



Annual Review 2020-2021

for

Possum Brush Quarry



Prepared in conjunction with:



R.W. CORKERY & CO. PTY. LIMITED

September 2021



ABN: 45 050 224 250

Annual Review 2020-2021

for

Possum Brush Quarry

Prepared by:

Pacific Blue Metal Pty Ltd
ABN: 45 050 224 250
Possum Brush Rd
POSSUM BRUSH NSW 2430

Telephone: (02) 6554 3206
Facsimile: (02) 6554 3250
Email: qse@pacificbluemetal.com.au

In conjunction with:

R.W. Corkery & Co. Pty. Limited
Geological & Environmental Consultants
ABN: 31 002 033 712

Brooklyn Office:

1st Floor, 12 Dangar Road
PO Box 239
BROOKLYN NSW 2083

Orange Office:

62 Hill Street
ORANGE NSW 2800

Brisbane Office:

Level 54, 111 Eagle Street
BRISBANE QLD 4000

Telephone: (02) 9985 8511
Email: brooklyn@rwcorkery.com

Telephone: (02) 6362 5411
Email: orange@rwcorkery.com

Telephone: (07) 3205 5400
Email: brisbane@rwcorkery.com

**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 2020
Annual Review end date	30 June 2021
<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 2020 to 30 June 2021 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:	XX 2021

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CONTENTS

	Page
LIST OF ACRONYMS.....	V
1. STATEMENT OF COMPLIANCE	1
2. INTRODUCTION.....	3
2.1 OVERVIEW OF OPERATIONS.....	3
2.2 KEY PERSONNEL CONTACT DETAILS.....	3
3. APPROVALS AND LICENCES.....	10
4. OPERATIONS SUMMARY	11
4.1 MINING OPERATIONS	11
4.2 OTHER OPERATIONS.....	12
5. ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW	14
6. ENVIRONMENTAL PERFORMANCE.....	15
6.1 INTRODUCTION	15
6.2 NOISE	15
6.3 BLASTING	15
6.4 AIR QUALITY.....	18
6.5 TRANSPORT.....	18
6.6 WASTE	19
7. WATER MANAGEMENT	21
8. REHABILITATION.....	22
8.1 REHABILITATION PERFORMANCE DURING THE REPORTING PERIOD	22
8.2 REHABILITATION ACTIONS FOR THE NEXT REPORTING PERIOD	23
9. COMMUNITY	23
9.1 COMMUNITY RELATIONS	23
10. INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD	24
10.1 INCIDENTS.....	24
10.2 COMPLIANCE	24
10.3 INDEPENDENT ENVIRONMENTAL AUDIT	24
11. ACTIVITIES TO BE UNDERTAKEN IN THE NEXT REPORTING PERIOD	25

APPENDICES

Appendix 1 Consent & Licence Compliance Tables

Appendix 2 Summary of Quarry Product Transportation Records

Appendix 3 Extractive Materials Return



CONTENTS

Page

FIGURES

Figure 1.1	Locality Plan.....	2
Figure 2.1	Activities Undertaken during 2020-2021 Outside Quarry Area.....	4
Figure 2.2	Activities Undertaken During 2020-2021 Within Quarry Area	5
Figure 6.1	Environmental Monitoring Locations.....	16
Figure 11.1	Activities Planned During 2020-2021 Outside Quarry Area	26
Figure 11.2	Activities Planned During 2020-2021 Within Quarry Area.....	27

TABLES

Table 1	Title Block.....	ii
Table 2	Statement of Compliance.....	1
Table 3	Production Summary: 2020 – 2021	11
Table 4	Actions from the Previous Annual Review.....	14
Table 5	Compilation of Noise Monitoring Data and PBM Contributions: 2014 – 2021	17
Table 6	Ground Vibration and Airblast Overpressure Recorded: 2014– 2021	18
Table 7	Summary of Waste and Recycled Materials Recorded for 2020-2021.....	20
Table 8	Water Quality Data (Dam 3) 2012 – 2021	21
Table 9	Summary of Areas Disturbed and Rehabilitation.....	22

PLATES

Plate 1	View to the east of the active extraction area	7
Plate 2	View to the west of the active extraction area	7
Plate 3	View to the north towards the farm and northwest of Extraction Area B	7
Plate 4	View to the southeast of the Area A sump and rehabilitated benches in the background	7
Plate 5	View to the northwest of the storage area for material for recycling.....	8
Plate 6	View to the southwest of processing plant and related buildings	8
Plate 7	View to the southwest of loadout and weighbridge.....	8
Plate 8	View of the meteorological station and some water tanks located to the east of the Quarry Administration Office.....	8
Plate 9	View to the north of the wildlife corridor from the asphalt plant.....	9
Plate 10	View to the southeast towards the Asphalt Plant.....	9



LIST OF ACRONYMS

AHD	Australian Height Datum
CCC	Community Consultative Committee
DA	Development Application
DPIE	Department of Planning, Industry 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.

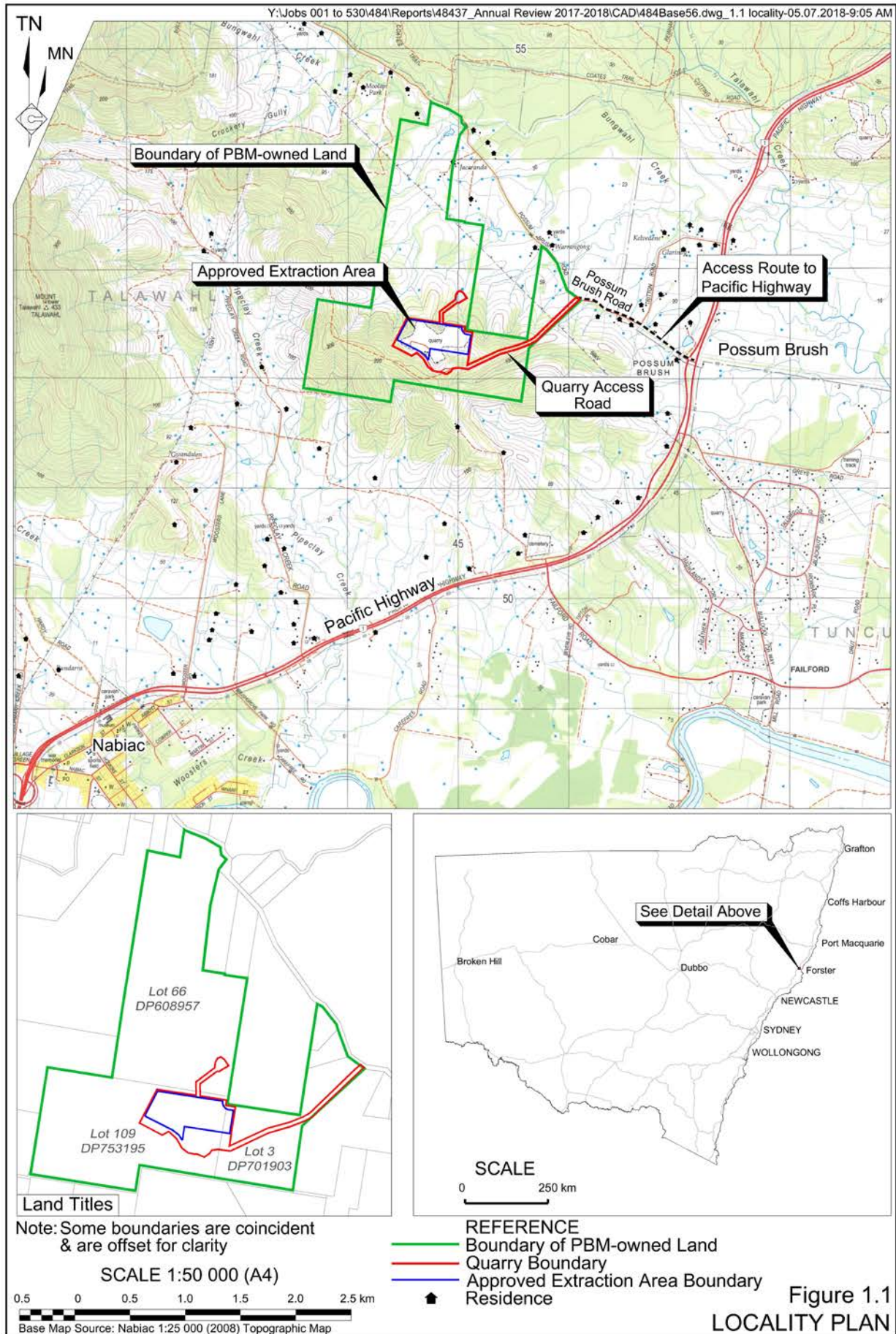
This Annual Review has been compiled by Pacific Blue Metal (PBM) in conjunction with R.W. Corkery & Co. Pty Limited to provide a compliance assessment for DA 283/07, DA 1127/2005 (Asphalt Plant), DA 769/2009 (Recycling Plant) and EPL 3393. The audit established compliance with all conditional requirements. **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)	Yes
Possum Brush Asphalt Plant (DA 1127/2005)	Yes
Possum Brush Recycling Plant (DA 769/2009)	Yes
EPL 3393	Yes

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



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 **11** show various operations and/or features of the Quarry recorded on 17 September 2021. The locations of each photograph are displayed on **Figures 2.1** and **2.2**.

Throughout the reporting period, PBM undertook the following activities:

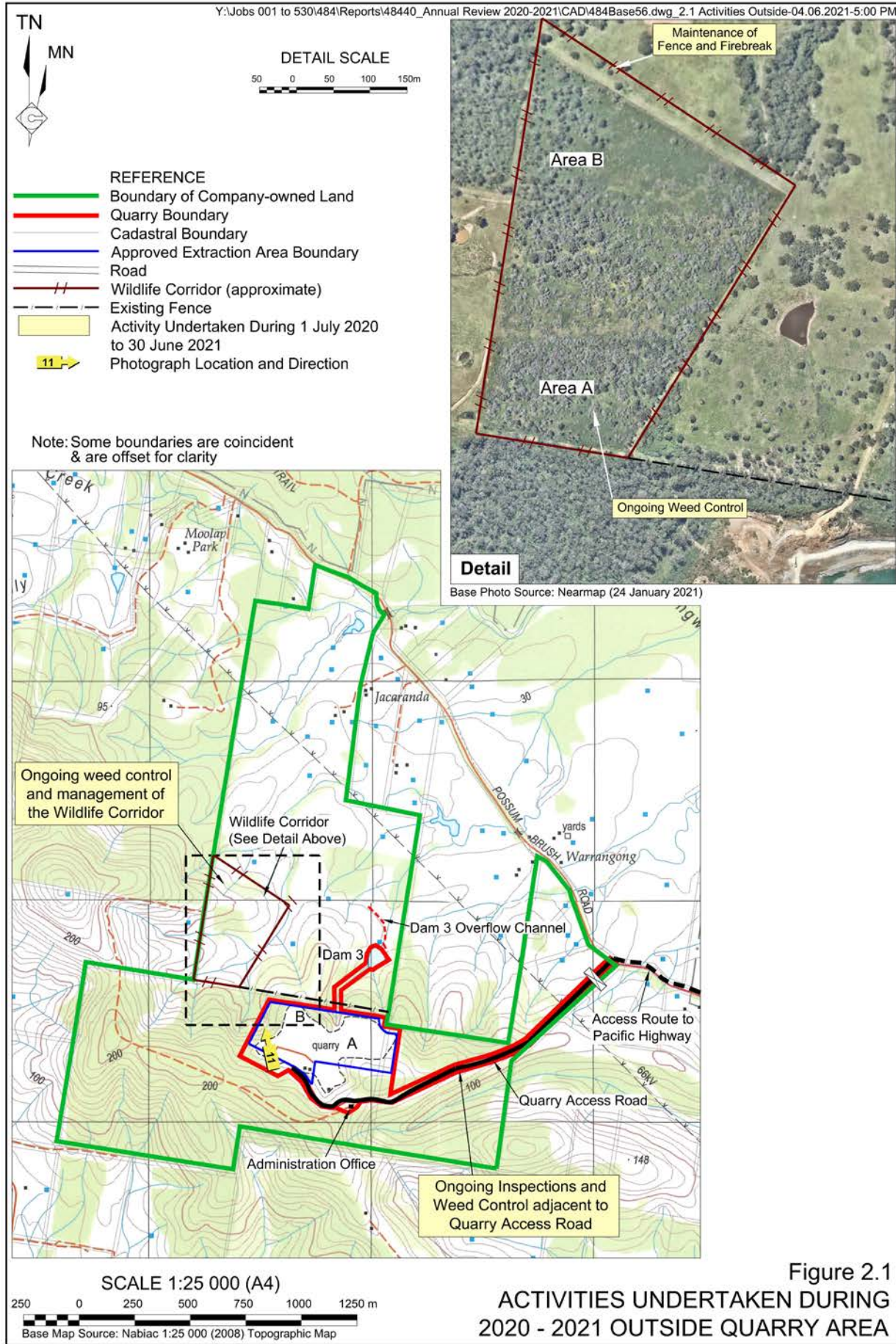
- Supply road base and subdivision construction materials
- Produce asphalt at the on-site asphalt plant.
- Accept materials imported for recycling/blending with quarry products.
- Refurbish and rationalise the existing processing plant to improve plant efficiencies and provide safer and more practical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

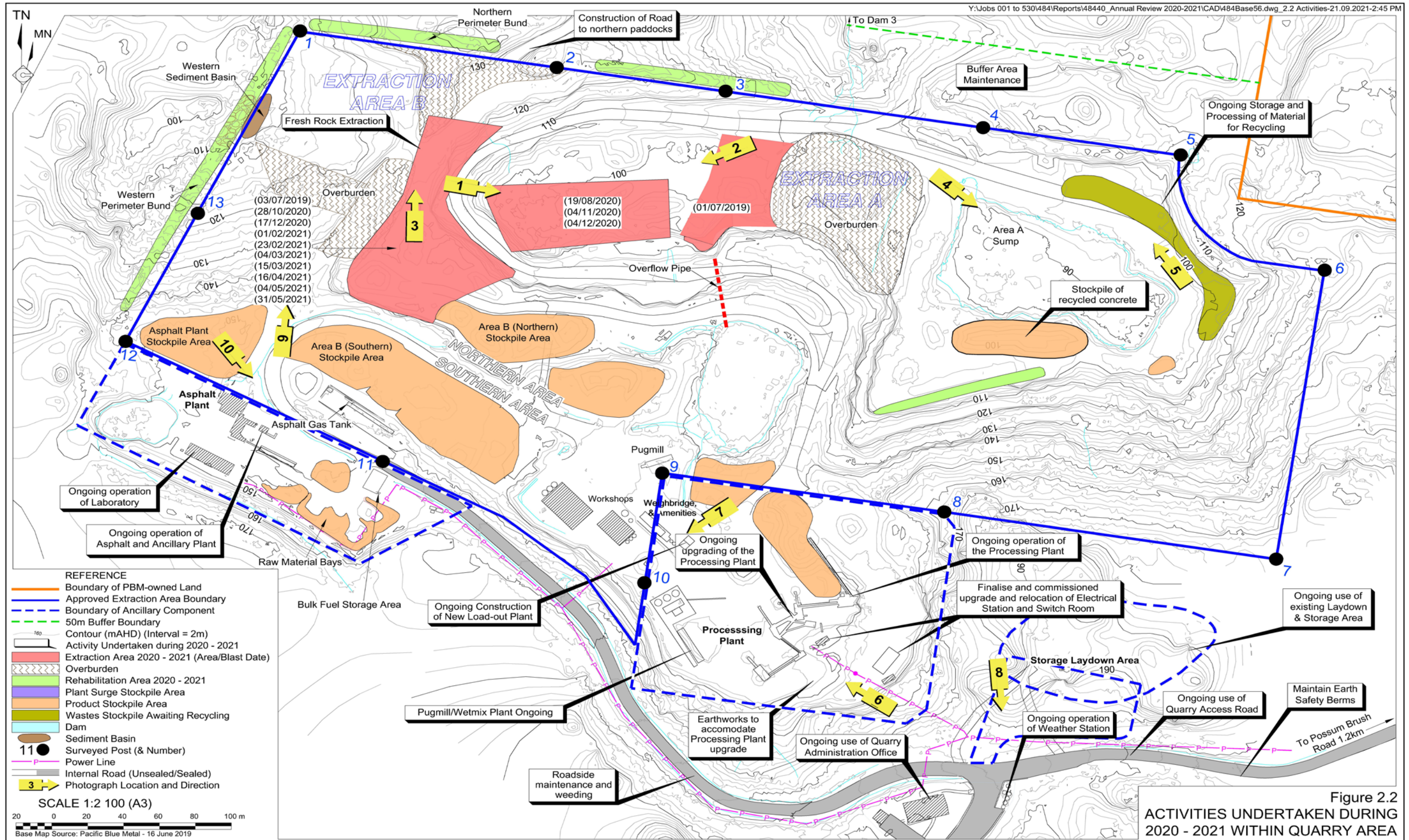
2.2 KEY PERSONNEL CONTACT DETAILS

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

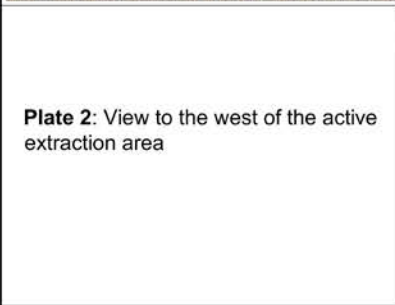


Plate 2: View to the west of the active extraction area



Plate 3: View to the north towards the farm and northwest of Extraction Area B.



Plate 4: View to the southeast of the Area A sump and rehabilitated benches in the background.





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Plate 5: View to the northwest of the storage area for material for recycling

Plate 6: View to the southwest of processing plant and related buildings

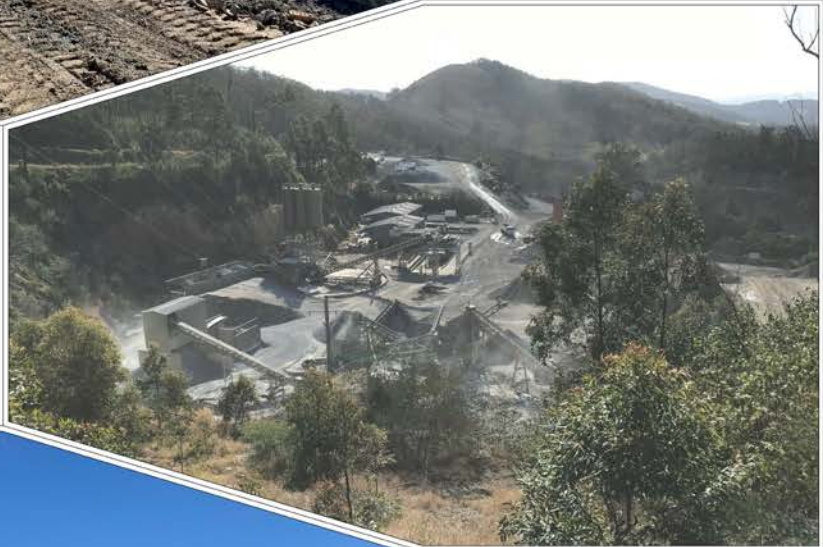


Plate 7: View to southwest of loadout and weighbridge

Plate 8: View of the meteorological station and some water tanks located to the east of the Quarry Administration Office





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Plate 9: View to the north of the wildlife corridor from the asphalt plant

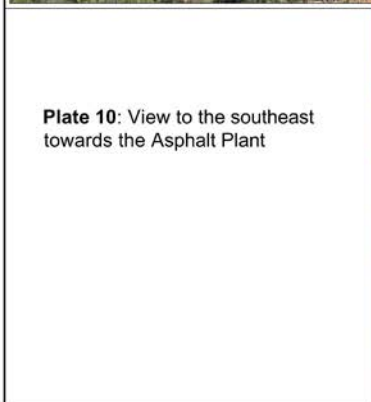


Plate 10: View to the southeast towards the Asphalt Plant



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: 2020 – 2021

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	219 219 tonnes	431 026	450 000

* 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 1 292 099 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.

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 6**) 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 10** presents a view of the asphalt plant towards the south east.

During the reporting period, the asphalt plant operated within the nominated hours including 36 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 5 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 6 175.43 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.

Four (4) loads of waste materials were rejected during the reporting period as follows:

- 04/03/21 suspected Asbestos Containing Material (ACM)

- 09/04/21 excess soil in load
- 12/05/21 suspected Asbestos Containing Material (ACM)
- 02/06/21 excess soil in load

As per Condition 2(h) 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 \$47 412.94 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 a 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 a 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. There were not any actions arising from the 2019-2020 Annual Review.

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
n/a	n/a	n/a	n/a

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 throughout 2020-2021. Noise monitoring covering the day, evening and night periods was undertaken on 08 July 2020 at the three locations (see **Figure 6.1**).

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

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. Night time monitoring also revealed that the measured noise, did not exceed the sleep disturbance criterion during the monitoring period.

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 2020-2021 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 13 (10) 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 108.1dB(L) with recorded ground vibration levels varying from Nil Trigger to 4.93mm/s. Both airblast and ground vibration levels recorded at Site R2 recorded Nil Trigger for all blasts. Blast monitoring results for the reporting period remained consistent with historic results.

No complaints were received regarding blasting throughout the reporting period.

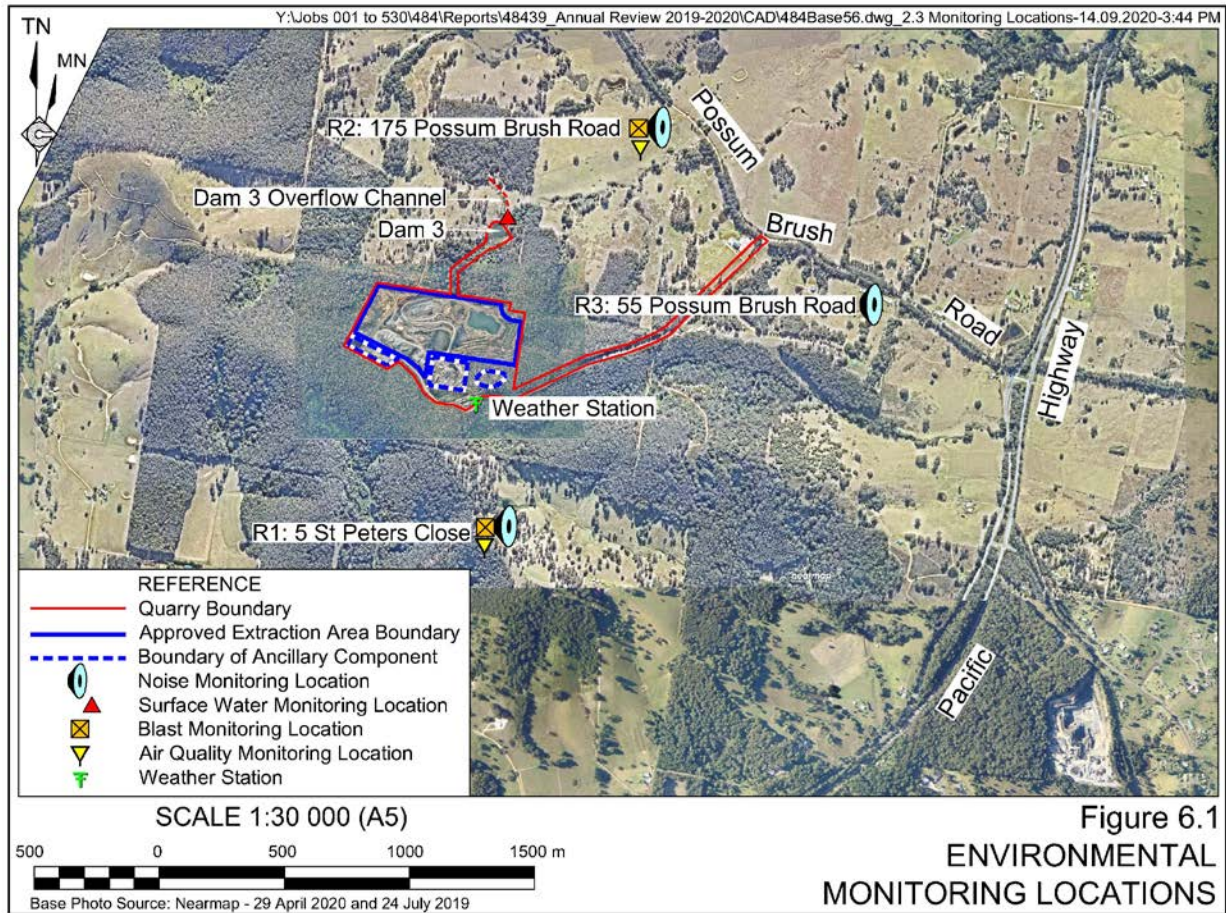


Table 5
Compilation of Noise Monitoring Data and PBM Contributions: 2014 – 2021

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
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
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

1 Criteria for PBM contribution per *Condition 3(1)* of DA 283/97 (Mod 4) and *Condition L4.1* of EPL 3393
2 Noise from quarry trucks on Quarry Access Road
3 Only noise from quarry trucks on public road was audible

Table 6
Ground Vibration and Airblast Overpressure Recorded: 2014– 2021

Measurement	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
03/07/20	0.76	Nil trigger	97.2	Nil trigger
19/08/20	4.93	Nil trigger	100.7	Nil trigger
28/10/20	Nil trigger	Nil trigger	Nil trigger	Nil trigger
04/11/20	Nil trigger	Nil trigger	Nil trigger	Nil trigger
04/12/20	Nil trigger	Nil trigger	Nil trigger	Nil trigger
17/12/20	1.80	Nil trigger	103.2	Nil trigger
01/02/21	2.27	Nil trigger	108.1	Nil trigger
23/02/21	1.86	Nil trigger	99.0	Nil trigger
04/03/21	3.24	Nil trigger	104.1	Nil trigger
15/03/21	Nil trigger	Nil trigger	Nil trigger	Nil trigger
16/04/21	1.72	Nil trigger	106.0	Nil trigger
04/05/21	3.42	Nil trigger	103.8	Nil trigger
31/05/21	1.73	Nil trigger	105.4	Nil trigger

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

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 2019-2020 year, 431 026 tonnes of quarry products (including asphalt and recycled product road bases) were transported from the Quarry. The additives to asphalt and road base products (lime, bitumen, sand, flyash, etc.) amounted to 5032.36 tonnes of the total 431 026 tonnes of material 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 328, recorded on 03 March 2021. There were 87 occurrences throughout the reporting period when the maximum 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 2020-2021

Waste Stream	Average Quantity	Frequency	Total Quantity 2020-2021	Comments
Tyres	80 tyres	1 – 2 times per year	8056kg (227 tyres)	All tyres are recycled through Tyrecycle.
Motor Oils	3 000 litres	1 – 2 times per year	8 300 litres	All waste oils are recycled through Southern Oil.
Batteries	500 kilograms	1 – 2 times per year	1360 kilograms	This figure includes batteries that were stored during the -2020 period and batteries from the 2020-2021 period. All batteries are recycled through River City Recycling Taree.
Scrap Metal	5 tonnes	3-6 times per year	55.32 tonnes	This amount includes approximately 35 tonne of heavy plant and equipment recycled 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 07 January 2021. During this rain event, PBM received a total of 551.6ml of rain the four (4) weeks preceding the overflow event. This was the first overflow event since March 2020

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

Table 8
Water Quality Data (Dam 3) 2012 – 2021

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
07 January 2021	7.0	9.0	<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*.

8. REHABILITATION

8.1 REHABILITATION PERFORMANCE DURING THE REPORTING PERIOD

Rehabilitation activities currently 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). It is proposed that the quantum of the Bond is reviewed following the next Independent Environmental Audit due to be submitted within 6 weeks after 30 September 2022.

Rehabilitation Areas

Shortly after the release of the 2018-2019 Vegetation Report, the bushfires of November 2019 burnt all vegetated areas of the quarry and surrounding land including:

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

Irreplaceable Bush Regeneration Indigenous Services (IBIS) undertook post bushfire monitoring and assessment of the Wildlife Corridor and other vegetated areas in January 2020. IBIS found that all vegetation within the Wildlife Corridor and other vegetated areas, including the planted Rudder Box trees were severely burnt. Stemming from January 2020 assessment, IBIS recommended that PBM wait for substantial rainfall to undertake further monitoring and assessment of survival, growth and loss of native vegetation and, if necessary, develop a weed control program. Whilst substantial rainfall events did occur in February and March 2020, COVID-19 restrictions placed on both IBIS and PBM restricted site visits. IBIS attended the Site in August 2020 and September 2020 to undertake the second post bushfire assessment and prepare a management plan for recovery. IBIS determined the best course of action to leave the rehabilitation areas over the summer months, to allow time for recovery and new growth, which

would then be assessed again in Autumn 2021. Subsequently, the rehabilitation areas were re-assessed in May 2021. IBIS found that the natural recovery of native flora species was evident and flourishing, including Giant Stinging Tree seedlings. A stand of the *eucalyptus rudderi* was also still present.

8.2 REHABILITATION ACTIONS FOR THE NEXT REPORTING PERIOD

IBIS recommended the rehabilitation areas will need continual weed control to ensure the existing and new pioneer native vegetation is not suppressed by non-native vegetation. The initial works, which began in June 2021, are expected to last some months until the sites are reasonably re-established. Ongoing weed management will then be undertaken on a 3-6 month 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 2020-2021 reporting period for Quarry-related incidents. Complaint numbers regarding quarry-related incidents for previous years are as follows.

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

The Department appointed Kath Elliott as the Chair of the CCC in July 2020. Kath proceeded to seek nominations for a new CCC, placing advertisements in the Manning River Times as well as Over the Fence, a local free Nabiac community newspaper, which is well read and distributed in the immediate vicinity of the quarry. Neither advertisement generated any nominations for the CCC. Kath wrote to the Secretary seeking advice on whether the Department could potentially dissolve the requirement for the CCC. This request was based on the lack of interest and response from the community as well as the previous establishment and effective management of the CCC between 1998 and 2017 potentially satisfying the consent condition for a CCC. The Department agreed, stating that given a CCC was operating from 1998 until 2017, Pacific Blue Metal has been satisfactorily addressing 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”.

10. INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD

10.1 INCIDENTS

No incidents reportable to the Department or EPA occurred within the Quarry throughout the 2020-2021 reporting period.

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 compliance with all conditional requirements.

10.3 INDEPENDENT ENVIRONMENTAL AUDIT

The next Independent Environmental Audit will be undertaken by October 2022.

11. ACTIVITIES TO BE UNDERTAKEN IN THE NEXT REPORTING PERIOD

The principal activities planned during 2021-2022 are listed below. The locations of these activities are shown on **Figures 11.1** and **11.2**.

Extraction Activities

PBM expects the demand for road pavement and subdivision products will continue during 2021-2022, 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 2021-2022 reporting period. To allow for the delivery, storage and construction of the new components, the informal laydown area will be extended and formally established. A Development Application will be submitted to Council for this purpose. Asphalt Production

PBM intends to continue to operate the asphalt plant, at a similar output level to that produced during 2020-2021 reporting period, to supply asphalt products to a range of projects throughout the region.

Product Despatch and Road Maintenance

No substantial changes are planned to occur in the transportation of products from the Quarry during 2021-2022.

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

Rehabilitation

In the 2020-2021 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. IBIS will be engaged to start the recovery program in Winter and Autumn 2021 with follow up sessions on a 3-6 monthly basis dependent on progress and advice from IBIS.

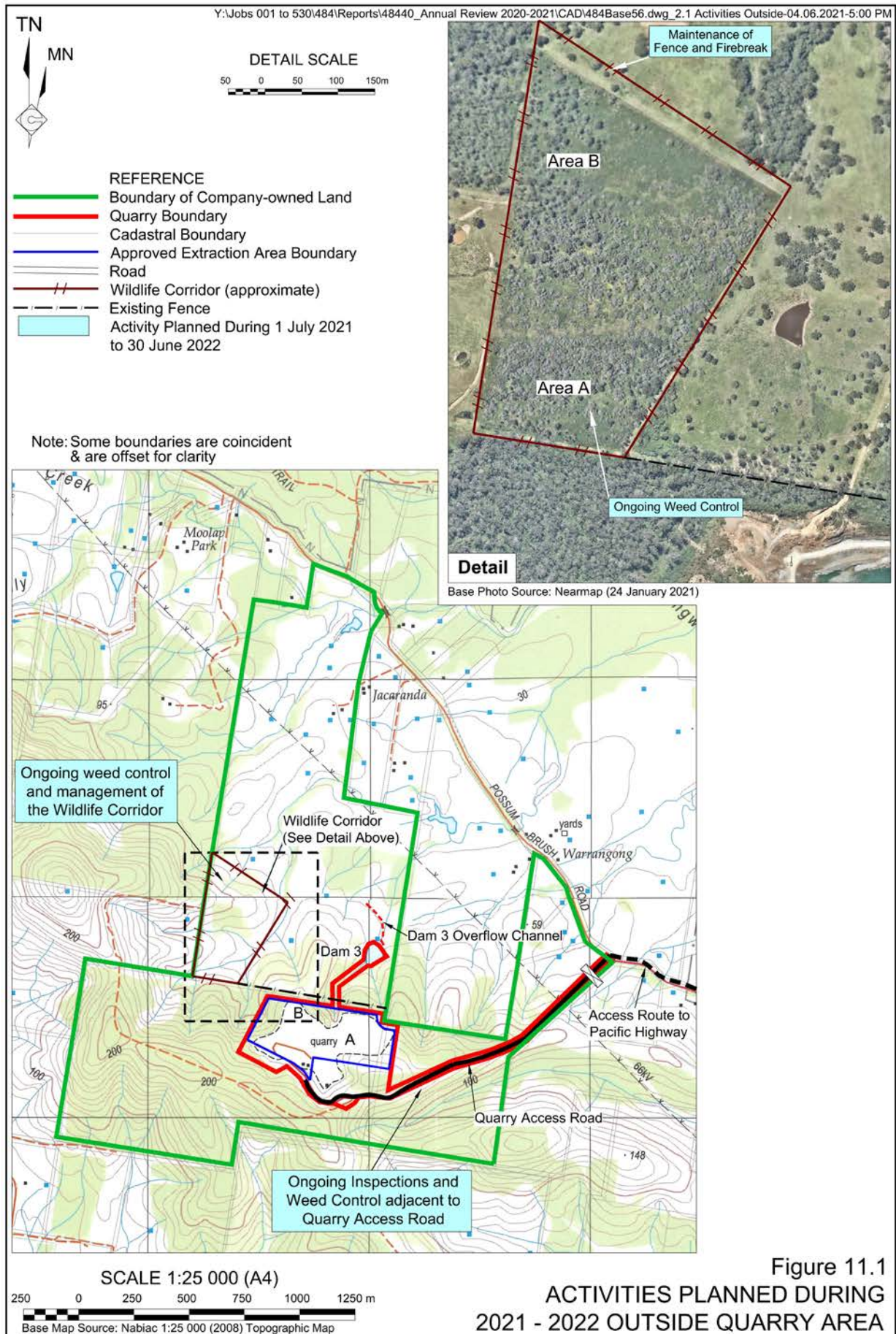


Figure 11.1
ACTIVITIES PLANNED DURING
2021 - 2022 OUTSIDE QUARRY AREA

Figure 11.2 Activities Planned During 2020-2021 Within Quarry Area

A3 / Colour

Environmental Monitoring

The monitoring activities currently undertaken within and surrounding the Quarry will remain in place throughout 2021-2022. The monitoring proposed during 2021-2022 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 2021-2022 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 \$336 989.40 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 12 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 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.

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