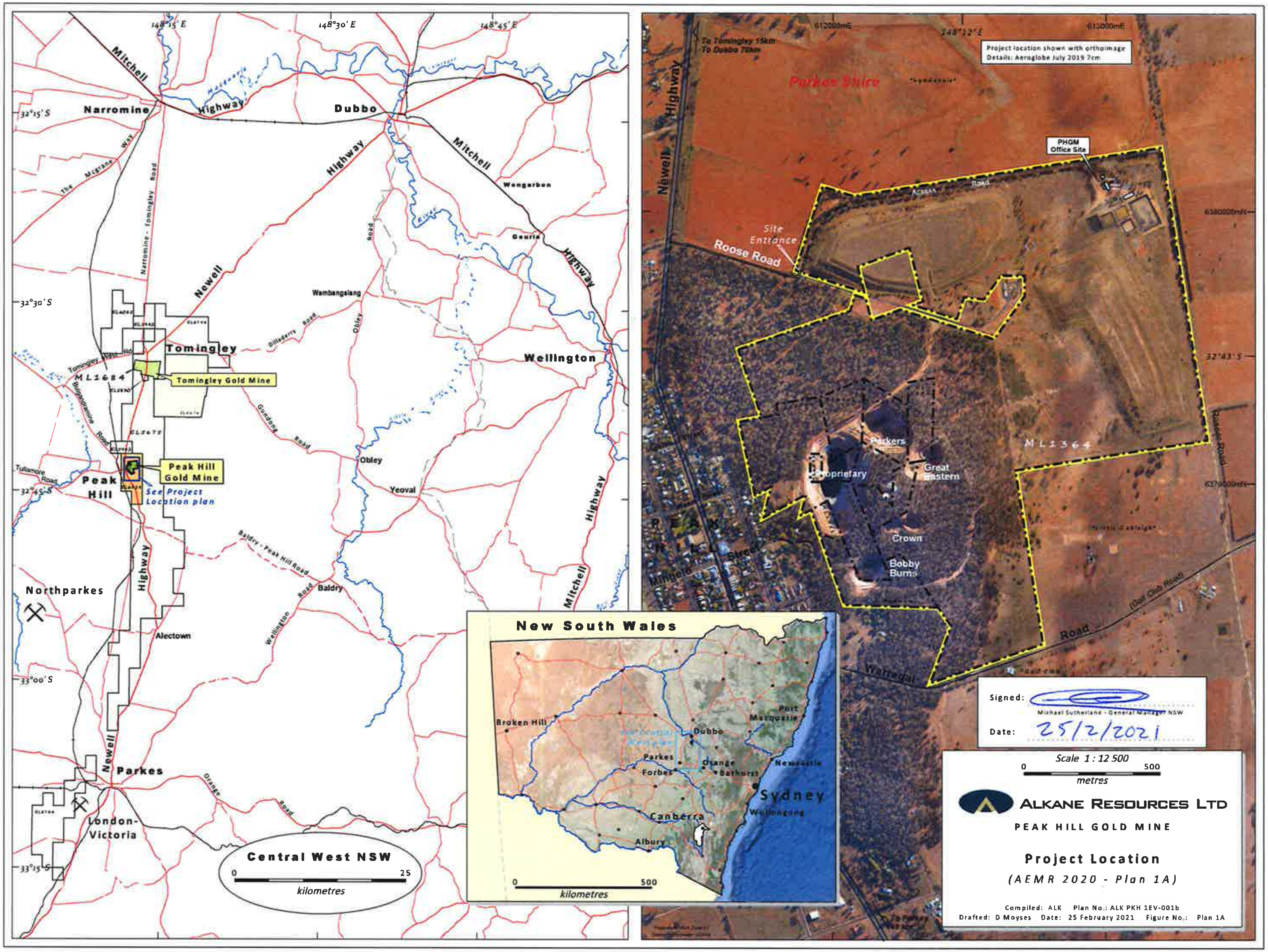
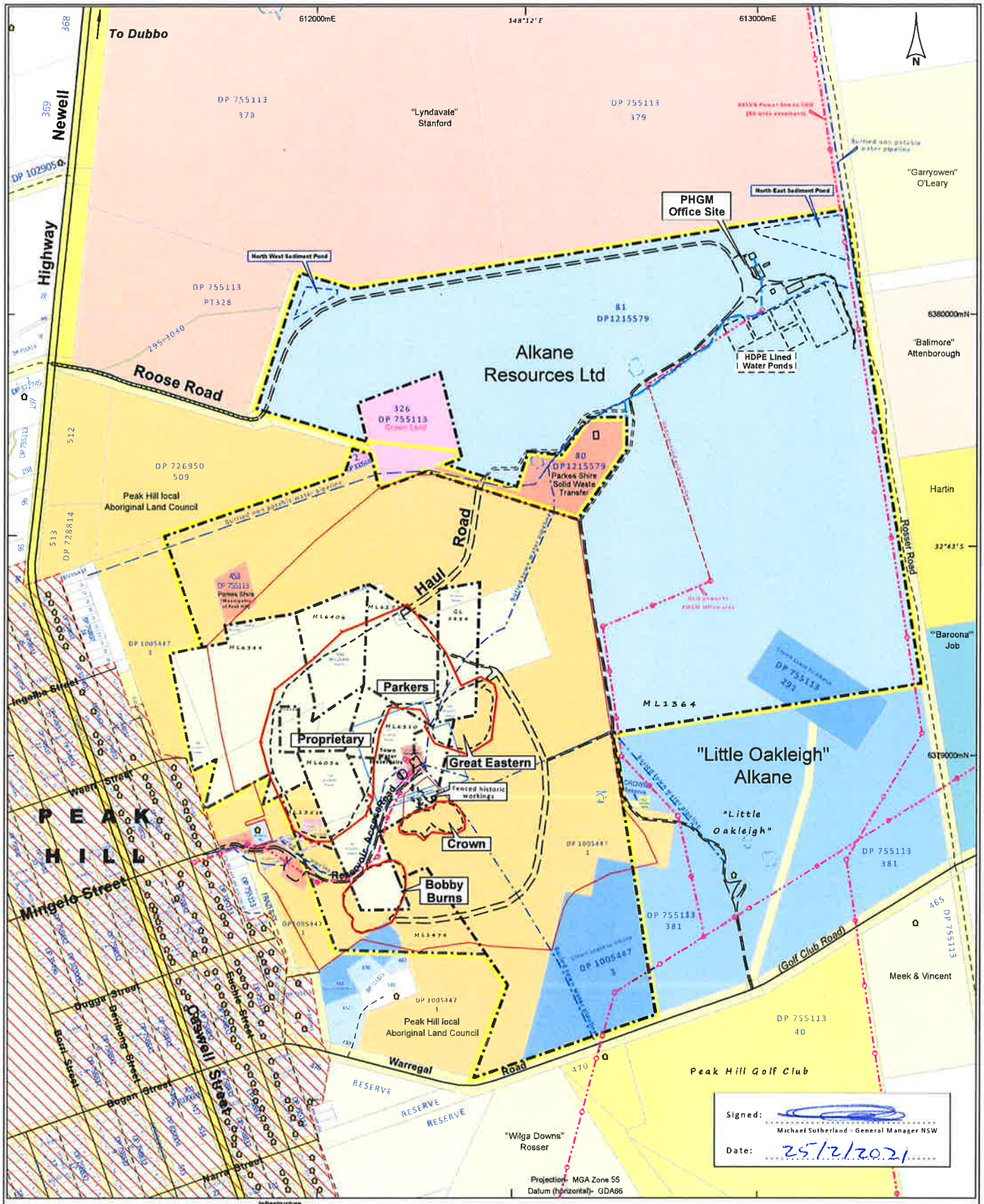


Figure 1: Peak Hill Gold Mine Local Setting (source: EIS 1993)


Central West NSW
0 25 kilometres
Narromine
Dubbo
Wellington
Tomingley
Tomingley Gold Mine
ML1684
Peak Hill Gold Mine
Peak Hill
See Project Location plan
Northparkes
Alectown
Parkes
London-Victoria
Obley
Yeoval
Baldry
Wambangalang
Mitchell Highway
Newell Highway
New South Wales
Broken Hill
Port Macquarie
Newcastle
Sydney
Wollongong
Bathurst
Orange
Forbes
Canberra
Albury
0 500 kilometres
Project location shown with orthoimage
Details: Aeroglobe July 2019 7cm
To Tomingley 15km
To Dubbo 78km
Parkes Shire
PHGM Office Site
Site Entrance
Roose Road
Access Road
ML1364
Parkers
Proprietary
Great Eastern
Crown
Bobby Burns
Warregal Road
Signed:
Michael Sutherland - General Manager NSW
Date: 25/2/2021
Scale 1 : 12 500
0 500 metres
ALKANE RESOURCES LTD
PEAK HILL GOLD MINE
Project Location
(AEMR 2020 - Plan 1A)
Compiled: ALK Plan No.: ALK PKH 1EV-001b
Drafted: D Moyses Date: 25 February 2021 Figure No.: Plan 1A



ALKANE RESOURCES LTD

PEAK HILL GOLD MINE

Mining Environment - December 2020

Built Environment

(AEMR 2020 - Plan 1C)

Compiled: ALK Drafted: D Mayses Plan No.: ALK PKH 1EV-002c
Date: 25 February 2020 Figure No.: Plan 1C


To Dubbo
Primary Domain
Secondary Domain
Rehabilitation Phases
Active area
Decommissioning
Landform establishment
Growth medium development
Ecosystem land use and establishment
Ecosystem land use sustainability
Relinquished lands
Newell Highway
PHGM Office Site
North East Sediment Pond
North West Sediment Pond
EL6319
Road
WRE (Rehabilitated)
Roose Road
HDPE Lined Water Ponds
Intermediate Pond
Project Boundary
Heap Leach (Rehabilitated)
ROM Pad (Rehabilitated)
ML1364
EL6319
PEAK HILL
Mingelo Street
Dubbo Street
Warren Road
Signed:
Michael Sutherland - General Manager NSW
Date: 25/2/2021
Scale 1 : 8 000
0
500
metres
Roads: Newell Highway
Roads: sealed and unsealed
Mining lease boundary
Peak Hill Gold Mine - Project site boundary
ALKANE RESOURCES LTD
PEAK HILL GOLD MINE
Mine Domains at
31 December 2020
(AEMR 2020 - Plan 2)
Compiled: ALK
Plan No.: ALK PKH 1EV-003c
Drafted: D Moyses
Date: 25 February 2021
Figure No.: Plan 2

1.2. CURRENT CONSENTS, AUTHORISATIONS AND LICENSES

Table 1 presents the consents, authorisations and licences held in relation to the Mine.

Table 1 - Current Consents, Authorisations and Licenses

Number	Granted by	Grant Date	Expiry Date	Purpose
Development Consent				
DA 648/93	Parkes Shire Council	3 September 1993	NA	Development Consent – Open Cut Gold Mine and heap leach gold extraction plant
DA 648/93	Parkes Shire Council	16 August 1994		Modification of Development Consent (Parkers Extension)
DA 1033/97	Parkes Shire Council	15 July 1997	NA	Extension of Processing Operations
DA 1049/97	Parkes Shire Council	5 August 1997		Garth Bore Pipeline
DA 1080/97	Parkes Shire Council	6 February 1998		Main Tailings
DA 99253	Parkes Shire Council	20 April 2000		Great Eastern
DA 00174	Parkes Shire Council	8 December 2000		Bobby Burns Pit
DA 01072	Parkes Shire Council	20 June 2001		Parkers Cutback
DA 01162	Parkes Shire Council	20 November 2001		Crown Pit
DA 15039	Parkes Shire Council	25 June 2015		Retention of Mine Buildings at PHGM
Subdivision Certificate 15008	Parkes Shire Council	30 July 2015		Waste Transfer Station
Special Purpose Conditions	Mineral Resources	27 February 2003		Permit to Conduct Tourist Activities
Mineral Authorities				
ML1684	Minister for Mineral Resources	11 Feb 2013	11 Feb 2034	Mining activities at the Tomingley Gold Mine
EL5675		17 Jan 2000	17 Jan 2023	Exploration Activities
EL5830		05 Apr 2001	04 Apr 2022	
EL5942		03 May 2002	03 May 2024	
EL6085		20 May 2003	20 May 2024	
EL6319		12 Oct 2004	11 Oct 2020*	
GL5884		12 Dec 1969	17 Jan 2022	Mining activities at the Peak Hill Gold Mine
ML1351		15 Jun 1994	17 Jan 2022	
ML1364		14 Mar 1995	17 Jan 2022	
ML1479		18 Jan 2001	17 Jan 2022	
ML6036		07 Mar 1968	17 Jan 2022	
ML6042		21 Feb 1968	17 Jan 2022	
ML6277		12 Mar 1971	17 Jan 2022	
ML6310		27 Aug 1971	17 Jan 2022	
ML6389		06 Apr 1973	17 Jan 2022	
ML6406		25 Jan 1974	17 Jan 2022	

Number	Granted by	Grant Date	Expiry Date	Purpose
Licences – Environmental				
EPL5473	Environment Protection Authority	5 September 1999	Renewed annually	Regulation of noise, dust and water emissions from the Mine Site (provided as **Appendix 4**).
EPL5473	Environment Protection Authority	7 November 2003	NA	Notice of Variation of Licence
EPL 5473	Environment Protection Authority	28 January 2011	NA	Licence varied by correction to DECCW region record
EPL 5473	Environment Protection Authority	17 June 2014	NA	Licence variation 1505946
EPL 5473	Environment Protection Authority	3 December 2018	NA	Licence Variation (reflecting excision of 4Ha of ML 1364)
Licence 451536	Trade & Investment – Crown Lands	23 Feb 2010	NA	Licence for pipeline and pump site
WAL 28643	NSW Office of Water	1993	NA	300ML Water Access Licence – Bogan Weir
Source: Alkane Resources Ltd				

*Approval pending

1.3. LAND OWNERSHIP AND LAND USE

Plan 1A provides an aerial photo of the Mine Site and its surrounds. Land uses within and surrounding the Mine Site include the following:

- Urban residential and rural residential;
- Agriculture;
- Transportation (Newell Highway);
- Water Supply Infrastructure on Peak Hill, Reservoir access road, communications towers, rising and gravity water mains;
- Peak Hill Solid Waste Transfer Station off Roose Road (Lot 80 DP1215579);
- Commercial main street of Peak Hill;
- Recreation (Open Cut Experience - Tourist Mine);
- Former mining operations - namely Crown workings and alluvial mine shafts; and
- Bushland owned by Peak Hill Local Aboriginal Lands Council.

1.3.1. Community Consultation

Consultation was undertaken with the local community, indigenous representatives and relevant government agencies throughout the operating life of the Peak Hill Gold Mine and during mine closure planning.

Establishing a tourist mine, post mine closure, was a voluntary commitment made by Alkane Resources as a demonstration of its commitment to sustainable development. The community has been keen to have continued access to the mining leases on the hill post mine closure.

The Tourist Mine, formerly operated as the *Open Cut Experience,* attracted 11,000 visitors in 2003.

A community information session was hosted by Alkane at the Peak Hill Ex-Services and Citizens Club on 24 October 2018 to explain Alkane's diamond drilling program which was conducted from December 2018 to February 2019.

1.3.2. Government Agency Consultation

The following government agencies were consulted during the preparation of the 2014-2022 MOP.

- Mining Energy & Geoscience.
- Environment Protection Authority.
- Parkes Shire Council.

In addition, a final draft version (September 2014) of the MOP document was provided to the Department of Industry Resources & Energy and comments received were taken into account when finalising the document.

The EPA issued a licence variation for the Peak Hill Gold Mine (EPL5473) on 3 December 2018. The variation was simply a slight change to the premise identification.

During 2019, Alkane has consulted with the Resources Regulator regarding clean up of minor patches of sulphides and exploration sample bag temporary storage at the mine site.

The Resources Regulator conducted a safety audit/inspection of the Tourist Mine in November 2019 which resulted in follow up actions by Alkane regarding safety signage and Safety Management Plans.

Alkane has also consulted during 2019 with Parkes Shire Council and contractors constructing the Inland Rail Project regarding the water supply pipeline from the Bogan River to the mine site which crosses under the rail corridor.

The Resources Regulator conducted Targeted Assessment Program (TAP) – Soils and materials management at Peak Hill Gold Mine on 19 June 2020.

Observations and recommendations are contained in Appendix 2.

The Resources Regulator conducted an audit of the Peak Hill Gold Mine admin and laydown areas and core yard on 14 December 2020.

Improvements Notices were issued regarding general housekeeping, safety barriers, chemical storage and electrical deficiencies.

An Electrical Engineering Control Plan will be completed by 28 May 2021. An external electrical engineer has been contracted to prepare the EECP.

All other defects have been remedied on site by 28 January 2021.

2. MINING ACTIVITIES

2.1. PROJECT DESCRIPTION

The Peak Hill Gold Mine includes the following components (**Plan 2**).

- Mine site access road (off Roose Road).
- Three-bedroom transportable house with carport (ultimately to be removed).
- Mine site office, crib room, and steel shed (slab floor).
- Core shed, sea container (exploration access and continuing use).
- Five HDPE lined ponds (awaiting re-use or final rehabilitation).
- Rehabilitated Final Landforms (waste rock emplacement, heap leach and ROM Pad).
- Open cut voids (fenced):
    - Proprietary and Parkers Open Cut (including Parkers Cut Back);
    - Great Eastern Open Cut;
    - Crown Open Cut;
    - Bobby Burns Open Cut (partially back filled); and
    - Historic (1890-1915) Crown Workings and alluvial workings (fenced).
- Bobby Burns to Proprietary Haul Road (fire break).
- Buried water pipelines from "Westray", the Bogan Weir and Peak Hill Sewage Treatment Works.*
- A transformer and electrical distribution network within the Mine Site.
- Grassed waterways and sediment ponds in the northeast and northwest corners of the mine site.
- Three groundwater monitoring bores around the northeastern perimeter of the mine site.
- Viewing platform and 22 interpretive signs around the Open Cut Experience.

Parkes Shire Council has provided additional built infrastructure to the Tourist Mine during 2016 to enhance the visitor experience. Additional improvements – a large fabricated gateway/shelter/interpretive signs and two bronze sculptures and a sound post were installed by PSC in 2017. These improvements were officially opened by the Minister for Tourism, the Hon Adam Marshall on 11 August 2017.

The Bogan River water pipeline was replaced in the rail corridor by ARTC for the Inland Rail Project. The pipeline was upgraded to meet Inland Rail construction standards in the rail corridor. The Bogan weir pump was reactivated during 2020.

Table 2 below details the domains within the Mine Site, their size and major assets contained. Note that the areas detailed are based on maximum disturbance within the

term of the MOP. A detailed description of each domain is provided in Section 5.1 of the MOP.

Table 2 - Major Assets per Domain

Domain	Size (approx. ha)	Assets	Use & Details
1 - Infrastructure Area	4.5	Roads: site access. Buildings: Including site office, house, crib room and amenities. Processing: Including shed, wet plant slab and man-proof fencing 5 HDPE-lined ponds (processing and overflow). A subdivision of 4 hectares of land from Lot 380 with former contractor infrastructure on it was approved by PSC and subsequently gifted by Alkane to PSC for use as a waste transfer station. A part cancellation (4Ha) of the Mining Lease 1364 took effect from 26 June 2017.	Roads provide access to open cuts, site entry and inspection to site areas. Buildings still in use and maintained. Wet plant structures removed from site in 2010 and only slab remains. Processing ponds contain rain water and pumped Bogan river water which evaporates during the year.
2 – Residue	24.2	5Mt of heap and dump leach (spent ore) contoured to direct runoff to a downslope rock-lined flume. Includes 0.6Ha dump leach trial area The crushed ore in the heap leach does have some commercial value as construction material. RMS used spent heap leach material for shoulder widening on Newell Highway in 1999.	Rehabilitated as a final landform. Well grassed with mixed pasture sward. Some natural regeneration of trees and shrubs.
3 - Water Management Area	1.5	Includes two sedimentation ponds, dam near former contractor's area and grassed table drains and waterways.	Table drains and grassed waterways are designed to manage rainfall run-off.
4 - Overburden Emplacement Area (Waste Rock Emplacement and ROM pad)	27.0	5 Mt of waste rock including 815,000 tonnes of sulphidic material (>1 g Au/t) which is encapsulated in oxide waste rock (<0.5g Au/t). Includes 4.5Ha Rom pad constructed from oxidised waste rock.	Shaped and rehabilitated WRE has maximum height of 25m and heap leach has a maximum height of 20m.
5 - Stockpiled Material	0.7	Top soil stockpile south of overflow pond.	Temporarily rehabilitated with pasture. Natural regeneration and mine openings provide habitat for bats, birds and possums.
6 - Void (Open Cut)	14.6	Includes four voids at the end of the MOP period.	Part of tourist mine attractions.

7 - Rehabilitation Area – Pasture	1.3	During the MOP period no areas will be rehabilitated to pasture.	Biodiversity asset.
8 - Underground Mining Area (SMP)	0	Underground mining was not part of this development.	N/A
9 - Conservation & Biodiversity Area	76	There was no biodiversity offset required for this mine site. However, it should be noted that biodiversity has increased as result of the PHGM.	Tourist Mine.
10 - Rural Land	47	Areas largely undisturbed by mining (49Ha) Grazing licence as part of "Little Oakleigh" Lease (8 Ha).	Biodiversity and Agriculture (grazing)
Note: The WRE extends across 2.65Ha of Lot 326 which was used as a solid waste Depot by Parkes Shire Council up until 2017. This facility has been replaced by 4Ha of land subdivided off Lot 380. Source: Alkane Resources Ltd			

2.2. ACTIVITIES OVER THE MOP TERM

2.2.1. Exploration

The primary activity at the Peak Hill Gold Mine was the continuing use as the exploration base for the Tomingley Gold Extension Project (TGEP) which is a State Significant Development. TGEP will likely extend the life of Tomingley Gold Operations for at least ten years with the San Antonio Roswell Open Cut and underground mine proposed for construction in 2022.

Regional exploration activity (between Tomingley and Peak Hill) will continue during the 2021. Exploration personnel will continue to access the core yard and site offices as part of their normal activities.

The Peak Hill Gold Mine MLs contain a known sulphide resource totalling 4.91Mt grading at 2.05g/t Au and 0.17%Cu (1.0g/t Au cut off).

Exploration activities may include the following:

- Geochemical sampling;
- Geological mapping;
- Geophysics; and
- Diamond and Reverse Circulation drilling.

The objective of the PHGM exploration program in 2018-2019 was to further define the known resource, as well as identify additional resources within the Mine Site. Metallurgical test work continues on the core. Results will be released the ASX in 2021.

Environmental management of exploration activities will continue to be implemented to ensure the final rehabilitation of the exploration areas is consistent with the rehabilitation objectives identified in Section 5.2 of this document.

2.2.2. Construction

No construction took place during the reporting period, though two refrigerated containers were on site during 2020 to store the Peak Hill Gold Mine core which contains high amounts sulphides which would otherwise oxidise.

The decommissioning of the HDPE lined process ponds is scheduled for 2021as part of final mine closure activities. However, Alkane is currently evaluating the results for the PHGM diamond drilling program 2018-2019. Metallurgical testwork and pre-feasibility work is being undertaken to establish whether the Peak Hill Gold Mine has the potential to be re-opened as an underground mine. Removing the HDPE ponds prior to a final decision on underground operations would be premature.

Decommissioning the ponds (see photographs in Appendix 1) is a minor task when compared with the work that has preceded.

Alkane has commenced the process of renewing the Mining Leases at Peak Hill to allow for future potential underground mining. Processing of any ore would likely take place at Tomingley Gold operations. That would require a new development application and associated environmental assessment.

2.2.3. Mining Operations during the Reporting period

No mining was undertaken on the PHGM MLs during the 2017 reporting period (1 January 2019 - 31 December 2020.

There are no plans to disturb previously rehabilitated areas during the MOP period.

There has been no land clearing, construction activity, ore extraction nor mineral processing during 2019.

2.3. REHABILITATION DURING THE AEMR PERIOD

There have been few active interventions on the mine site since the commencement of the MOP as most of the site was rehabilitated by 2005.

In March 2020, exploration samples bags that had been temporarily stored south of the intermediate pond were removed from site and the area above the trial dump leach site was covered with fresh topsoil.

Boxthorn and other noxious weeds were controlled through spraying by the Site Supervisor.

Excessive macropod numbers were controlled under licence from OEH by a licenced professional shooter.

The site continues to develop more ecological complexity each year as trees planted in 1996 are producing habitat for birds and other vertebrates and seed for new generations of trees.

The 2020 calendar years has seen above average and timely rainfall which resulted in one of the best cropping seasons ever experienced in the district.

Groundcover on the mine site is generally much better than surrounding farm land.

Trees and shrubs (self-sown) on the batters of the WRE were cut to maintain ground cover and protect buried sulphides.

2.3.1. Further Development of Final Rehabilitation Plan

A DA was approved by Parkes Council in 2016 to allow for the retention of the mine buildings (except the house) on site. This reduces the area requiring further rehabilitation on site by 5.2Ha.

A DA was approved by Parkes Council for the subdivision of four hectares of land from Lot 380 for use as a new solid waste transfer station. This land was transferred at no cost to council to satisfy consent condition 1.25 of Consent 648/93

The new Peak Hill Waste Transfer Station which has recycled the contractor's area (workshop shed, slab and washdown bay) opened for operations in 2018.

Alkane submitted a part relinquishment application to DRE on 6 November 2015 to excise the 4 hectares from the mining lease. Alkane received confirmation of the part cancellation of the part cancellation on 26 June 2017.

Alkane will consult with Mining Energy & Geoscience and DPIE during 2021 regarding the potential to re-open the Peak Hill Gold Mine as an underground mine. Those discussions will determine whether the mine proceeds to final closure or works towards the approval of a new development.

Some of the remaining infrastructure on site would be utilised in the new development.

TABLE 3: Rehabilitation Summary

		Cumulative Area Affected (hectares)			
		To date	Last report	Next Report (estimated)	
A:	**MINE LEASE AREA**				
A1	**Mine Lease(s) Area**	194.8*			
B:	**DISTURBED AREAS**				
B1	**Infrastructure area** other disturbed areas to be rehabilitated at closure including house and processing ponds	3.1	8.5	3.1	
B2:	**Active Mining Area** excluding items B3 - B5 below	0	0	0	
B3	**Waste emplacements,** active/unshaped/in or out-of-pit	0	0	0	
B4	**Tailings emplacements,** active/unshaped/uncapped	0	0	0	
B5	**Shaped waste emplacement** (top soil stockpile will be used during final rehab)	0.5	0.5	0.5	
ALL DISTURBED AREAS		3.6	9.0	3.6	F1
C	**REHABILITATION PROGRESS**				
C1	**Total Rehabilitated area** (except for maintenance)	191.7	191.7	191.7	F2
DC:	**REHABILITATION ON SLOPES**				
D1	**10 to 18 degrees**	NA	NA	NA	
D2	**Greater than 18 degrees**	NA	NA	NA	
E:	**SURFACE OF REHABILITATED LAND**				
E1	**Pasture and grasses (native and introduced)**	97.2	101.2*	97.2*	
E2	**Native forest/ecosystems**	92.4	76.0	92.4	
E3	**Plantations and crops**	0	0	0	
E4	**Voids with some regeneration of trees**	14.6	14.6	14.6	

* Decrease in area from AEMR 2016 due to excision of 4Ha of ML for Waste Transfer Station

TABLE 4: Maintenance Activities On Rehabilitated Land
(This period's activities and activities proposed in the next reporting period)

NATURE OF TREATMENT	Area Treated (ha)		Comment/control strategies/ treatment detail
	Report period	Next period	
Additional erosion control works (drains re-contouring, rock protection)	0	0	
Re-covering (detail - further topsoil, subsoil sealing etc)	0	0	
Soil treatment (detail - fertiliser, lime, gypsum etc)	0	51	100 tonnes of agricultural lime will be applied to the WRE and heap leach final landforms in March 2021
Treatment/Management (detail - grazing, cropping, slashing etc)	0	0	
Re-seeding/Replanting (detail - species density, season etc)	0	0	Five Currajong trees were transplanted during establishment of diamond drill pads on the west edge of the Proprietary Pit.
Adversely Affected by Weeds (detail - type and treatment)	194.8	194.8	Boxthorn, Bathurst burr, Devlis Claw, Fierce thornapple. Spot spraying with glyphosate and wetter
Feral animal control (detail - additional fencing, trapping, baiting etc)	100	100	Macropod reduction under licence on Lot 380 only.

3. METEOROLOGICAL DATA

The Peak Hill Gold Mine no longer maintains a weather station at the mine site but rather relies on the registered BOM site at Peak Hill Post Office (within 500m of the site).

The Peak Hill Post Office mean annual rainfall is 561.3mm. The total rainfall at Peak Hill Post Office in 2020 was 653.4mm which was a significant improvement on 2019.

In 2019 the total rainfall for New South Wales was the lowest on record, at 55% below average; well below the previous driest year of 1944

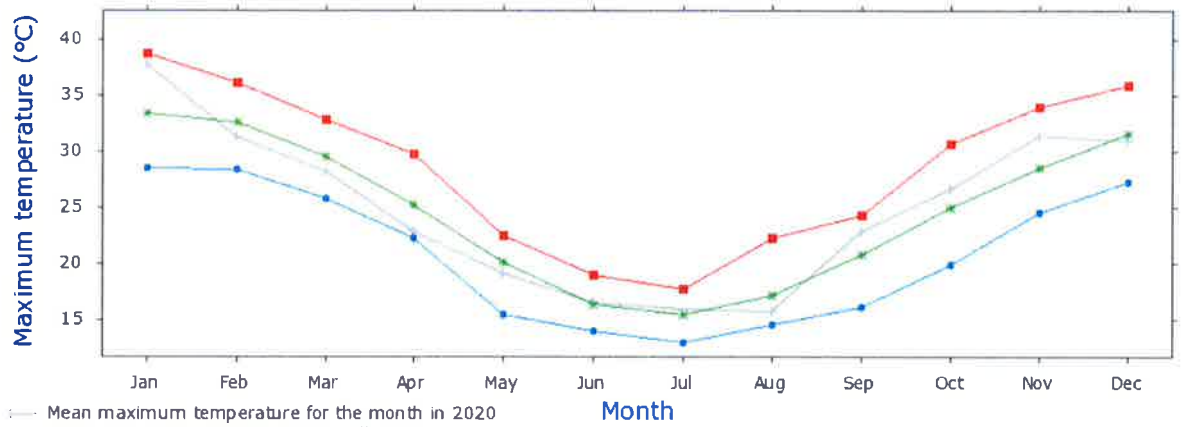
2019 was the warmest year on record for New South Wales as a whole, with the mean temperature 1.95 °C above average and 0.27 °C warmer than the previous warmest, 2018

The five warmest years on record for New South Wales are now 2019, 2018, 2014, 2017 and 2009

The mine site rehabilitation performed as designed and no damage has been observed on any of the final landforms. The northeast sediment pond did not overflow during 2020 and thus there was no surface water monitoring conducted.

The charts below contain maximum and minimum temperatures for 2020 versus the long term mean and daily rainfall data for 2020.

Peak Hill Post Office (050031) 2020 maximum temperature

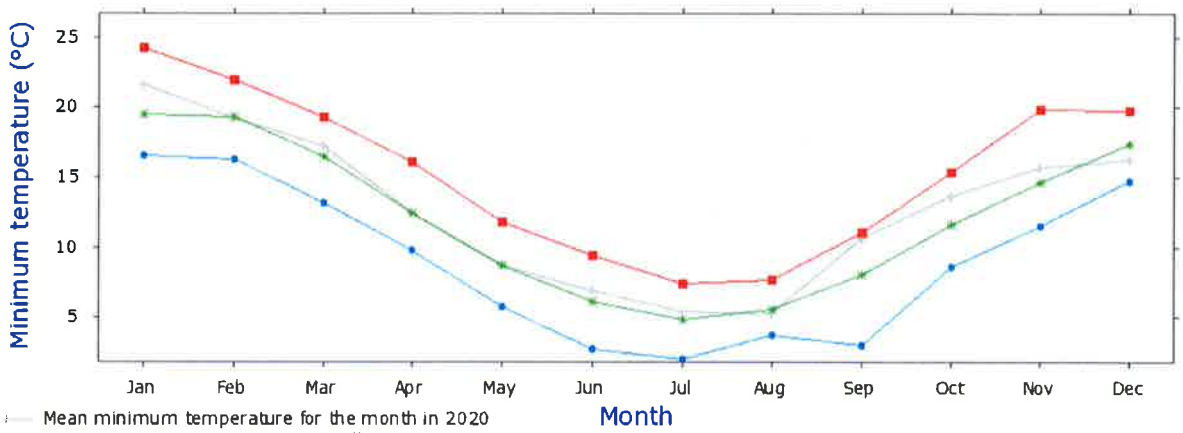


Mean maximum temperature for the month in 2020
Mean maximum temperature over all years
Highest monthly mean maximum temperature over all years
Lowest monthly mean maximum temperature over all years
No data

Note: Data may not have completed quality control
Observations made before 1910 may have used non-standard equipment

Product Code: IDCJAC0010

Peak Hill Post Office (050031) 2020 minimum temperature

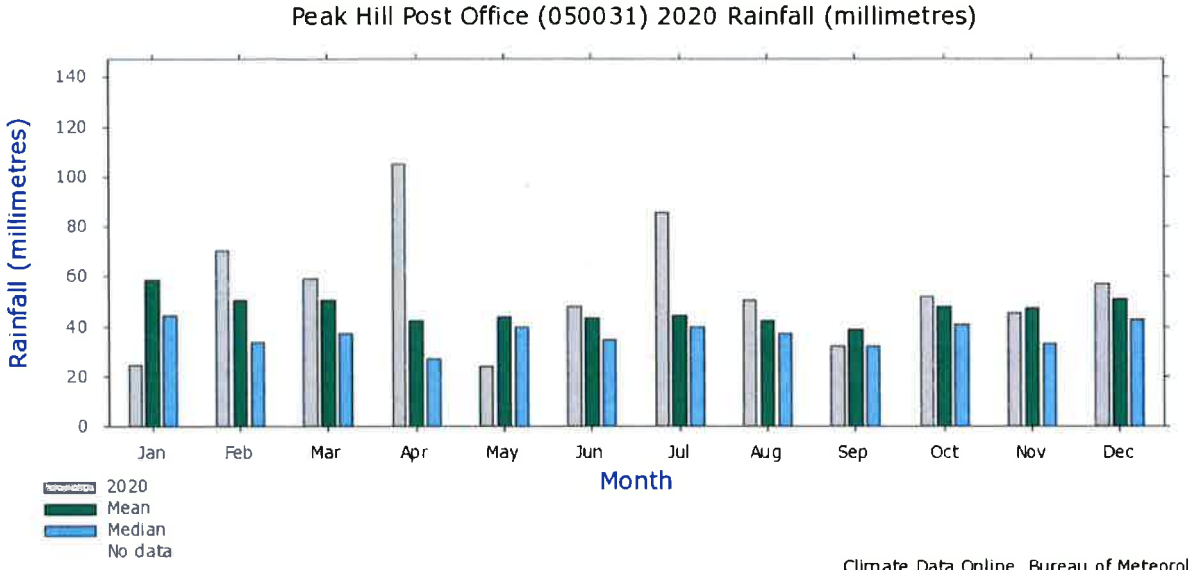


Mean minimum temperature for the month in 2020
Mean minimum temperature over all years
Highest monthly mean minimum temperature over all years
Lowest monthly mean minimum temperature over all years
No data

Note: Data may not have completed quality control
Observations made before 1910 may have used non-standard equipment

Product Code: IDCJAC0011

Monthly rainfall, measured at the Peak Hill Post Office is shown in the table on the following page.



Note: Data may not have completed quality control

Product Code: IDCJAC0009

4. ENVIRONMENTAL PERFORMANCE

Environmental control strategies (rehabilitation) have been undertaken as described in the MOP 2014-2022 though application of ag lime across WRE and heap leach final landforms proposed for 2020 will now happen in March 2021.

A new MOP will be required to extend the life of the mining leases beyond 17 January 2022. The new MOP will be required to allow Alkane the opportunity to develop the underground resource at Peak Hill while Tomingley Gold Operations is operating.

Three Landscape Function Analysis studies (14 transects across final landforms and two analogue site) have been undertaken to date by Graminus Consulting on August 2013, February 2014 and May 2014.

The analogue sites have not been disturbed by mining. Significantly "neither analogue site is any better or worse than any other transect". The metric scores (May 2014) for stability, infiltration and nutrient cycling endorse a positive outcome for the rehabilitation techniques employed on the minesite.

Surface water discharges (results reported on www.alkane.com.au) from the licenced discharge point (NE sediment pond) comply with EPA limits. Despite the above average rainfall in 2020, there were no surface water discharges during 2020 from the PHGM. This is an indication of the good groundcover across the minesite and healthy soils (landscape function) being able to absorb rainfall events.

Box thorn spraying is getting on top of the infestation with a decline in recruitment evident.

Macropod management is ongoing to ensure landforms are not overgrazed.

Establishment of the new waste transfer station on an excised portion of the mining lease is a very positive environmental outcome for Parkes Council and Alkane. This project has enabled recycling of mining assets for an ongoing use. The one negative aspect of the waste transfer station is that plastic and paper rubbish blows out of the council facility and contaminates the minesite which has in turn increased the workload (collecting litter) of the Site Supervisor.

Photographs of the mine site exploration and rehabilitation progress are contained in Appendix I.

5. COMPLAINTS AND LIAISON

There were no complaints received by Alkane relating to the Peak Hill Gold Mine during the reporting period.

Alkane completes an annual return for the EPA and that is posted on the Company website.

APPENDIX 1- PHOTOGRAPHS

Peak Hill Gold Mine site office and exploration staff private and company-owned vehicles. Photo taken 7 January 2021.

PHGM coreyard with two temporary refrigerated containers holding core from Peak Hill drilling.

PHGM Overflow pond. Photo taken 24 March 2020.

Barren pond. Boland Contractors moving RC bags beyond pond to Myall 24 March 2020.

Pregnant pond. Photo taken 24 March 2020.

Pregnant overflow pond. The PHGM processing ponds remain to be rehabilitated in MOP 2014-2022.

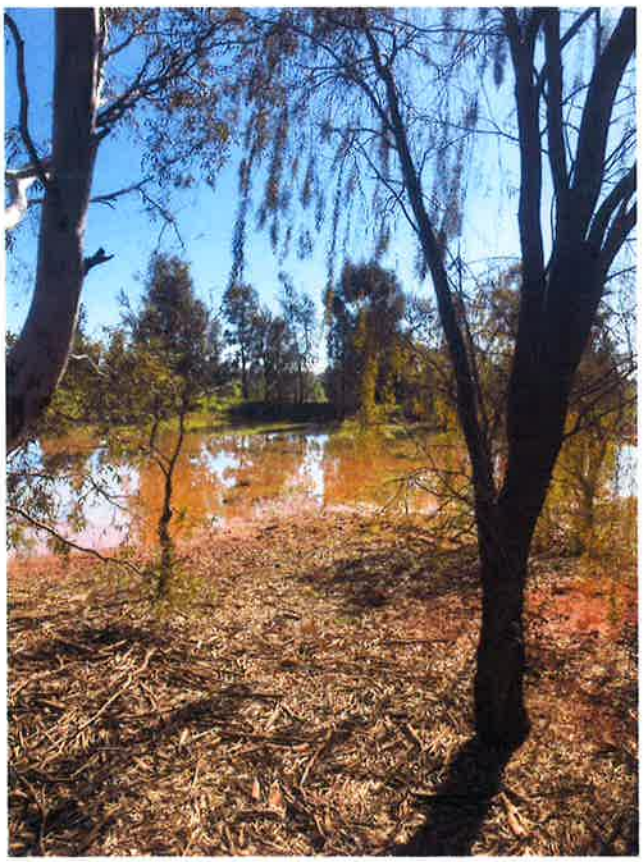
Rehabilitated teporary storage area (RC sample bags). Photo taken 29 April 2020

Resources Regulator inspecting localised salt sweats on heap leach final landform 19 June 2020. Ag lime to be spread March 2021 should partly remedy this phenomenon.

PHGM WRE flume designed and constructed by NSW Soil Conservation Service in 2002. Photo taken 31 July 2020

Groundcover of clovers and perennial grasses (seeded 2002) on cap of WRE. Photo taken 31 July 2020. Eastern grey kangaroos in the mid-round.

Batters of the WRE are dominated by Buffel grass while the cap and berm is dominated by Consol Love Grass. Photo taken 31 July 2020.



Northwest sediment pond has never overflowed since constructed in1995. Myall, River Red Gum and White Cypress Pine is regenerating from original plantings. Photo taken 31 July 2020.

Natural regeneration of wattle and hop bush at toe of WRE south of mine site entrance road.

Photo taken 31 July 2021.

Rehabilitated drill site from disturbance in Dec 2018-March 2019. Photo taken 7 January 2021.

Tourist mine visitors during COVID-19 times. Photo taken 7 January 2021.

Proprietary pit as seen from main viewing platform on 7 January 2021.

APPENDIX 2- CORRESPONDENCE

NSW GOVERNMENT

Resources Regulator

Our ref: ASMT0008654
LETT0004827

Alkane Resources Ltd
PO BOX 4384
VICTORIA PARK WA 6979

Dear Michael Sutherland

Peak Hill Gold Mine
Targeted Assessment Program – Soils and Materials Management

Overview

The NSW Resources Regulator within the Department of Regional NSW (the Regulator) is responsible for the administration and enforcement of the *Mining Act 1992* (the Act) and associated Regulations.

Our compliance and enforcement strategy involves targeted assessment programs (TAPs) at mines across NSW. TAPs have been developed to focus on critical controls across mine sites to ensure measures have been identified and implemented to facilitate sustainable rehabilitation outcomes. One of the primary aims of the TAP is to assist industry with continual improvement in rehabilitation outcomes.

Further information regarding our approach to conducting a TAPs can be found at https://www.resourcesregulator.nsw.gov.au/environment/compliance

Scope of assessment

On 19 June 2020, a TAP was conducted at Peak Hill Gold Mine (the mine).

The assessment focused on progressive rehabilitation obligations as outlined in the Mining Operations Plan (MOP) and how materials and soils on site were being managed to achieve sustainable rehabilitation outcomes.

The entire mine complex was not inspected and as such the observations outlined below do not reflect compliance or otherwise with the Act, the *Mining Regulation 2016*, the conditions of authorisation or relevant approvals granted by the Department.

Observations

- The mine has does not currently utilise a compliance management system to track, monitor and address obligations associated with the Mining Act 1992 including all requirements of the Mining Operations Plan and conditions of authorisation(s).
- It was noted that the Heap Leach Dump and Waste Rock Dump exhibit sporadic occurrences of Acid Mine Drainage (AMD) resulting in bare areas which are not compatible with the proposed rehabilitation objectives and completion criteria for the impacted landforms.

Recommendations

It is recommended that:

1. The mine should develop a compliance management system to ensure all obligations under the Mining Act 1992 are adhered to and potential breach(s) are identified addressed in a timely manner.
2. The mine should develop a plan to map and remediate all occurrences of AMD identified on the Heap Leach Dump and Waste Rock Dump in order to meet final rehabilitation objectives and completion criteria for these landforms.

Compliance monitoring

You should note that the Regulator intends to actively monitor and enforce rehabilitation obligations at the mine. Further information regarding mine rehabilitation obligations is available at http://www.resourcesregulator.nsw.gov.au

If you require additional information, please contact the Resources Regulator on 1300 814 609 (Option 2, then 5), or via email at nswresourcesregulator@service-now.com.

Yours sincerely,

Christine Fawcett
Manager Environmental Operations
Mining Act Inspectorate
Resources Regulator

17 August 2020