



Annual Review 2021-2022

for

Possum Brush Quarry



Prepared in conjunction with:



September 2022



ABN: 45 050 224 250

Annual Review 2021-2022

for

Possum Brush Quarry

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Table 1
Title Block

Name of operation	Possum Brush Quarry
Name of operator	Pacific Blue Metal Pty Ltd
Development consent / project approval #	DA283/97 (Mod 4)
Name of holder of development consent / project approval	Pacific Blue Metal Pty Ltd
Mining Lease #	Not Applicable
Name of holder of mining lease	Not Applicable
Water licence #	Not Applicable
Name of holder of water licence	Not Applicable
MOP/RMP start date	Not Applicable
MOP/RMP end date	Not Applicable
Annual Review start date	1 July 2021
Annual Review end date	30 June 2022
<p>I, Charlie Kennett, certify that this audit report is a true and accurate record of the compliance status of the Possum Brush Quarry for the period 1 July 2021 to 30 June 2022 and that I am authorised to make this statement of behalf of Pacific Blue Metal Pty Ltd.</p> <p><i>Note.</i></p> <p>a) <i>The Annual Review is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</i></p> <p>b) <i>The Crimes Act 1900 contains other offences relating to false and misleading information: Section 192G (Intention to defraud by false or misleading statement – maximum penalty 5 years imprisonment); Section 307A, 307B and 307C (false or misleading application/information/documents – maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
Name of authorised reporting officer	Mr Charlie Kennett
Title of authorised reporting officer	Quarry Manager
Signature of authorised reporting officer	
Date:	30 September 2022

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LIST OF ACRONYMS

AHD	Australian Height Datum
CCC	Community Consultative Committee
DA	Development Application
DPE	Department of Planning and Environment
EPL	Environment Protection Licence
IBIS	Irreplaceable Bush Regeneration Indigenous Services
IEA	Independent Environmental Audit
PBM	Pacific Blue Metal Pty Ltd

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1. STATEMENT OF COMPLIANCE

The Possum Brush Quarry (the Quarry) is operated by Pacific Blue Metal Pty Ltd (PBM) in accordance with Development Consents DA283/97, DA1127/2005 and DA769/2009 and Environment Protection Licence (EPL) 3393. PBM maintains all relevant documentation on site required to demonstrate compliance with each of the approvals and licences.

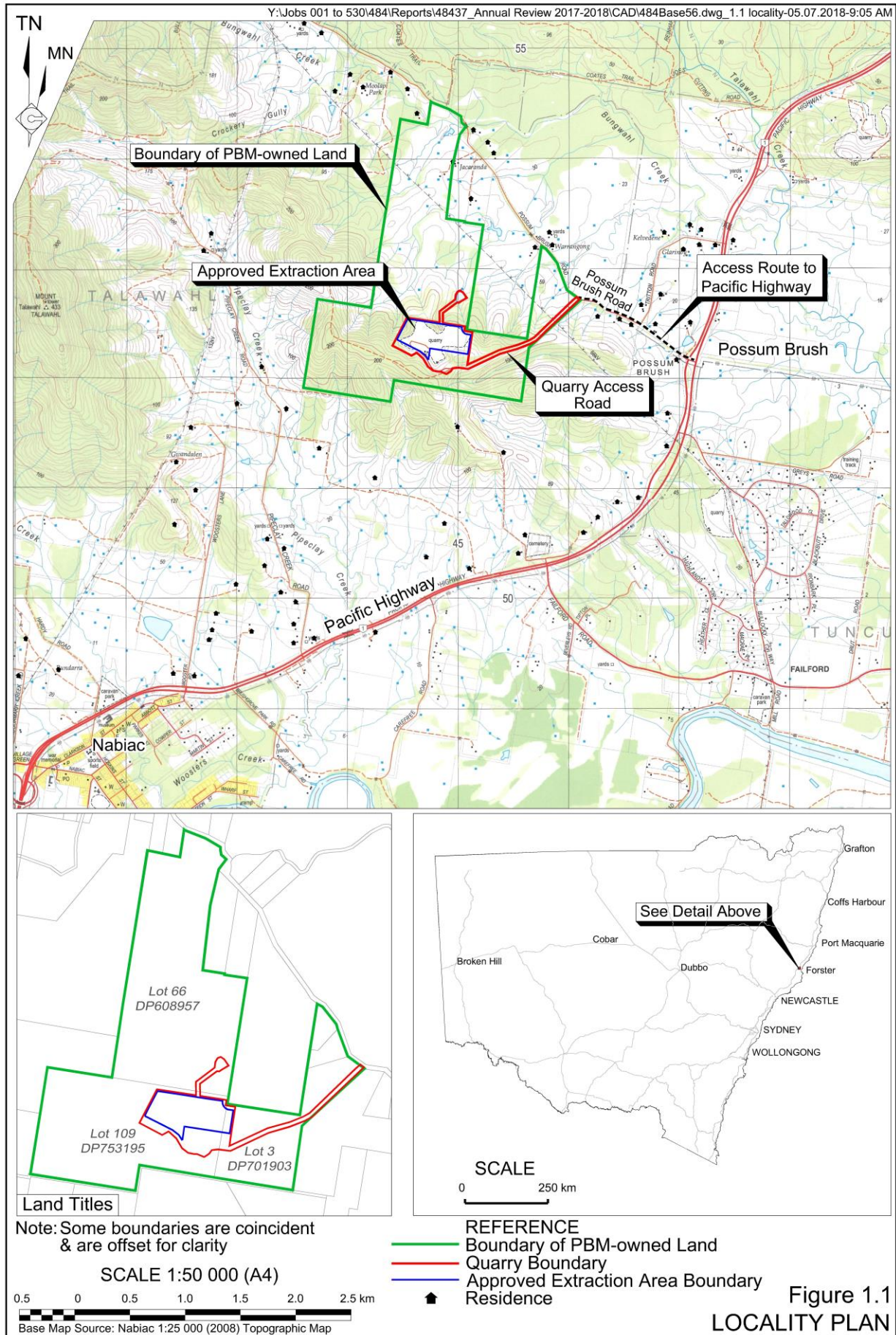
This Annual Review has been compiled by Pacific Blue Metal (PBM) in conjunction with R.W. Corkery & Co. Pty Limited to provide a compliance assessment for DA 283/07, DA 1127/2005 (Asphalt Plant), DA 769/2009 (Recycling Plant) and EPL 3393. The audit established compliance with all conditional requirements. **Appendix 1** presents four tables paraphrasing the conditions contained within these consent documents, together with a record of compliance and a brief comment recording the basis for assessing compliance or non-compliance.

Table 2 presents a summary of the assessment of compliance for all conditional requirements included in development consents issued for the Quarry, asphalt plant and recycling plant and EPL 3393.

Table 2
Statement of Compliance

Were all conditions of the relevant approval(s) complied with?	Yes / No
Possum Brush Quarry (DA 283/97) (Mod 4)	No
Possum Brush Asphalt Plant (DA 1127/2005)	Yes
Possum Brush Recycling Plant (DA 769/2009)	Yes
EPL 3393	No

Figure 1.1 presents the location of the Quarry in relation to the Pacific Highway and the village of Nahiatic.



2. INTRODUCTION

2.1 OVERVIEW OF OPERATIONS

Throughout the reporting period, the Possum Brush Quarry continued to supply a range of products, primarily for road construction and industrial and residential construction projects. The bulk of the quarry products comprised road pavement materials which were generated within the state-of-the-art wetmix plant given its superior quality control features.

Figures 2.1 and **2.2** indicate the areas in which activities were undertaken during the reporting period both outside and within the Quarry Area. **Plates 1** to **9** show various operations and/or features of the Quarry recorded on 16 September 2022. The locations of each photograph are displayed on **Figures 2.1** and **2.2**.

Throughout the reporting period, PBM undertook the following activities:

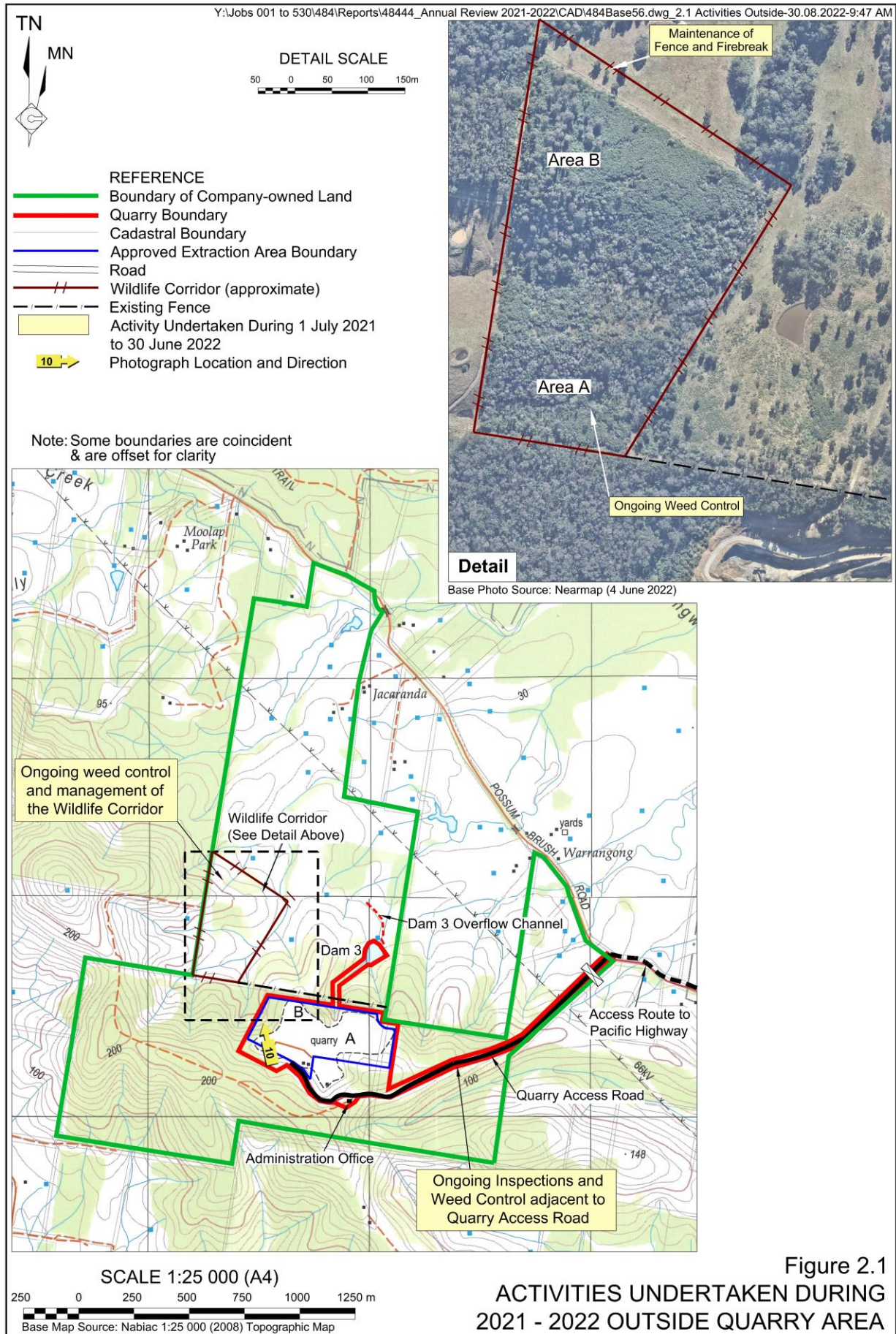
- Supply road base and subdivision construction materials.
- Produce asphalt at the on-site asphalt plant.
- Accept materials imported for recycling/blending with quarry products.
- Refurbish and rationalise the existing processing plant to improve plant efficiencies and provide safer and more practical access around the plant.
- Commission the new substation and switch room.
- Begin formalisation of laydown and storage area.

2.2 KEY PERSONNEL CONTACT DETAILS

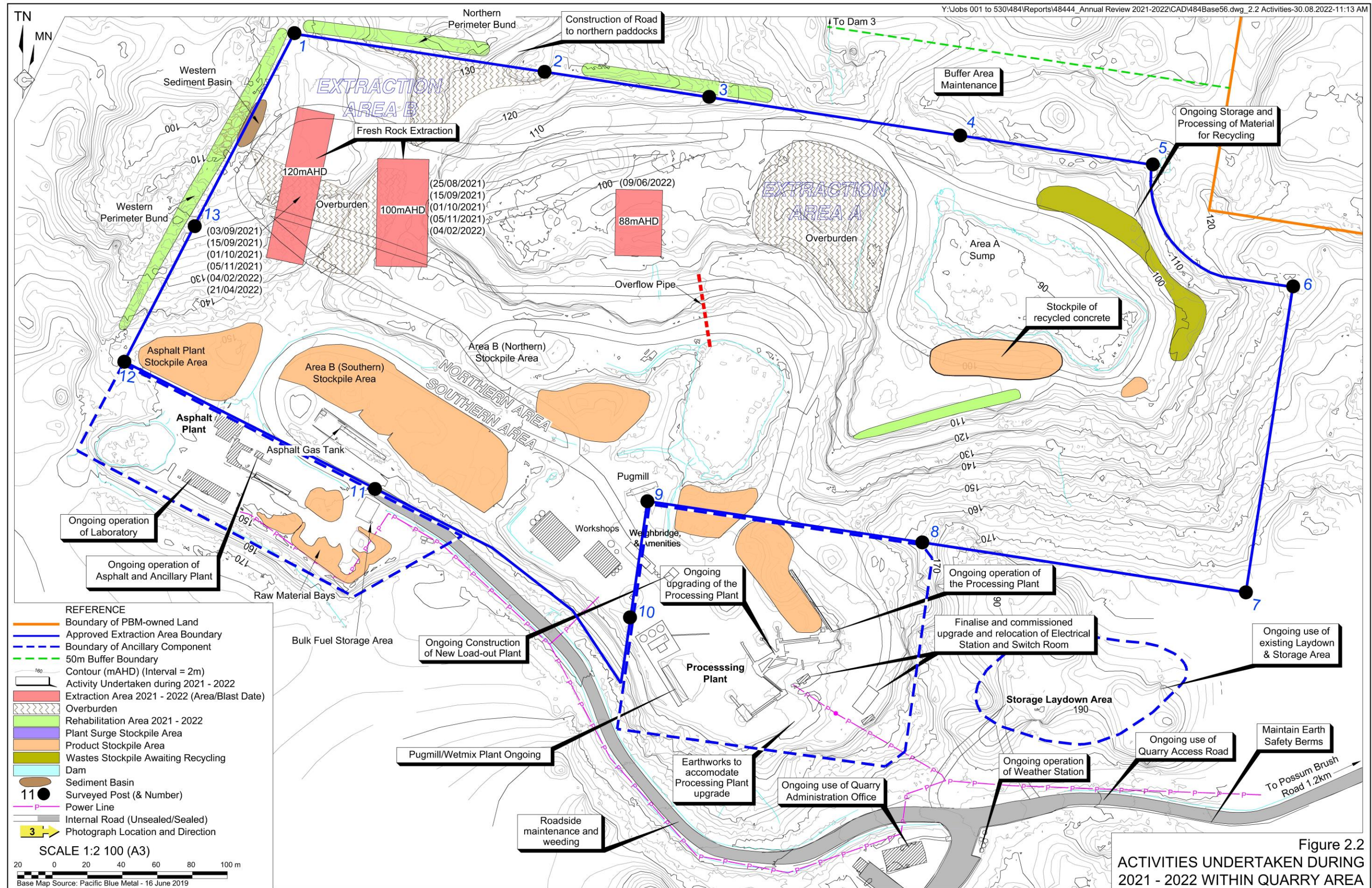
The contact names, position and phone numbers of key personnel who are responsible for the environmental management of the Quarry are as follows.

Name	Position	24 Hour Contact
Mr Charlie Kennett	Quarry Manager	0428 684 115
Ms Stacey Tyack	QSE Manager	0428 684 547

The Environmental Complaints line for the Quarry is (02) 6554 3597.



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2021-2022\CAD\484Base56.dwg_AR Plates 1-12-29.09.2022-5:00 PM

Plate 1: View to the east of the active extraction area

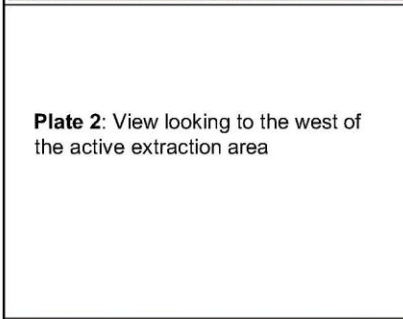


Plate 2: View looking to the west of the active extraction area



Plate 3: View to the southeast of the Area A sump and rehabilitated benches in the background.





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2021-2022\CAD\484Base\56.dwg_AR Plates 1-12-29.09.2022-5:00 PM

Plate 4: View to the northwest of the storage area for material for recycling

Plate 5: View to the southwest of processing plant and related buildings

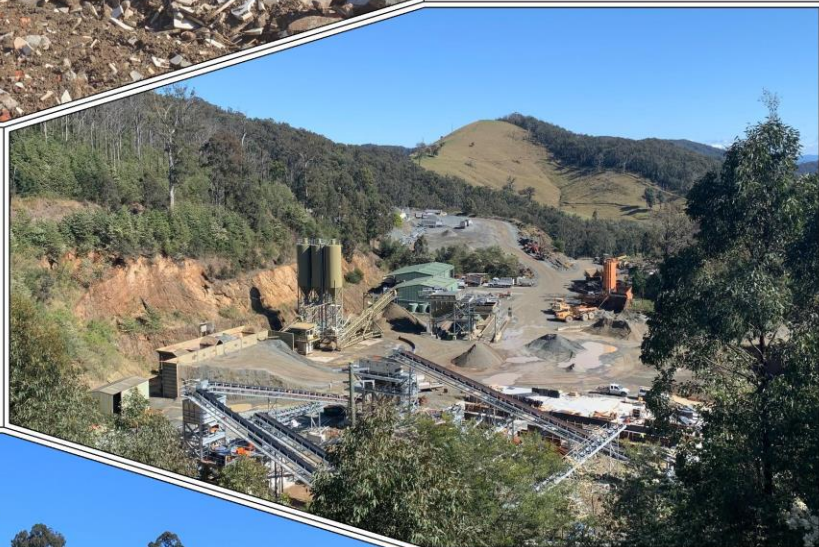


Plate 6: View to southwest of loadout and weighbridge

Plate 7: View of the meteorological station and some water tanks located to the east of the Quarry Administration Office





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2021-2022\CAD\484Base56.dwg_AR Plates 1-12-29.09.2022-5:00 PM

Plate 8: View to the north of the wildlife corridor from the asphalt plant

Plate 9: View to the southeast towards the Asphalt Plant



3. APPROVALS AND LICENCES

The following approvals and licences are currently held by PBM to operate the Possum Brush Quarry.

- Possum Brush Quarry DA 283/97 – Issued by the Department of Planning and Environment (DPE). DA 283/97 has been modified four times, with the last modification approved on 1 April 2016.
- Asphalt Plant DA 1127/2005 – Issued by Greater Taree City Council.
- Recycling Plant DA769/2009 – Issued by Greater Taree City Council.
- Environment Protection Licence (EPL) 3393 – Issued by EPA.

No modifications or variations to the above approvals were required or received during the reporting period.

4. OPERATIONS SUMMARY

4.1 MINING OPERATIONS

Figure 2.2 displays the three (3) areas within the approved Extraction Areas A and B where overburden and fresh rock were extracted during the reporting period.

All extraction throughout the reporting period was undertaken by either ripping with excavators and bulldozers or drill and blast followed by load and haul. **Plates 1** and **2** show the main extraction area of Area B.

Broken and fragmented rock suitable for processing was transported to the processing plant by off-road haul trucks. All oversize rock was sold as armour rock. **Table 3** presents the production summary for the extraction operations.

Table 3
Production Summary: 2021 – 2022

Material	Approved limit (specify source)	Previous reporting period (actual)	This reporting period (actual)	Next reporting period (forecast)
Waste Rock / Overburden	Not Applicable	0	0	0
ROM Coal Ore	Not Applicable	0	0	0
Coarse reject	Not Applicable	0	0	0
Fine reject (Tailings)	Not Applicable	0	0	0
Saleable Product*	500,000 tonnes / yr	431,026	346,324	400,000

* Saleable product includes all quarry, asphalt and recycling products extracted/processed and sold.

Modification 4 to DA 283/97 included a condition that limits the total extraction from the site to 16.2 million tonnes (Condition 8 of Schedule 2). Since Modification 4 was approved (1 April 2016), a total of 1,638,423 tonnes of saleable products have been extracted / processed and sold. This includes:

- 56,234 tonnes from 1 April to 30 June 2016;
- 272,460 tonnes in 2016-2017;
- 164,360 tonnes in 2017-2018;
- 148,800 tonnes in 2018-2019;
- 219,219 tonnes in 2019-2020;
- 431,026 tonnes in 2020-2021 and
- 346,324 tonnes in 2021-2022.

All extraction activities occurred between 6:30am to 6:00pm on weekdays and 7:00am to 3:00pm on Saturdays, public holidays excluded, i.e. in accordance with *Condition 2(11)* DA 283/97 (Mod 4) and *Condition L6.2* (a-g) EPL 3393.

The bulk of the fragmented rock was processed on site through the processing plant (see **Plate 5**) and mobile crushers, with the bulk of the products being produced within the state-of-the-art wetmix plant.

4.2 OTHER OPERATIONS

Asphalt Production

Whilst the asphalt plant is approved to operate during the standard hours of operation for the Quarry, as permitted under *Condition 10* DA 1127/2005 and *Condition L6.2* (h-i) EPL 3393, PBM may operate the asphalt plant for 24 hours per day, from 6:30am Monday to 10:00pm Friday, for up to 60 days per year. This is so that PBM may supply asphalt to community infrastructure projects requiring night-time deliveries. **Plate 9** presents a view of the asphalt plant towards the south east.

During the reporting period, the asphalt plant operated within the nominated hours including nine (9) night time operations.

All product despatch activities were undertaken within either the nominated standard hours as detailed in *Condition 2(11)* DA 283/97 (Mod 4) and *Condition L6.2* (a-g) EPL 3393 or those outside of standard hours, as nominated in *Condition 10* DA 1127/2005 and *Condition L6.2* (h-i) EPL 3393.

Recycled Products

During the reporting period, PBM continued to receive concrete and other waste materials suitable for reprocessing and blending with other quarry products. **Figure 2.2** displays the location of the recycled material receival bays within Extraction Area A. The wastes received comprised:

- asphalt and asphalt profilings;
- clean concrete;
- concrete with minimal contamination; and
- unsorted concrete, brick and tile.

Plate 4 displays the waste concrete and brick stockpiled on site awaiting processing.

Condition L3.1 EPL 3393, requires that PBM must not receive more than 10,000 tonnes of waste materials per year i.e. for the year ending on the anniversary date of 17 August. During the reporting period, a total of 8,231.89 tonnes of waste materials were received by PBM for processing, the bulk of which was clean concrete. All activities associated with the receipt of waste materials and the transport of recycled product were undertaken within the nominated hours outlined in *Condition 2(a)* of DA 769/2009 and *Condition L6.3* EPL 3393 and *Condition 2(11)* DA 283/97 (Mod 4).

PBM operates the recycling facility in accordance with DA 769/2009 under a Quality Assurance program ensuring all operational conditions are met. This includes accepting only licenced uncontaminated wastes, documenting all loads, rejecting unlicensed or contaminated wastes and

notifying MidCoast Council (Council) of such loads. During the reporting period, implementation of the Quality Assurance program ensured all operational conditions of DA 769/2009 were fully adhered to. Nine (9) loads of waste materials were rejected during the reporting period as follows:

- 03/08/21 excess rubbish in load – wood, plastics
- 05/10/21 excess rubbish in load – wood, plastics
- 07/10/21 excess rubbish in load – plastics, hessian
- 18/10/21 excess rubbish in loads – timber, plastic, sand
- 26/10/21 excess organic material – soil, grass
- 27/10/21 excess organic material – sand, soil
- 24/11/21 excess rubbish in load – plastic
- 31/05/22 two (2) large boulders in load
- 20/06/22 excess steel in load – steel stormwater grates

As per Condition 2(h) of DA 769/2009 Council was notified of the details of the rejected waste load including the name and registration number of the waste supplier, why the waste load was rejected and the proposed fate of the load of the waste, within 30 minutes of the load leaving the premises.

Off-site Road Maintenance

Monthly payments were made to Council throughout the reporting period for the maintenance of Possum Brush Road in accordance with *Condition 2(20)* of DA 283/97 (Mod 4). A total of \$38,095.63 was paid to Council for the products despatched during the reporting period.

In accordance with *Condition 2(19)* DA 283/97 (Mod 4), extractive material is to be supplied to Council free of charge for the maintenance of Possum Brush Road between the quarry entrance and the Pacific Highway. During the reporting period, Council did not request any material for road repairs along Possum Brush Road. Further discussion regarding the maintenance of Possum Brush Road is provided in Section 11.

On-site Road Maintenance

Repair and maintenance of the asphalted access road was undertaken in several sections during the reporting period. PBM continued to undertake vegetation maintenance and weed control adjacent to the on-site roads.

Meteorological Monitoring

During the reporting period, the on-site meteorological station near the Quarry Administration Office operated to record the parameters nominated in *Condition M4.2* of EPL 3393, namely:

- rainfall;
- wind speed and direction @ 10m;
- temperature @ 2m and 10m; and
- sigma theta @ 10m.

5. ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW

Table 4 records actions arising from previous Annual Review/s.

Table 4
Actions from the Previous Annual Review

Action Required from Previous Annual Review	Requested by	Action Taken by the Operator	Where Discussed in Annual Review
Future Annual Reviews include a summary of any official cautions, warning letters, penalty notices or prosecution proceedings by any regulatory agency and a summary of the response of PBM to any such enforcement actions.	DPE	Enforcement Actions included in Annual Review	Section 10.4

6. ENVIRONMENTAL PERFORMANCE

6.1 INTRODUCTION

Within the Quarry Site itself, the standard of environmental management has remained high with an excellent standard of housekeeping. Such standards, and the compliant monitoring results, indicate that the adopted environmental controls set out in the various Management Plans are effective.

Sections 6.2 to 6.5 provide a summary of the environmental outcomes associated with the operation of the Quarry.

A summary of monitoring data collected to demonstrate PBM's environmental performance with respect to the Quarry is posted on PBM's website.

6.2 NOISE

Table 5 presents the results from the noise monitoring undertaken during 2021-2022. Noise monitoring covering only the day period was undertaken on 17 December 2021 at the three nominated noise monitoring locations (see **Figure 6.1**).

- Site R1: 5 St Peters Close;
- Site R2: 175 Possum Brush Road; and
- Site R3: 55 Possum Brush Road.

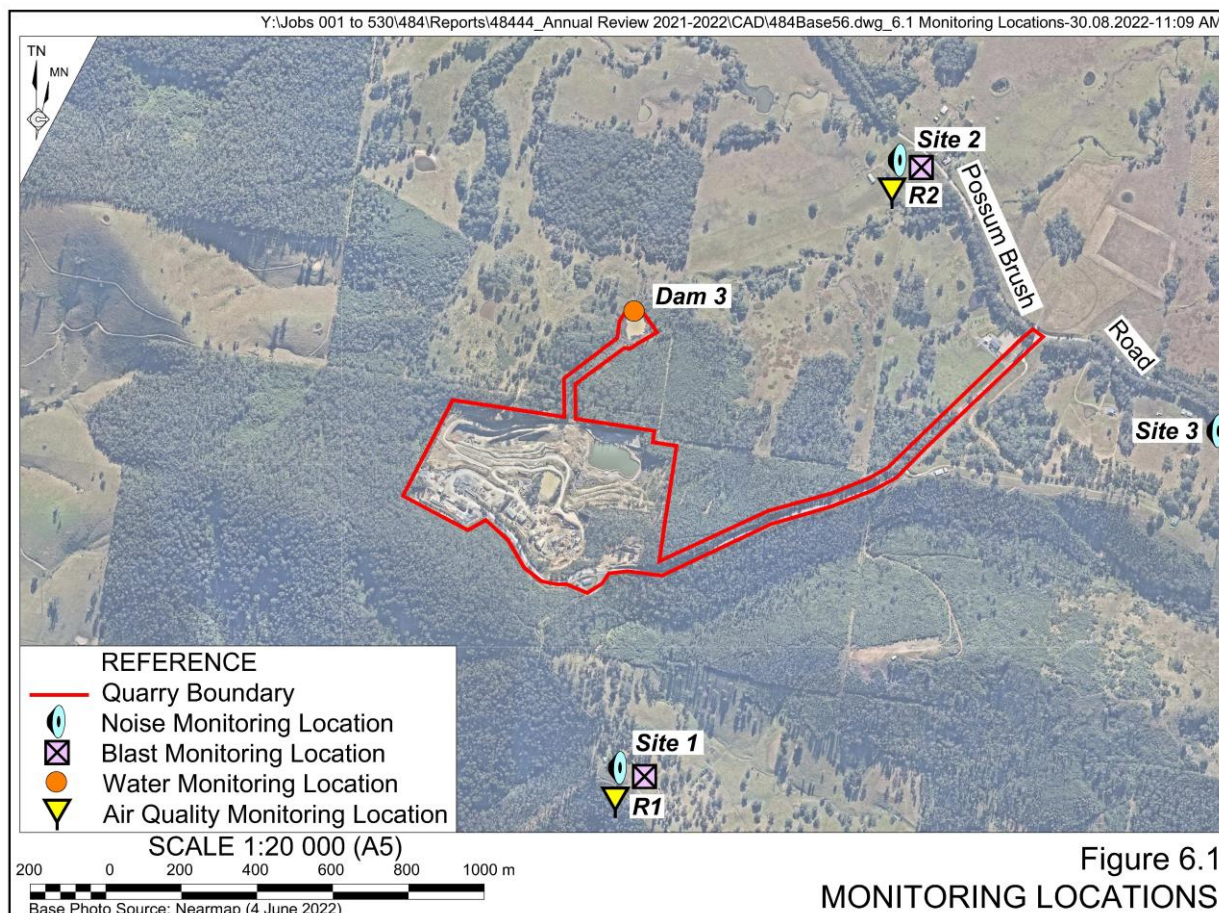


Table 5
Compilation of Noise Monitoring Data and PBM Contributions: 2014 – 2022

Site / Year	Day		Evening		Night	
	dB(A) LA _{eq} (15 min)	PBM Contribution	dB(A) LA _{eq} (15 min)	PBM Contribution	dB(A) LA _{eq} (15 min)	PBM Contribution
Site R1: 5 St Peters Close (Criteria¹: 39dB(A))						
2014-2015	44	22 ²	-	-	44	Barely audible ²
2015-2016	44	inaudible	44	26	43	Barely audible ²
2016-2017	41	31 ²	45	inaudible	49	28 ²
18/07/17	49	<20	45	inaudible		inaudible
25/09/17	36	<23	40	27	39	29
29/03/18	43	28	44	inaudible	40	inaudible
29/06/18	43	29	38	inaudible	45	inaudible
15/08/18	34	32 ²	43	38	47	38
10/12/18	40	<20	40	28	48	<20
03/04/19	38	28	40	<25	42	inaudible
24/09/19	47	<20	39	<20	40	<20
08/07/20	44	<20	38	26	36	<20
17/12/21	47	33	-	-	-	-
Site R2: 175 Possum Brush Road (Criteria¹: 38dB(A))						
2014-2015	45	26 ²	-	-	49	inaudible
2015-2016	40	25	38	inaudible	46	inaudible
2016-2017	44	21 ²	41	<20	39	23
18/07/17	37	<20	51	<20	41	<20
25/09/17	38	<20	32	28	32	28
29/03/18	43	25 ²	41	inaudible	43	<25
29/06/18	53	<25 ²	44	inaudible	53	<25
15/08/18	40	<20	n/a ³	n/a ³	33	33
10/12/18	56	<20	46	<20	38	<20
03/04/19	41	<25	36	inaudible	38	<25
24/09/19	44	<20	53	30 ²	39	<20
08/07/20	48	27	44	<20	39	<20
17/12/21	43	<20	-	-	-	-
Site R3: 55 Possum Brush Road (Criteria¹: 37dB(A))						
2014-2015	51	31 ³	-	-	46	inaudible
2015-2016	49	inaudible	46	inaudible	46	inaudible
2016-2017	52	inaudible ³	57	inaudible	51	inaudible ³
18/07/17	56	inaudible	54	inaudible	57	inaudible
25/09/17	54	inaudible	47	inaudible	43	<20
29/03/18	42	<20	46	inaudible	46	25
29/06/18	52	<20	46	31	63	<25
15/08/18	30	<20	n/a ³	n/a ³	43	<20
10/12/18	38	<20	56	<20	58	<20
03/04/19	47	36	48	inaudible	44	<25
24/09/19	43	<20	46	<20	52	<20
08/07/20	46	<20	35	<20	48	<20
17/12/21	50	<20	-	-	-	-
<p>1 Criteria for PBM contribution per <i>Condition 3(1)</i> of DA 283/97 (Mod 4) and <i>Condition L4.1</i> of EPL 3393</p> <p>2 Noise from quarry trucks on Quarry Access Road</p> <p>3 Only noise from quarry trucks on public road was audible</p>						

At all sites, birds, insects and distant traffic (on the Pacific Highway) were the main contributors to the noise levels recorded. The monitoring results demonstrated that noise emissions from the Quarry did not exceed the relevant noise criteria at any monitoring location at any time during the survey. Evening and night-time monitoring was not undertaken during the reporting period. This was due to the reduced number of evening and night-time operations during the reporting period. As PBM was not able to demonstrate compliance during these operations (within the reporting period), this is considered a non-compliance which is discussed in more detail in Section 10.

In order to understand the status of noise monitoring over time, the noise monitoring data results over the previous 5 years together with the monitoring undertaken in 2021-2022 are presented in **Table 5**. Monitoring results for the reporting period remained consistent with historic results; that is, the Quarry remains largely inaudible at surrounding residences.

6.3 BLASTING

A total of 12 blasts were initiated during the reporting period. All blasts were monitored at Site R1 (5 St Peters Close) and Site R2 (175 Possum Brush Road) (see **Figure 6.1**) and were all within the airblast overpressure and ground vibration criteria nominated within *Condition 3(4)* of DA 283/97 (Mod 4) and *Condition L5* of EPL 3393. As recorded in **Table 6**, airblast levels recorded at Site R1 ranged from Nil Trigger to 103.5dB(L) with recorded ground vibration levels varying from Nil Trigger to 2.83mm/s. Airblast levels recorded at Site R2 ranged from Nil Trigger to 102.8dB(L) with recorded ground vibration levels varying from Nil Trigger to 0.98mm/s, the majority of blasts did not trigger Site R2. Blast monitoring results for the reporting period remained consistent with historic results.

Table 6
Ground Vibration and Airblast Overpressure Recorded: 2014– 2022

Measurement Site Year	Ground Vibration (mm/s)		Airblast Overpressure (dB(L))	
	Site R1	Site R2	Site R1	Site R2
2014-2015	0.56 – 4.03	0.2 – 0.47	91.9 – 107.0	84.2 – 111.4
2015-2016	1.00 – 2.66	Nil trigger – 0.67	98.8 – 105.5	Nil trigger – 111.3
2016-2017	0.14 – 2.61	Nil trigger – 0.50	96.3 – 101.8	Nil trigger – 107.0
2017-2018	0.88 – 4.29	Nil trigger – 0.45	98.3 – 105.1	Nil trigger – 108.3
2018-2019	0.59 – 1.34	Nil trigger – 0.27	100.3 – 105.0	Nil trigger – 113.4
2019-2020	1.91 – 4.82	Nil trigger – 0.56	94.4 – 102.8	Nil trigger – 111.1
2020-2021	Nil trigger – 4.93	Nil trigger	Nil trigger – 108.1	Nil trigger
15/07/21	2.99	Nil trigger	102.3	Nil trigger
12/08/21	Nil trigger	Nil trigger	Nil trigger	Nil trigger
25/08/21	1.28	Nil trigger	100.2	Nil trigger
03/09/21	1.68	Nil trigger	103.5	Nil trigger
15/09/21	1.46	Nil trigger	99.9	Nil trigger
01/10/21	0.84	Nil trigger	99.4	Nil trigger
05/11/21	Nil trigger	Nil trigger	Nil trigger	Nil trigger
03/12/21	2.35	Nil trigger	101.3	Nil trigger
04/02/22	1.65	Nil trigger	102.9	Nil trigger
21/04/22	Nil trigger	Nil trigger	Nil trigger	Nil trigger
29/04/22	Nil trigger	Nil trigger	Nil trigger	Nil trigger
09/06/22	2.83	0.98	100.3	102.8

Site R1: 5 St Peters Close (Wynns)
Site R2: 175 Possum Brush Road

No complaints were received regarding blasting throughout the reporting period.

6.4 AIR QUALITY

No complaints relating to air quality were received during the reporting period. Subsequently, no air quality monitoring was undertaken by PBM.

6.5 TRANSPORT

PBM records both the number of heavy vehicles transporting quarry products from the Quarry and the number of laden trucks entering the Quarry with either raw materials for the asphalt plant or waste materials for recycling. Information is recorded on an hourly and daily basis in order to demonstrate compliance with *Conditions 2(9) and 2(10)* of DA 283/97 (Mod 4).

Condition 2(9) of DA 283/97 (Mod 4) stipulates that a maximum of 500,000 tonnes of quarry products may be transported from the Quarry in any calendar year. In the 2021-2022 year, 346,323.99 tonnes of quarry products (including asphalt and recycled product road bases) were transported from the Quarry.

Condition 2(10) of DA 283/97 stipulates that PBM must ensure that no more than 36 truck movements occur per hour and no more than 420 truck movements occur per day. A truck movement is defined as a heavy vehicle one-way trip (i.e., either entering or leaving the Quarry), including trucks associated with the asphalt and recycling activities. During the reporting period, the maximum daily number of truck movements was 172, recorded on 02 September 2021. There were no occurrences throughout the reporting period when the maximum hourly number of truck movements (36) were recorded.

At no time did the hourly traffic movements exceed 36 movements, demonstrating the effectiveness of transport management procedures.

A summary of the maximum number of hourly and daily truck movements for each calendar month throughout the reporting period is presented in **Appendix 2**. The comprehensive records of all truck movements are held in the Quarry Administration Office.

6.6 WASTE

PBM's approach to waste management and minimisation is based upon three main principles, namely to:

1. minimise the quantity of waste generated;
2. maximise the quantity of waste recycled; and
3. effectively manage and correctly remove all waste from the Quarry.

The wastes generated within the Quarry include:

- domestic type wastes and workshop wastes that are stored in approved containers and transported regularly to either a recycling facility or approved waste disposal facility;
- tyres for recycling are stored on site and regularly transported to a licenced recycling facility;
- stormwater potentially contaminated with petroleum products which drains to a proprietary oil/water separator system in the workshop from which clarified water is allowed to drain to the sedimentation pond system. Oil-contaminated fluids are collected by a licensed recycling contractor; and
- scrap metal that is collected by licensed recycling contractor.

The quantities of waste materials are closely aligned with operational requirements such as production demand, maintenance schedules and general wear on equipment. During the reporting period, the waste management and minimisation procedures were successful and consistent with previous years.

Quantities of measurable waste and recycling are provided in **Table 7**.

Table 7
Summary of Waste and Recycled Materials Recorded for 2021-2022

Waste Stream	Average Quantity	Frequency	Total Quantity 2021-2022	Comments
Tyres	80 tyres	1 – 2 times per year	6,680kg (170 tyres)	All tyres are recycled through Tyrecycle.
Motor Oils	3,000 litres	1 – 2 times per year	6,360 litres	All waste oils are recycled through Southern Oil.
Batteries	500 kilograms	1 – 2 times per year	0 kg	All batteries are recycled through South Wang Wauk Recycling.
Scrap Metal	5 tonnes	3-6 times per year	329.23t	General Scrap metal. All scrap metal is recycled through South Wang Wauk Recycling.
Recycling Office /Crib Room	2 x 0.24m ³ *	Fortnightly	24m ³	Collected by JR Richards on behalf of Council.
General Waste Office / Crib Room	3 x 0.12m ³ *	Weekly	18m ³	Collected by JR Richards on behalf of Council.
General Waste – Quarry	1 x 1.5m ³ *	Weekly	75m ³	Collected by JR Richards on behalf of Council.
* These are maximum values.				

7. WATER MANAGEMENT

The PBM water monitoring point is located at the overflow of Dam 3 (see **Figure 2.1**). When an overflow event occurs, monitoring is required at this point in accordance with *Condition M2* of EPL 3393. *Condition L2.5* of EPL 3393 stipulates that the concentration limits for pollutants in water sampled at the overflow are:

- pH between 6.5-8.5
- TSS <50 mg/L
- Oil and Grease 10m/L and/or non-visible

Water quality monitoring was undertaken on one (1) occasion as a result of an overflow on 4 March 2022. During this rain event, PBM received a total of 485.6mm of rain the four (4) weeks preceding the overflow event. This was the first overflow event since January 2021.

Table 8 presents the water quality data for overflows from Dam 3 since 2012.

Table 8
Water Quality Data (Dam 3) 2012 – 2022

Dates tested	pH	Total Suspended Solids (mg/L)	Oil and Grease
Criteria	6.5 – 8.5	<50 mg/L	10mg/L and/or non-visible
2012 – 2013 (3 overflow events)	7.0 – 7.3	9 – 39	Non Visible
2013 – 2014	No overflow event/s		
2014 – 2015 (five overflow events)	6.7 – 7.4	8 – 37	Non Visible
2015 – 2016 (two overflow events)	7.6	7 and 32	Non Visible
2016 – 2017 (two overflow events)	7.0 and 7.1	7 and 19	Non Visible
2017 – 2018 (one overflow event)	7.3	6	Non Visible
2018 – 2019	No overflow event/s		
2019-2020 (two overflow events)	7.4-7.5	23	<5
2020-2021 (one overflow event)	7.0	9.0	<5
04 March 2022	7.6	16	<5

As shown in **Table 8**, the results of overflow sampling were within the limits specified in *Condition L2.5* of EPL 3393.

PBM is not required to hold a water access licence or works approval under the provisions of the *Water Management Act 2000* for the current water use on site (mostly sourced from sediment basins).

8. REHABILITATION

8.1 REHABILITATION PERFORMANCE DURING THE REPORTING PERIOD

Rehabilitation activities involve the maintenance of 18ha of land currently under rehabilitation. Given the current progress of extraction activities of quarry development, no new sites have been completed that require rehabilitation.

Rehabilitation activities are undertaken within a range of areas within the Quarry through Irreplaceable Bush Regeneration Indigenous Services (IBIS). **Table 9** provides a summary of the disturbance and rehabilitation areas, indicating no change to areas are expected in the next reporting period.

Table 9
Summary of Areas Disturbed and Rehabilitation

Quarry Area Type	Previous Reporting Period (Actual)	This Reporting Period (Actual)	Next Reporting Period (Forecast)
Total quarry footprint	45ha	45ha	45ha
Total active disturbance*	27ha	27ha	27ha
Land being prepared for rehabilitation	0ha	0ha	0ha
Land under active rehabilitation	18ha	18ha	18ha
Completed rehabilitation	1ha	1ha	1ha

* Includes access road, Dam 3, approved extraction area, processing area and all quarry-related infrastructure.

Rehabilitation and Conservation Bond

PBM lodged the Rehabilitation and Conservation Bond for the Quarry on 18 May 2019 through execution of the Company's Bankers' undertaking for the Bond in accordance with *Condition 3(23)* of DA 283/97 (Mod 4).

The quantum of the Bond is being reviewed following the 2022 Independent Environmental Audit which was submitted to the Department on 22 August 2022.

Rehabilitation Areas

PBM has been progressively improving the structure and floristic composition of the Wildlife Corridor since 1999. The 2018-2019 Vegetation Report, provided by Irreplaceable Bush Regeneration Indigenous Services (IBIS) stated that the wildlife corridor had reached a mature self-sustaining stage with minimal interference required. The non-native flora seed banks on and in the soil had been sufficiently depleted and natural succession of native flora species was evident with a great population of seedlings, maturing seedlings and young healthy trees flourishing since non-native flora populations had been controlled.

As such, IBIS recommended that the site be deemed as an act on inspection once every 12 months until further notice.

Only four (4) months later, the Hillville Bushfire of November 2019 burnt all vegetated areas of the quarry and surrounding land including:

- Quarry access road
- Final benches in Area A and Area B
- 50m buffer zone
- Wildlife corridor

Severe wet weather and flooding events, generated by two seasons of La Nina (2020 and 2021) further impacted the rehabilitation areas.

IBIS undertook post bushfire and flood monitoring and assessment of the Wildlife Corridor and other vegetated areas in January, August, September 2020 and May 2021. The natural recovery of native flora species was evident and flourishing, including Giant Stinging Tree seedlings. The stand of the *eucalyptus rudderi* was also still present. However, the areas will need repeated weed control to ensure the existing and new pioneer native vegetation is not suppressed by non-native vegetation.

IBIS followed up the assessments with a three (3) month weed control program from June 2021-August 2021. A further inspection and weed control program was undertaken in May 2022.

Feral Pest Control (Wild Dogs) was undertaken by IBIS in August 2022, with authorisation from Hunter Local Land Services.

8.2 REHABILITATION ACTIONS FOR THE NEXT REPORTING PERIOD

IBIS recommended the rehabilitation areas will need repeated weed control to ensure the existing and new pioneer native vegetation is not suppressed by non-native vegetation.

IBIS will continue to undertake weed management on a 3-6 monthly basis until the weed populations can be controlled and/or a full forest canopy is reinstated.

9. COMMUNITY

9.1 COMMUNITY RELATIONS

No complaints were received during the 2021-2022 reporting period for Quarry-related incidents. Complaint numbers regarding quarry-related incidents for previous years are as follows.

2020-2021 No complaints

2019-2020 No complaints

2018-2019 No complaints

2017-2018 Seven (7) complaints regarding squealing brakes (same complainant).

2016-2017 Three (3) complaints; two (2) regarding squealing brakes (same complainant) and one (1) regarding plant noise.

PBM encourages local residents to contact the Quarry Manager directly in the event of a complaint to assist PBM to be more responsive to specific complaints and the local community.

Community Consultative Committee

Pacific Blue Metal ran a Community Consultative Committee from 1998 until 2017. The Department considers that Pacific Blue Metal has satisfactorily addressed its requirement under condition 6 of Schedule 5 of DA 283/97 to “...*operate a Community Consultative Committee (CCC) for the development, to the satisfaction of the Secretary*”. However, if there is renewed interest by the community in the establishment of a CCC, the Secretary may direct Pacific Blue Metal to recommence this process and establish a CCC for the remainder of the project life.

10. INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD

10.1 INCIDENTS

PBM incurred a non-compliance with regard to Schedule 3 Condition 1, Evening and Night-time noise monitoring during 2021-2022.

During the 2021-2022 reporting period, night works was only undertaken on a total of nine (9) nights, as opposed to 36 nights in the previous 2020-2021 reporting period. A combination of cancelled night works, inclement weather, inappropriate meteorological monitoring conditions and the unavailability of the noise consultants to attend the site resulted in no opportunity to undertake evening and night time noise monitoring in the 2021-2022 reporting period.

As per Schedule 5 Condition 7, PBM submitted notification and a written report to the Department on 05 July 2022, regarding the non-compliance.

10.2 COMPLIANCE

An internal compliance assessment for DA 283/07, DA 1127/2005 (Asphalt Plant), DA 769/2009 (Recycling Plant) and EPL 3393 is presented as **Appendix 1** and notes areas of compliance and non-compliance for all conditional requirements.

10.3 INDEPENDENT ENVIRONMENTAL AUDIT

An Independent Environmental Audit (IEA) was undertaken by James Hart of James Hart Consulting dated 29 August 2022 that assessed compliance for DA 283/07 and EPL 3393 for the period from September 2019 to August 2022. Four (4) non-compliance matters were identified in the audit. **Table 10** presents a summary of the non-complaint matters and PBM's response to each of the non-compliances. PBM addressed the non-compliances either immediately or within 30 days following the audit.

Table 10
IEA Non-Compliance Summary and PBM Response

Nbr	IEA Recommendation	PBM Response
N-01	It is recommended that all non-compliances identified are addressed and closed out.	All non-compliances have been addressed.
N-02	Evening and night time noise monitoring should be conducted at the earliest available opportunity.	Evening and night time noise monitoring conducted 25 August 2022.
N-03	Ensure all liquid containers are stored in the bunded storage area provided.	Liquid container stored outside have been moved inside the bunded storage area.
N-04	Ensure that a summary of any official cautions, warning letters, penalty notices issued or prosecution proceedings by any regulatory agency, and a summary of the response of Pacific Blue Metal to any such enforcement actions is included in Annual Reviews.	To be applied from 2021-2022 Annual Review onwards.

The next Independent Environmental Audit will be undertaken by October 2025.

10.4 ENFORCEMENT ACTIONS

No enforcement actions were issued to Pacific Blue Metal in the 2021-2022 reporting period.

11. ACTIVITIES TO BE UNDERTAKEN IN THE NEXT REPORTING PERIOD

The principal activities planned during 2022-2023 are listed below. The locations of these activities are shown on **Figures 11.1** and **11.2**.

Extraction Activities

PBM expects the high demand for road pavement and subdivision products will continue during 2022-2023, particularly given the high quality of products produced within the wetmix plant. Fresh rock reserves will be removed from extraction faces in Areas A and B with sufficient weathered rock extracted for blending with the fresh rock to produce the required products.

Extraction will be focused in Area B with the removal of both overburden and fresh rock as extraction continues to progress westward. Some small areas are to be extracted within Area A to improve access and storage areas.

Processing Activities

PBM will continue to upgrade the existing crushing plant in the 2022-2023 reporting period. To allow for the delivery, storage and construction of the new components, the informal laydown area will be completed.

Asphalt Production

As Asphalt Production was hampered by inclement weather during the 2021-2022 reporting period, it is expected that the 2022-2023 will see an increase in asphalt production to address the back log of local and regional road repairs and construction (weather dependent).

Product Despatch and Road Maintenance

No substantial changes are planned to occur in the transportation of products from the Quarry during 2022-2023.

PBM will continue to draw Council's attention to areas requiring maintenance along Possum Brush Road.

Rehabilitation

In the 2021-2022 Regeneration Report, IBIS stated the rehabilitation areas will need significant resources to re-establish the native vegetation to a reasonable condition and control the emerging weed population following from the 2019 bushfire and the 2020 and 2021 floods. IBIS will be engaged to undertake the continued assessment and rehabilitation on a 3-6 monthly basis dependent on progress and advice from IBIS.

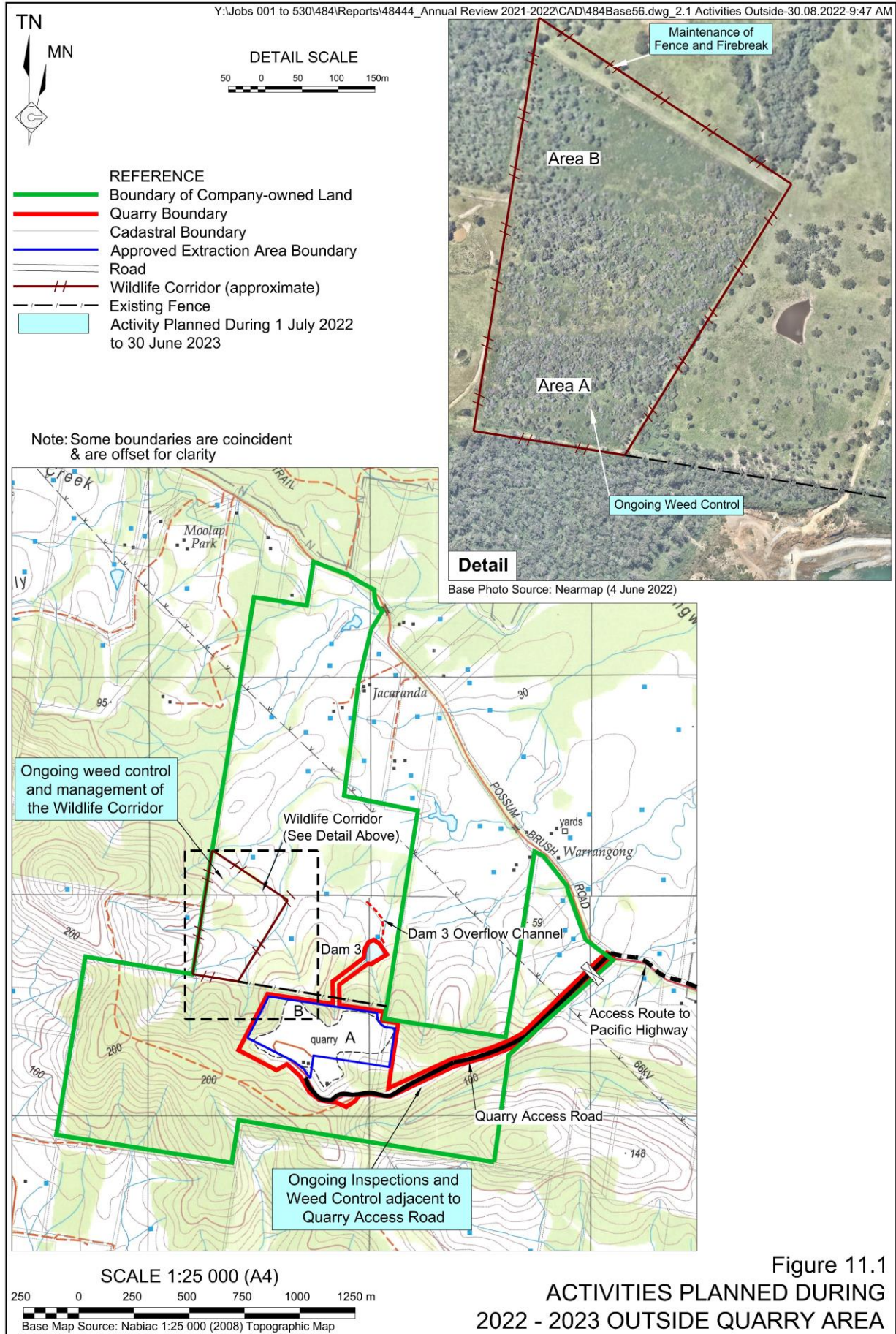
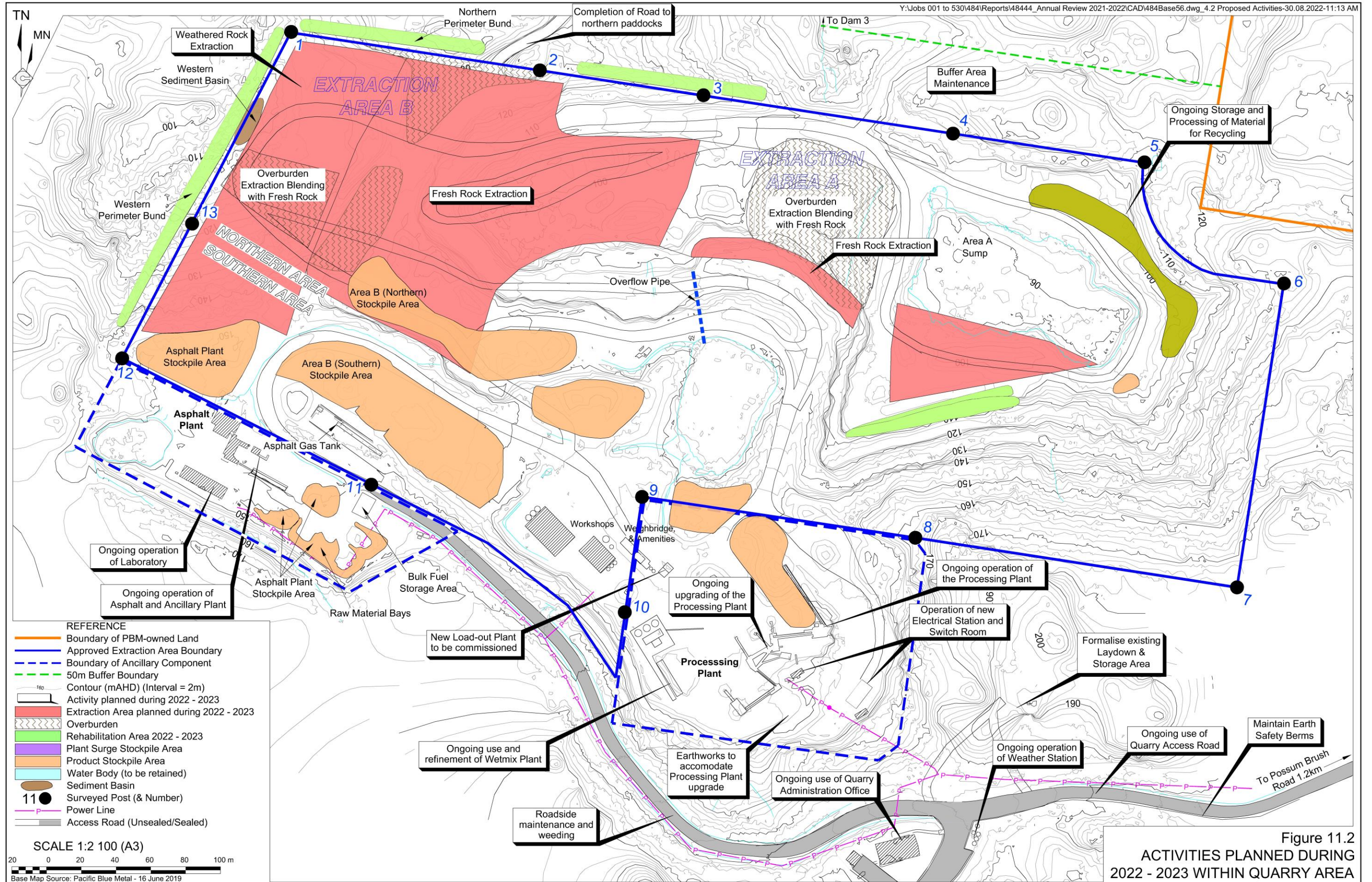


Figure 11.1
ACTIVITIES PLANNED DURING
2022 - 2023 OUTSIDE QUARRY AREA



Environmental Monitoring

The monitoring activities currently undertaken within and surrounding the Quarry will remain in place throughout 2022-2023. The monitoring proposed during 2022-2023 will include:

- blast monitoring (each blast);
- weather-related monitoring including rainfall levels (continuous);
- water quality (if Dam 3 overflows); and
- noise monitoring on an annual basis.

PBM proposes to continue to review all monitoring results as they are received to ensure the measured parameters are within the relevant limits or criteria. All monitoring results collected during 2022-2023 will be assembled in conjunction with all previous relevant results to provide the basis for an ongoing review of the environmental performance of the Quarry.

Maintenance of Possum Brush Road

PBM will continue to draw Council's attention to the need to undertake maintenance of Possum Brush Road to re-instate the hitherto high quality of the road pavement. Since May 2008, Council has received \$375,085.03 for maintenance of the 1.13km section of Possum Brush Road of which there is little evidence of any work having been undertaken.

Given the negligible maintenance undertaken on the section of road for over the past 14 years, its condition is progressively deteriorating. Since December 2018, PBM has been corresponding with Council and requesting road maintenance works.

In order to progress the road maintenance, PBM has previously (2018) provided Council with a Quotation to undertake the required works. However, Council declined the offer, stating that Possum Brush Road is not a priority road within Council's road network. This response disregards the condition that the monthly contribution fee paid by PBM to Council be solely for the maintenance of Possum Brush Road (i.e. the local road used by Quarry operators).

Return of Bank Guarantee from Council

As outlined in Section 8 of this report, PBM finalised the Rehabilitation and Conservation Bond for the Quarry on 18 May 2019. PBM has since formally approached Council seeking Council's written acceptance that PBM's bank can cancel the Bank Guarantee in place under the former Council-controlled Development Consent (DA 431/1986) for the Quarry. PBM will continue to liaise with Council until this matter is resolved.