



Year Ending
30th June
2024

Annual Review for Bringelly Clay / Shale Mine and Brickworks ML 1731 & SSD5684



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Bringelly Clay Mine Annual Report	
Name of Mine	Bringelly Clay / Shale Mine
DA Number	SSD5684
Mining Authorisations	ML1731
Mine Lease Grant Date	9 th March 2016
Name of Authorisation Holder	PGH Bricks & Pavers Pty Ltd
Name of Mine Operator (s)	PGH Bricks & Pavers Pty Ltd
Name and Contact Details of the Mine Manager	Joe Gauci, (02) 9826 3964 jgauci@pghbricks.com.au
Name and Contact Details of the Environmental Representative	Mykel King, 0477 983 024 myking@csr.com.au
Name of the Representative of the Authorisation Holder	Joe Gauci, (02) 9826 3964 jgauci@pghbricks.com.au

Revision Table

Date	Version	Author	Reviewed	Approved
5/9/2024	D0 for client review	LT	TW	
23/09/2024	F0	LT	TW Astrid Christensen	TW
30/10/2024	F1 inc DPHI changes	LT	TW	

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1 Executive Summary

This Annual Review (AR) has been prepared by VGT Environmental Compliance Solutions Pty Ltd (VGT) on behalf of PGH Bricks & Pavers Pty Ltd for the Bringelly Clay / Shale Mine, SSD 5684 and ML1731. This report describes the mining and rehabilitation activities as well as the environmental monitoring results for the reporting period from 1st July 2023 to 30 June 2024. Compliance with the conditions of consent SSD 5684 Mod 1, are considered for the same period.

Extraction occurred in the report period on the same benches mined in previous years. Brickmaking has continued at a similar rate to previous years. Environmental monitoring has continued in accordance with approved management plans.

The noise bund north of the pit extraction has been built and mulched, and will be vegetated next report period.

There are 10 non-compliances in the period 1st July 2023 to 30th June 2024 with the conditions in the SSD 5684 Mod 1 consent, and no non-compliances against the Mining Lease 1731, Environment Protection Licence 1808, or the water licences (numbers given in [Table 6](#)).

2 Introduction

2.1 PROJECT SITE

PGH Bricks & Pavers Pty Ltd Bringelly Clay / Shale Mine located off Greendale Road, in the Camden Council Government Area, Bringelly NSW. The site is approximately 18km west of Liverpool, as presented in [Figure One](#). The site is constituted of the active mine and brickworks, situated on Lot 100, DP 1203966. The mine and associated brickworks are freehold owned and operated by PGH Bricks & Pavers Pty Ltd.

2.2 BACKGROUND

The report serves to ascertain compliance over the reporting period with the SSD_5684 Mod 1 conditions of consent for the Annual Review (AR) (Schedule 5, Condition 4) reporting requirements to NSW Department of Planning, Housing and Infrastructure (DPHI). Mining Lease conditions now require reporting on the dedicated portal; a copy of this report is available on request.

This report covers the financial year from 1st July 2023 to 30th June 2024.

2.3 QUARRY CONTACTS

Table 1. Contact Details

Aspect	Brickworks Manager	Mine Manager
Name	Tony West	Joe Gauci
Company	PGH Bricks & Pavers Pty Ltd	PGH Bricks & Pavers Pty Ltd
Address	Greendale Road	59-67 Cecil Road
	Bringelly	Cecil Park
Mobile	0419 474 953	0417 683 526
Phone	02 9684 8778	02 9826 3964
Email	twest@pghbricks.com.au	jgauci@pghbricks.com.au

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Statement of Compliance

Table 2. Statement of Compliance

Relevant Approval	All Conditions Compliant?	Actions Taken
SSD_5684 Mod 1	No Schedule 2 Condition 2 "The Applicant must: (a) carry out the development generally in accordance with the EIS and SEE (Mod 1); and (b) the conditions of this consent."	Not all conditions compliant
	Schedule 3 Condition 7 "The Applicant must implement all reasonable and feasible avoidance and mitigation measures so that particulate matter emissions generated by the development do not exceed the criteria in Tables 3 to 6 at any residence on privately-owned land." [Particulate Matter less than 10 micron exceeded 24 hour limits on 3 occasions].	High Volume Air Sampler moved to a more appropriate location. See section 7.2
	Schedule 3 Condition 28 "Within 6 months of the approval of the Biodiversity Management Plan, the Applicant must lodge a conservation bond with the Department"	Conservation Bond not lodged.
	Schedule 5 Condition 4: "By the end of September each year, the Applicant must submit a report to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary."	Annual Review 2023 prepared but not submitted.
	Schedule Condition 5: Within 3 months of the submission the Applicant must review the strategies, plans and programs required under this consent..."	Plans and strategies not reviewed.
	Schedule 2 Condition 7 - The Applicant must not: (c) dispatch more than 90 trucks from the site per day or more than 18 trucks per hour.	The IEA reported that Schedule 2 Condition 7 was non-compliant on 2 occasion due to receiving more than 90 trucks a day Details in section 6.6
	Schedule 3 Condition 4A – The Applicant must ensure that the noise bund adjacent to Greendale Road is constructed prior to the commencement of brick making operations.	The bund adjacent to Greendale Road has not been constructed. This matter is being addressed with Mod-2.
	Schedule 3 Condition 14 – Within 12 months of commencing development under this consent, unless otherwise agreed with the Secretary, the Applicant must design and construct the new site access road intersection with Greendale Road in accordance with applicable AUSTROADS standards, to the satisfaction of Camden Council.	The new site access road has not been built. This matter is being addressed with Mod-2.

Relevant Approval	All Conditions Compliant?	Actions Taken
	Schedule 3 Condition 19 – The Applicant must implement the Biodiversity Offset Strategy described in the EIS, as summarised in Table 7 and shown conceptually in Appendix 4, to the satisfaction of the Secretary.	Biodiversity offset strategy not implemented. This matter is being addressed with Mod-2.
	Schedule 3 Condition 20 - Within 2 years of notifying the Department of commencement of development (see condition 8 of Schedule 2), unless otherwise agreed with the Secretary, the Applicant must make suitable arrangements to provide appropriate long-term security for the offset area, to the satisfaction of the Secretary.	This matter is being addressed with Mod-2.
EPL1808	Yes	Details in section 7.3
ML1771	Yes	
Water Licences (Table 6)	Yes	

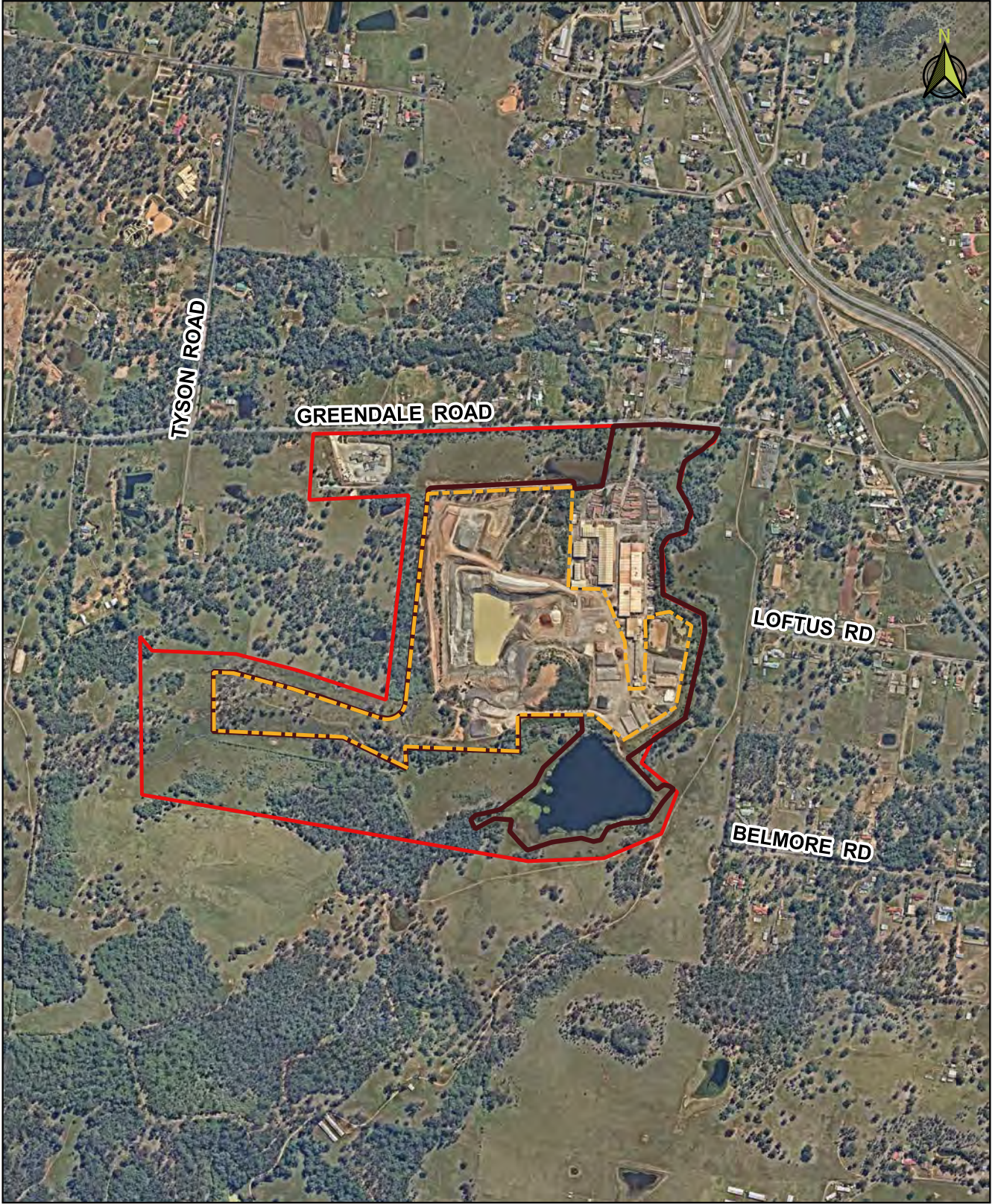
A full list of conditions and compliance status is included in [Appendix F](#).

Figure One. Location

Plan of:	Annual Review for Bringelly Clay/Shale Mine Year Ending 30/06/2024 - Site Location	Location:	Bringelly Clay Mine, Off Greendale Road, Bringelly, NSW	Source:	Google Maps & nearmap - Image Date 30/03/2024 Zone MGA 56	Plan By:	SK/JD
Figure:	ONE	Council:	Camden Council	Survey:	Not Applicable	Project Manager:	LT
Version/Date:	V0 02/07/2024	Tenure:	ML 1731	Projection:	GDA2020/MGA Zone 56 EPSG:7856	Office:	Thornton
Our Ref:	12640_BR_AR2024_Q001_V0_F1	Client:	PGH Bricks & Pavers Pty Ltd	Contour Interval:	Not Applicable		



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- Legend
- Cadastral Boundary

Authority Boundary (ML 1731)

Project Approval Boundary

Figure Two. Site Layout

4 Actions Required from Past Reports

4.1 ANNUAL REVIEW 2023

There were no actions required from the previous Annual Review. The report was not submitted before the required date through the Major Projects Portal.

4.2 INDEPENDENT ENVIRONMENTAL AUDIT

An Independent Environmental Audit was undertaken by Element commencing 24th February 2024 and the report completed 4th July 2024 – after the period covered by this report. 23 non-compliances were found, and an action plan has not yet been developed. The DPHI has received a copy of the audit through the Major Projects portal. Actions towards compliance will be described next Annual Report, as the completion of the audit is after the end of the current report period.

4.3 CHANGES FROM PREVIOUS VERSION

The following message was received by the client following submission of the previous version of this report (F0):

Message

I refer to the Annual Review for the period 1st July 2023 to 30th June 2024 (SSD-5684-PA-51) and the Independent Environmental Audit (IEA) for the period 29 January 2021 to 29 February 2024 (SSD-5684-48).

The Annual Review reported 5 non-compliances to Schedule 2 Condition 2; Schedule 3, Condition 7, & Condition 28; and Schedule 5 Condition 4 & and Condition 5.

The IEA reported 23 non-compliances covering some of the same time-period as the Annual Review.

Please update the Annual Review to accurately reflect the compliance status of the following conditions:

- *Schedule 2 Condition 7 - The IEA reported that Schedule 2 Condition 7 was non-compliant on 3 occasion due to receiving more than 90 trucks a day on: 6 September 2023 (91 entries), 30 October 2023 (91 entries).*
- *Schedule 3 Condition 4A – The bund adjacent to Greendale Road has not been constructed. This mater is being addressed with Mod-2.*
- *Schedule 3 Condition 14 – The new site access road has still not been built.*
- *Schedule 3 Condition 17 – EPL discharge limits exceeded a number of occasions due to high rainfall events.*
- *Schedule 3 Condition 19 – Biodiversity offset strategy still not implemented.*
- *Schedule 3 Condition 20 – as above.*

Please provide an amended Annual Review including the above non-compliances by 1 November 2024.

This version of the report (F1) incorporates those changes and further data supplied by the client.

Please note that the client has advised that there were no exceedances of the EPL surface water discharge limit in this report period.

5 Approvals

5.1 LOCAL COUNCIL

Development approval for the site authorised by Camden Council in 1979 and modified in 1991 was surrendered on 24th February 2020. Camden Council continues to be consulted regarding road maintenance contributions, traffic and transport management, biodiversity, rehabilitation and final landform, waste and sewerage management, and is represented on the Community Consultation Committee. Liverpool Council is also consulted regarding traffic and transport management.

5.2 DEPARTMENT OF PLANNING, HOUSING AND INFRASTRUCTURE (DPHI)

5.2.1 Development Approvals

The consolidated State Significant approval conditions are included in [Appendix A](#). Development approvals modifications are summarised below.

Table 3. Development Approvals

No.	Date Approved	Expires	Notes
SSD_5684	3/03/2015	01/03/2045	Extraction limit: 200,000 Tpa clay/shale Production limit: 263,500 Tonnes bricks pa Receival limit: 96,000 Tonnes raw materials for brickmaking per annum Depth restriction: RL46 m AHD
SSD_5684 Mod 1	Submitted 05/08/2016	01/03/2045	Receival Limit increased to 321,000 tonnes raw materials for brickmaking per annum Inclusion of noise bund construction
SSD_5684 Mod 2	Not yet approved	Submitted to DPHI	Extraction increased to 350,000 Tpa clay/shale Production limit increased to 330,000 Tpa Receival limit increased to 350,000 Tpa Laden trucks leaving site increased to 200 per day Relocation of biodiversity offset area

This report is to comply with Schedule 5, Condition 4 of the SSD_5684 Mod 1 Approval as reproduced in the table below.

Table 4. Annual Review Reporting Conditions

Element of Condition	Where Addressed in this Report
Annual Review By the end of September each year, the Applicant must submit a report to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary. This review must: (a) describe the development (including rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year;	Section 6, Section 8
(b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, which includes a comparison of these results against: - the relevant statutory requirements, limits or performance measures/criteria; - the monitoring results of previous years; and - the relevant predictions in the documents in condition 2(a) of Schedule 2;	Section 7
(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;	Section 3 and Section 7
(d) identify any trends in the monitoring data over the life of the development;	Section 7
(e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and	Section 7
(f) describe what measures will be implemented over the current financial year to improve the environmental performance of the development.	Section 14

5.3 RESOURCES REGULATOR

The details for Mining Lease 1731 (Act 1992), held in the name PGH Bricks & Pavers Pty Ltd are shown in [Table 5](#). The conditions are included in [Appendix B](#). The Mining Lease area does not cover the entire site, and boundaries are shown on [Figure Two](#). The Regulator holds a rehabilitation security for the current footprint of the site which is reviewed and updated as required.

There have been no incidents or non-compliances recorded against the mine lease conditions during the reporting period, and all reporting requirements against the ML have been undertaken via the Regulator Portal.

Table 5. Mining Authorisations

No.	Act	Company	Granted	Expires	Area (Ha)	Minerals
1731	1992	PGH Bricks & Pavers Pty Ltd	9 March 2016	9 March 2037	37.25	Clay/Shale

5.4 ENVIRONMENT PROTECTION AUTHORITY

Environmental Protection Licence Number 1808 has been issued under the Protection of the Environment Operations Act (PoEOA) (included in [Appendix C](#)) and covers works both within the ML boundary and at the Bringelly Brickworks.

The licence requires the monitoring of the discharges to air through kiln stacks and discharges to water. Stack emissions are to be monitored at the kiln for hydrogen fluoride, nitrogen oxide and total solid particles. Water is monitored at Points 1 and Point 5 for oil and grease, pH and turbidity. Point 5 additionally requires conductivity to be monitored. These points are shown on [Figure Two](#).

The Pollution Incident Response Management Plan (PIRMP) was not activated during the reporting period. Any relevant monitoring results are made available on the PGH website (<https://www.pghbricks.com.au/-nsw-environmental-reporting>). There were no non-compliant monitoring points during the EPL Annual Return reporting period (year ending May 2024) for the Bringelly Clay Mine, as submitted to the EPA in the Annual Return.

5.5 WATER NSW

Water NSW issued Bore Licence 10BL605770 for four monitoring bores located on the site (see [Appendix D](#)). Results of the groundwater monitoring are discussed in [Section 7.4](#).

There are two unregulated Water Access Licences and one domestic & stock Water Access Licence (see [Appendix E](#)). The use of the water is specific to the work approvals attached to the WALs and benefits Lot 100, DP 1203966. No water has been drawn from the WAL's over the reporting period.

Table 6. Water Approvals and Licences

Approval No	Issue Date	Expiry Date	Work Type	Reference No	WAL No	Units
10BL605770	28/01/2016	Perpetuity	Monitoring Bore	N/A	N/A	N/A
10CA104657	1/7/2011	20/4/2026	Pump	10AL104656	26259	150
10CA104630	1/7/2011	18/6/2025	Pump	10AL104628	26257	6.50
			Dam	10AL104629	25987	152.50

6 Operations During Report Period

6.1 EXPLORATION

No exploration activities were undertaken during the reporting period.

6.2 CONSTRUCTION

No construction was undertaken during the reporting period.

6.3 HOURS OF OPERATION

The site operates under the consented hours as detailed in Schedule 3 condition 1 are shown below. Any movements recorded outside the operating hours listed below were not associated with quarrying operations, deliveries or dispatch of finished bricks or construction activities.

Table 7. Hours of Operation

Activity	Operating Hours	Compliance
Quarrying Operations	6am to 6pm Monday to Friday 6am to 1pm Saturday No activities Sundays or Public Holidays	Compliant
Deliveries Dispatch of finished bricks	6am to 6pm Monday to Friday 6am to 1pm Saturday No activities Sundays or Public Holidays	Compliant
Brick making operations	24 hours, 7 days	Compliant
Construction Activities	7am to 6pm Monday to Friday 8am to 1pm Saturday No activities Sundays or Public Holidays	Compliant

6.4 MINING OPERATIONS

100,483 tonnes of raw material was mined during the report period from the north and west of the existing extraction area (see [Figure Three](#)). Extraction will continue within the existing footprint and expand into the south east faces. Previously imported clay and shale was stockpiled onto the mining bench in the west. 89,352 tonnes of raw material for brickmaking has been imported to the site during the reporting period.

The Mining Lease (ML) boundary has been surveyed and permanent pegs installed. The DA11/1194 limits of extraction have been pegged and each future approved cell is permanently marked prior to extraction moving into that area.

Stockpile material from previous campaigns and imported material are stored in the stockpile area or pit floor or within the raw material stockpile area within the brick plant portion of the site (off the ML). The stockpiles, limited to 5m in height, and hardstand area are dampened via a water cart as required.

Production data has been reported to the Resources Regulator in an online form in accordance with Schedule 2, condition 18 and proof of submission is available on request.

6.5 MINERAL PROCESSING

Processing of clay occurs outside of the ML boundary within the brickworks. All raw materials won from mining on the site or imported into the Bringelly brickworks are placed in stockpiles located as shown on [Figure Two](#).

Table 8. Production During the Report Period

Item	Actual	Production Limits	Compliance
Extract clay/shale	100,483 T	200,000 T	Compliant
Produce Bricks	156,675 T	263,500 T	Compliant
Receive raw brick making materials	89,352 T	321,000 T	Compliant
Carry out quarrying operations below 46m AHD	67 m AHD	46 m AHD	Compliant

6.6 TRANSPORTATION AND TRAFFIC MANAGEMENT

The Traffic Management Plan was approved on 11/5/2022.

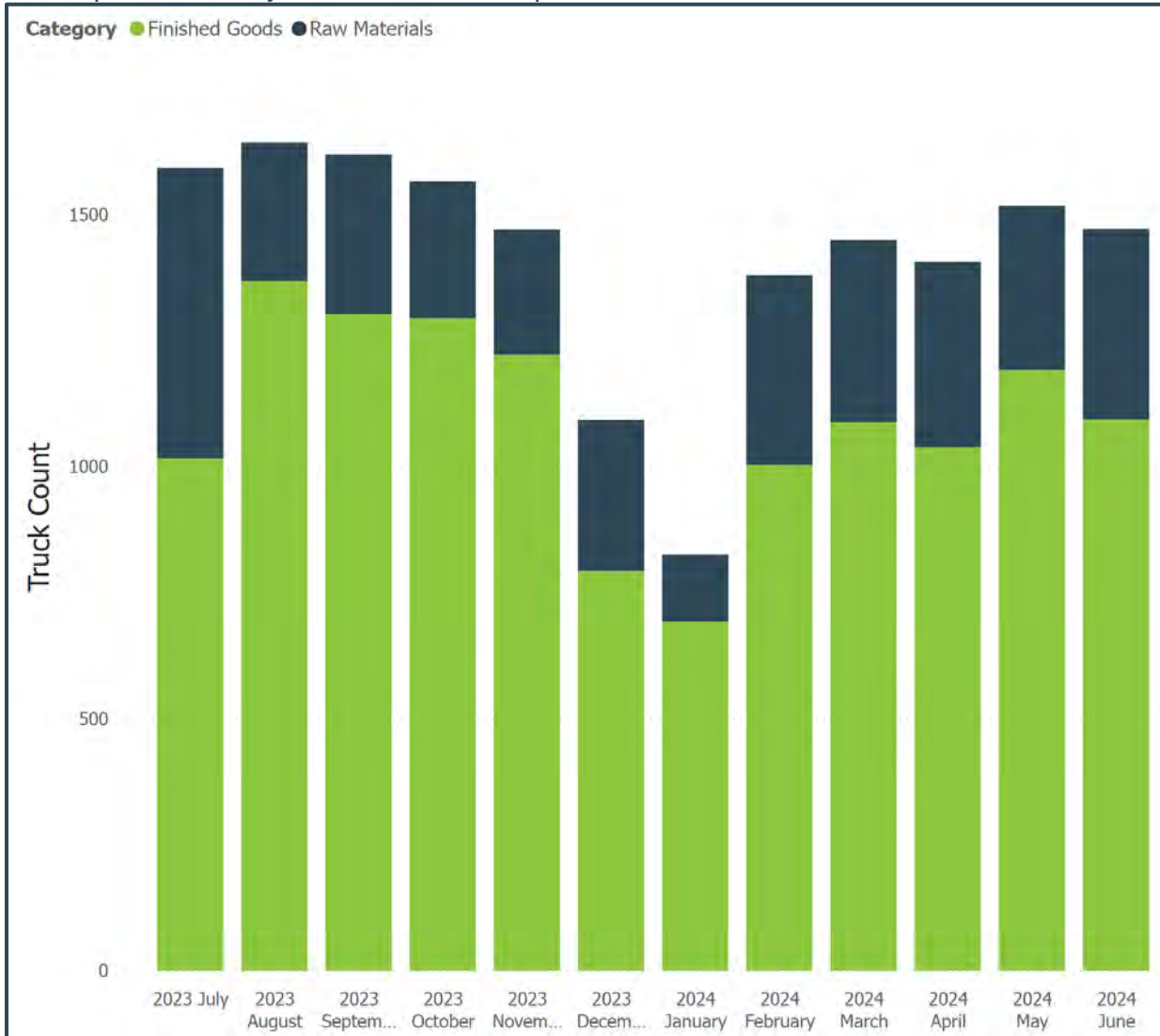
Table 9. Transportation During the Report Period

Item	Period	Actual	Transportation Limits	Compliance
Transport Bricks	1/7/23 to 30/6/2024	195,409 T	263,500 T	Compliant
Receive or dispatch Trucks	Max per day during year	6/09/23 – 91 30/10/23 – 91	90 trucks per day	Non Compliant
Receive or dispatch Trucks	Max per hour during year	Manual counts ensure compliance	18 trucks per hour	Compliant

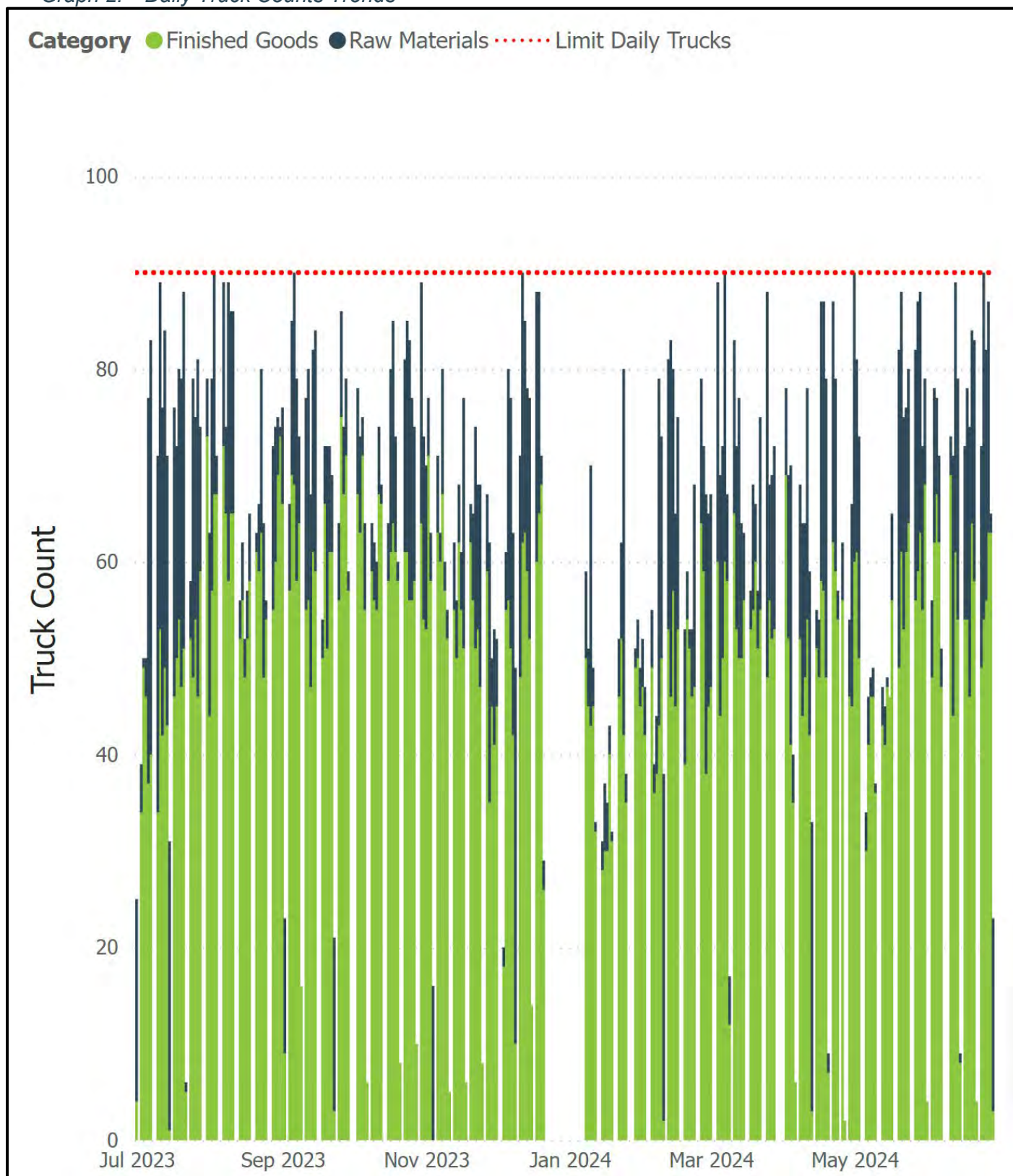
Table 10. Max Truck Count per Day

Date	Truck Number per Day	Action
6th September 2023	91	When count reached 90 the gate automatically closed and the 91st truck was not loaded – directed to exit gate
30th October 2023	91	When count reached 90 the gate automatically closed and the 91st truck was not loaded – directed to exit gate

Graph 1. Monthly Truck Counts for Report Period



Graph 2. Daily Truck Counts Trends



* Truck counts do not include “drive throughs” on 6/9/23 and 30/10/23.

Trucks per hour are monitored manually, as the automatic counter frequently produced errors.

Figure Three. Site Operations this Report Period

Figure Four. Operations Planned for Next Reporting Period

Plan of:	Annual Review for Bringelly Clay/Shale Mine Year Ending 30/06/2024 - Operations Planned for Next Report Period	Location:	Bringelly Clay Mine, off Greendale Road, Bringelly, NSW	Source:	nearmap imagery dated 30/03/2024 GDA2020 MGA Zone 56, NSW Government Spatial Services, July 2019 Survey, Accessed Through ELVIS & Property boundary from NSW Clip & Ship	Plan By:	SK/JD
Figure:	FOUR	Council:	Camden Council	Survey:	GDA2020 MGA Zone 56, NSW Government Spatial Services, July 2019 Survey, Accessed Through ELVIS & Property boundary from NSW Clip & Ship	Project Manager:	LT
Version/Date:	V0 02/07/2024	Tenure:	ML 1731	Projection:	GDA2020 Geoscience Australia Lambert EPSG:7856		
Our Ref:	12640_BR_AR2024_Q004_V0_F4	Client:	PGH Bricks & Pavers Pty Ltd	Contour Interval:	1m		

N

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100

200 m

vgt

environmental compliance solutions and laboratories

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Legend

Feature/Domain

Cadastral Boundary

Authority Boundary (ML 1731)

Project Approval Boundary

Electricity Transmissio Line

Forecast Disturbance Year 2

VGT Environmental Compliance Solutions Pty Ltd

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ABN: 26 621 943 888

6.7 CONSTRUCTION WASTE

No construction was undertaken during the AR reporting period.

No changes to the waste management system have occurred during the reporting period.

6.8 OPERATIONAL WASTE

Operational wastes that may be produced on site include cardboard, timber, recycling of metals and oil, brickmaking by-products such as waste bricks. Metal is taken by contractor for recycling; cardboard is stored in two bins and taken from site once week; general waste is stored in six skip bins and taken off-site once a week. In addition, once every 3 months an extra bin is ordered to take extraordinary waste (for example pallets). Oil waste is taken by a contractor and septic waste is taken twice a week by a separate contractor.

Full and broken waste fired bricks are reused for road repairs on site, or removed by licensed contractors for recycling. Green waste bricks are recycled through the factory.

6.9 DECOMMISSIONING AND DEMOLITION ACTIVITIES

No decommissioning or demolition activities were undertaken during the reporting period.

6.10 TEMPORARY STABILISATION

Areas in the west of the pit where water was flowing in from the next property and causing erosion have been repaired and remain stabilised, with vegetation naturally regrowing.

To assist in stability and safety, layered stockpiles are kept to a height limit of 4.5 metres.

6.11 WEED MANAGEMENT

No weed management activities were undertaken during the report period.

6.12 PROGRESSIVE REHABILITATION AND COMPLETION

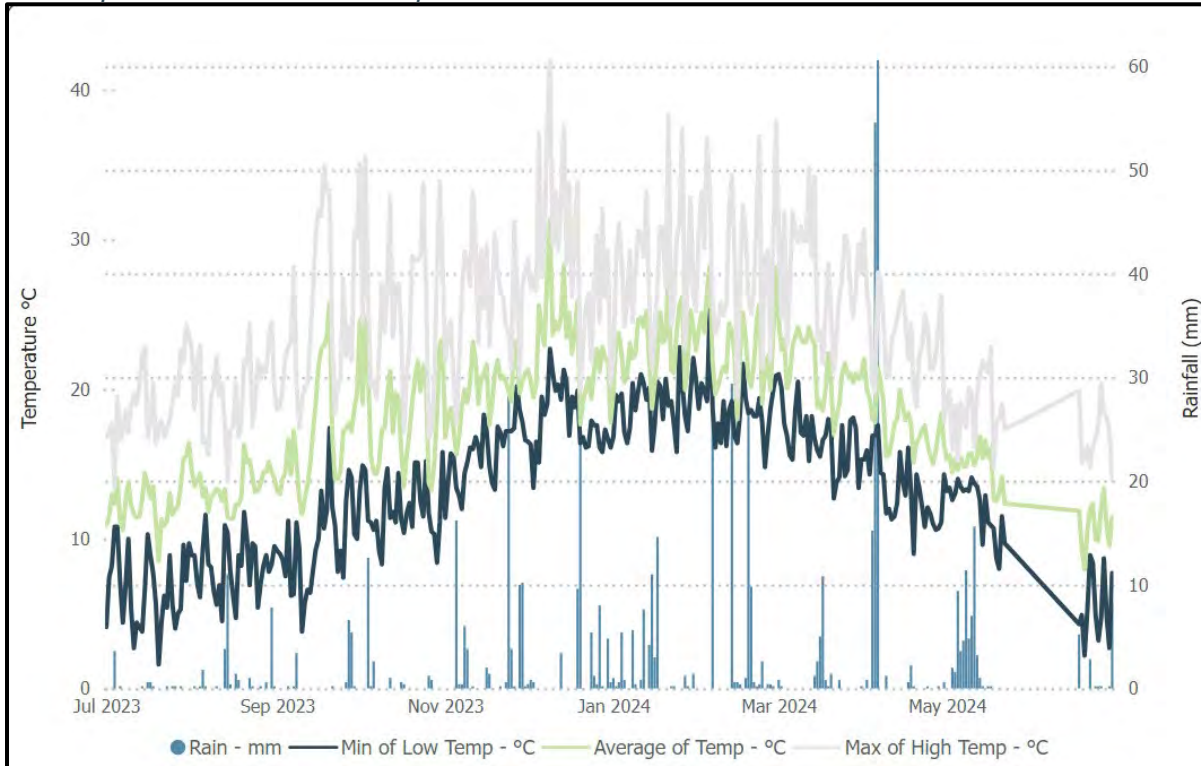
The bund wall to the west has been repaired, and a northern bund wall built to reduce noise and visual impacts on the northern neighbours. Those areas have been spread with topsoil and mulched, but not yet vegetated.

7 Environmental Monitoring and Management

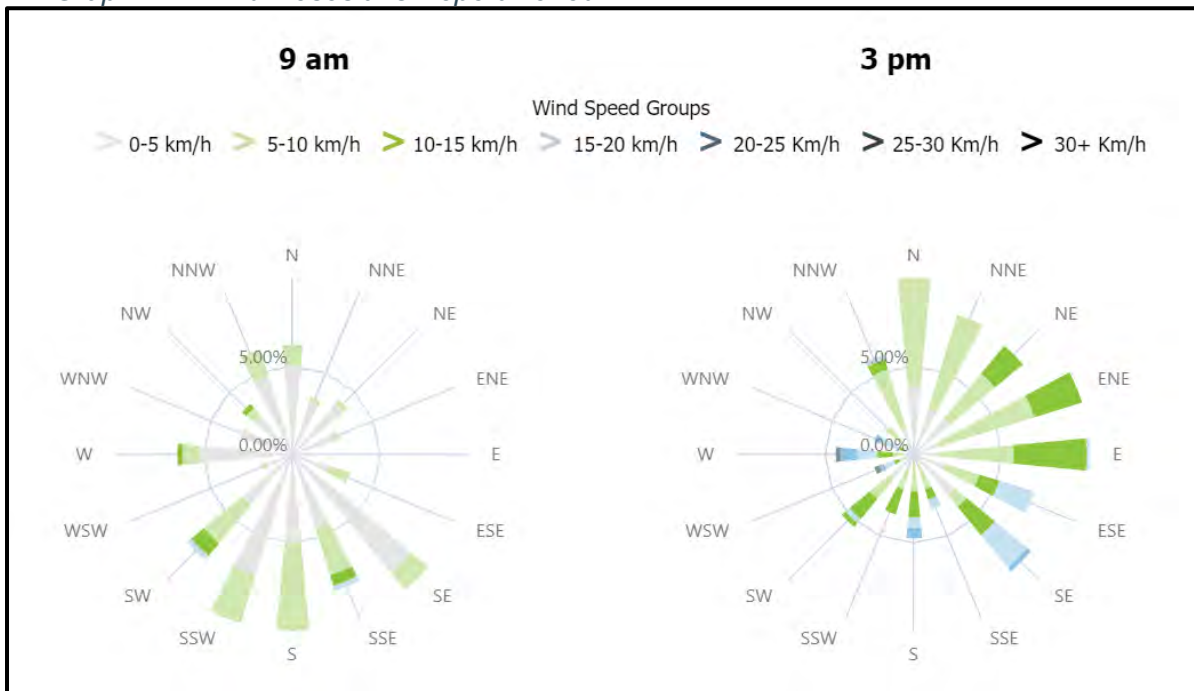
7.1 CLIMATE SUMMARY

A weather station was installed in early 2017; data for the reporting period is shown below. Power to the unit was disconnected for a period in May and June 2024.

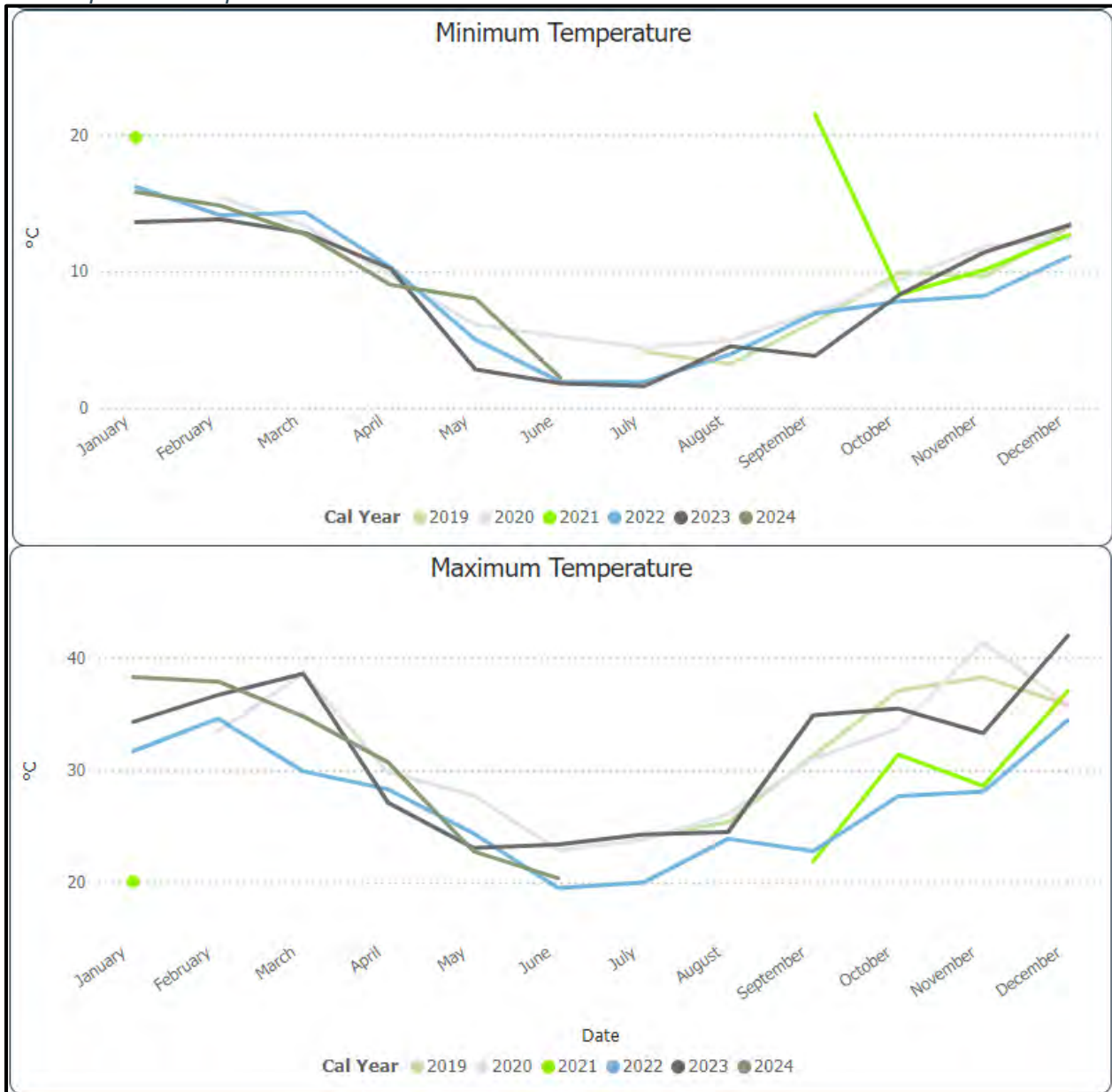
Graph 3. Weather This Report Period



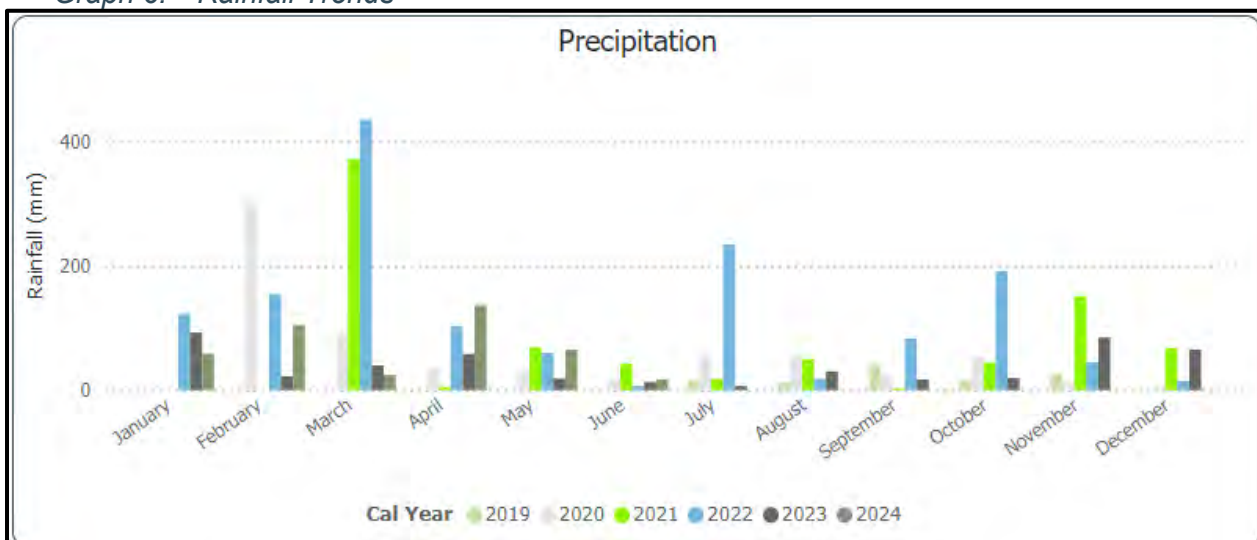
Graph 4. Wind Roses this Report Period



Graph 5. Temperature Trends



Graph 6. Rainfall Trends



7.2 AIR QUALITY

7.2.1 Monitoring Data

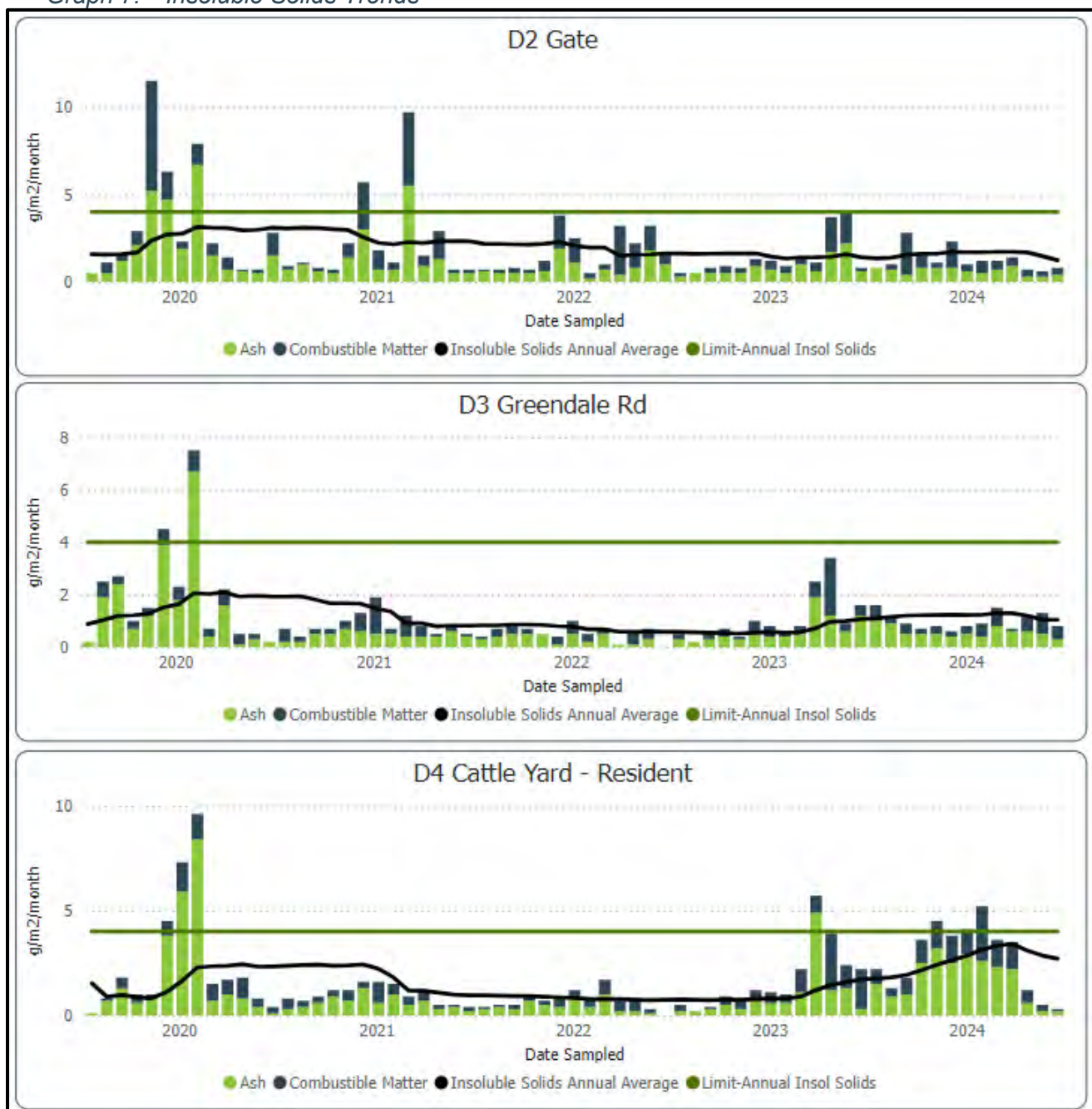
7.2.1.1 Depositional Dust Gauges

Air-borne dust is monitored using static dust gauges. Results for three dust gauges (locations shown on [Figure Two.](#)) during the reporting period are included below.

Table 11. Depositional Dust Results this Report Period

Site	Annual Average Insoluble Solids g/m ² /month	Max Increase over Background	Max Total Limit
D2 Gate	1.2	2	4
D3 Greendale Rd	1.0	2	4
D4 Cattle Yard	2.7	2	4

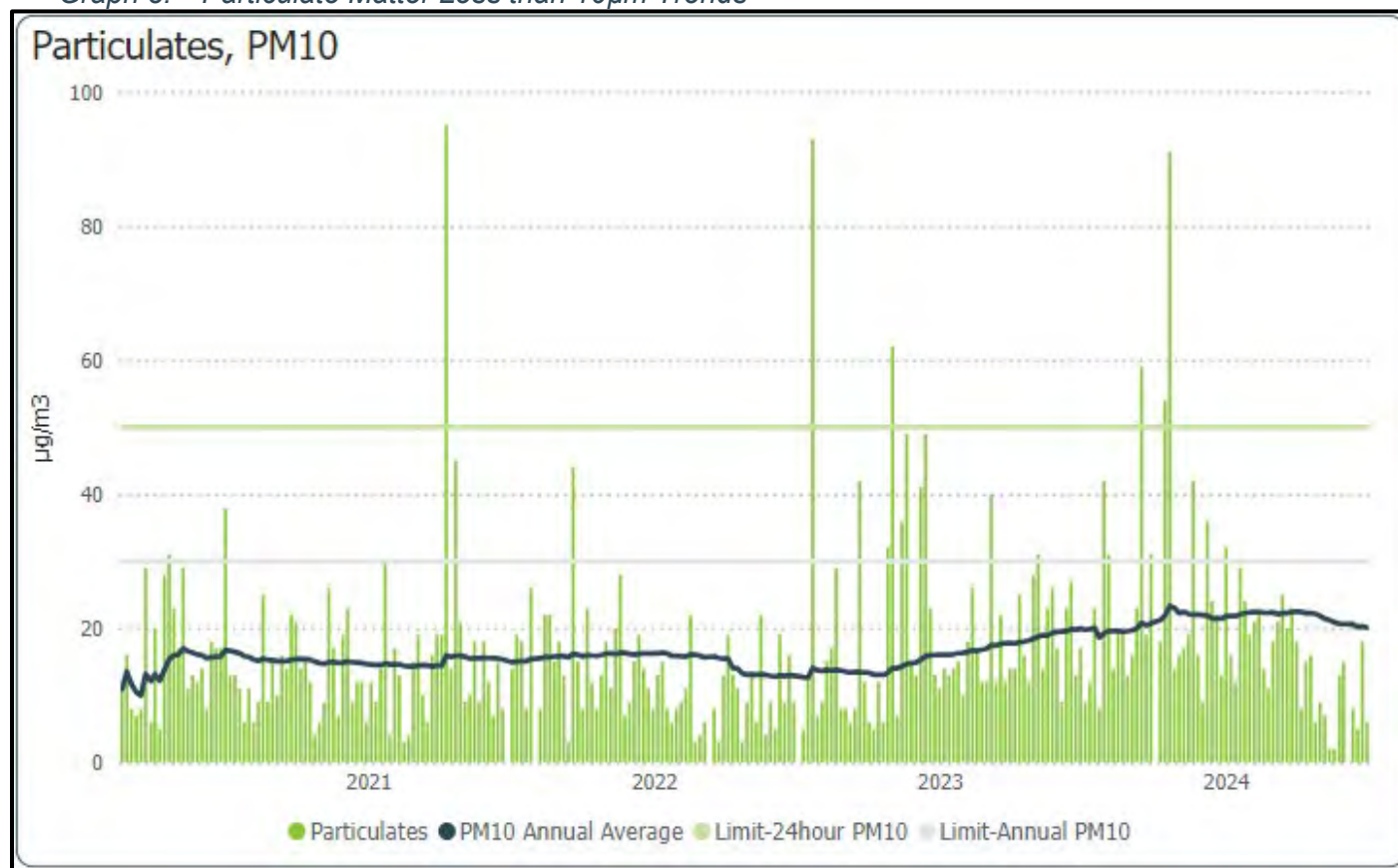
Graph 7. Insoluble Solids Trends



7.2.1.2 High Volume Air Sampling

One high volume air sampler (HVAS) has also been purchased for the site to monitor dust particulates and the results to date are shown below. All site monitoring equipment is maintained and calibrated in accordance with manufacturer's instructions.

Graph 8. Particulate Matter Less than 10µm Trends



Only PM10 measurements have been undertaken to date.

Table 12. Particulate Matter Results for Report Period

Pollutant	Averaging Period	Actual Result	Limit
Total Suspended Particulates (TSP) (ug/m³)	Annual	49.8 (Calculated from PM10 = 40% of TSP)	90
Particulate Matter <10 um (PM10) (ug/m³)	Annual	19.9	30
Particulate Matter <10 um (PM10) (ug/m³)	24 hour	91 (Sun 22/10/23) 59 (Sat 16/9/23) 54 (Mon 16/10/23)	50

The exceedances were reported to the relevant departments within 7 days of receiving the results. Representatives of DPHI visited the site and recommended relocating the High Volume Air Sampler closer to the site boundary.

7.2.1.3 Stack Emissions

Emissions testing of the kiln stack was conducted during the reporting period on the 28/2/2023. The results are summarised below.

Table 13. Stack Emissions Results in the Report Period

Analyte	Result Reported	EPL Limit
Hydrogen Flouride (mg/m3)	9.4	50
Nitrogen Oxides (mg/m3)	120	2000
Total Solid Particles (mg/m3)	6.7	100

Graph 9. Stack Monitoring Trends

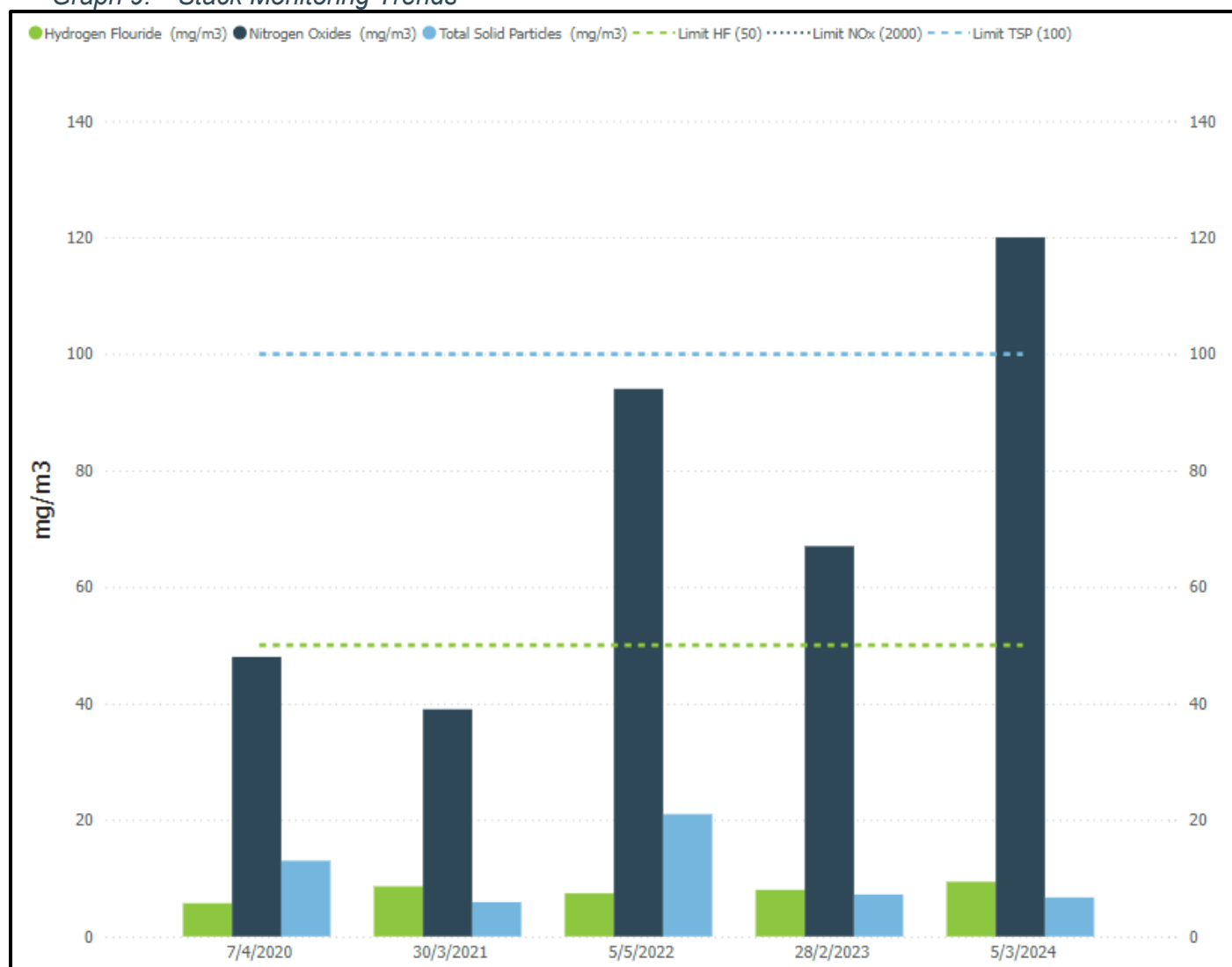


Table 14. Assessable Load for Stack Emissions From 1/6/2023 to 31/5/2024

Assessable Pollutant	Load (kg)*	Load Limit from EPL 1808 (kg)
Sulphur Oxides	34,164	186,500
Nitrogen Oxides	57,816	90,300
Coarse Particulates	736	8,400
Fine Particulates	2,470	33,300
Fluorides	4,468	11,700
Nitrogen Oxides - Summer	14,256	No limit

*Sourced from the EPL website.

Stack emissions criteria are reproduced below.

Table 15. Stack Emissions Criteria for Residences

<i>Table 6: Long and Short-Term Stack Emissions</i>		
Pollutant	Averaging period	^d Criterion
Sulphur Dioxide	10-minute	712 µg/m ³
	1-Hour	570 µg/m ³
	24-Hour	228 µg/m ³
	Annual	60 µg/m ³
Nitrogen Dioxide	1-Hour	246 µg/m ³
	Annual	62 µg/m ³
Hydrogen Chloride	1 hour	0.14 mg/m ³

Although ambient air quality monitoring has not been undertaken or modelled for the residences on privately owned land, the stack monitoring results were near or below the inputs used for the air modelling (AUSPLUME) in the EIS.

The results from the stack monitoring are below the EPL 1808 limits. It is therefore unlikely that the residences experienced levels above the criteria during the reporting period.

7.2.2 Non-Compliances

7.2.2.1 Depositional Dust Non- Compliances

The depositional dust monitoring results for the reporting period are all below the annual average criteria. There were no non-compliances.

7.2.2.2 HVAS Non- Compliances

The Particulate Matter less than 10 micron exceeded the 24 hour average limit on 3 occasions as shown in *Table 16*

Table 16. Particulate Matter 24 hour limit Exceedances

24 hour exceedances (>50 µg/m³)

Date	Day	Particulates	Sampling Comments
22/10/2023	Sunday	91	
16/9/2023	Saturday	59	
16/10/2023	Monday	54	

In each case the result was queried with the laboratory and found to be valid. These were reported to the DPHI via the Major Projects portal within 7 days of receiving the results. The DPHI visited the site and recommended that the High Volume Air Sampler be relocated. This has been actioned.

7.2.2.3 Stack Emission Non-Compliances

The stack monitoring was within the load base requirements and concentration levels for the EPL reporting year. Comparison to the AUSPLUME modelling input data indicates it is unlikely that the ambient stack emission criteria for residences was exceeded.

7.2.3 Comparison to Predictions

The results are consistent with the background pollutant concentrations predicted in the Hyder Consulting EIS.

Table 17. Hyder Consulting EIS Background Air Quality Data Comparison

Air Pollutant	Averaging Period	Background Concentration From EIS ($\mu\text{g}/\text{m}^3$)	Actual Result from Reporting Period
PM₁₀	Annual	16.0	19.9
	24-hour (maximum)	83.8	91
NO₂	Annual	9.7	Not applicable
	Monthly (maximum)	41	Not applicable
SO₂	Annual	3.5	Not applicable
	Monthly (maximum)	4.5	Not applicable
TSP	Annual	40.0 (estimate value)	Not applicable 49.8 (estimate based on the PM ₁₀ being 40% of the TSP annual average)
Dust Deposition	Annual	1.8 g/m ² /month	D2- 1.2 g/m ² /month D3- 1.0 g/m ² /month D4- 2.7 g/m ² /month

Note: Ambient monitoring of NO₂ and SO₂ at nearby residences is not undertaken (see Section [7.2.1.3](#)).

7.2.4 Trends and Discrepancies Against Predicted and Actual Impacts

Depositional dust results showed a typical increasing seasonal trend during the summer but all annual averages are below the required criteria. The Cattle Yard site trended higher due to the presence of frogs and vegetation in October, December and January samples. These results do not reflect dust management by the site.

HVAS results are steady, with no increasing trend noted.

Stack emissions are also consistent with previous years for EPL recorded results and no significant trends were observed.

7.2.5 Measures to Improve Performance in the Next Reporting Period

The High Volume Air Sampler was located adjacent a concrete road and storage area abutting the factory. A wind tunnel effect was frequently observed in the area, contributing to particulate matter recorded in the sampler that was highly unlikely to be indicative of any affects off site. The DPHI recommended relocating the sampler and approved of the new location.

There are several sources of airborne dust on the Bringelly Clay Mine site and surrounds. The principal source is earth-moving activities, including ore extraction and stockpiling. Dozers, excavators and haul trucks will produce airborne dust while undertaking clearing, mining and stockpiling activities and by travelling along unsealed internal roads. The use of a water cart during all of these activities will minimise impact on the environment. Pit and stockpile rehabilitation with vegetation established as soon as practicable will assist with prevention of dust generation. Other air pollutants include gases from the kiln and dryers, since the kiln is not being refurbished there is minimal opportunity to reduce these emissions from current levels.

7.3 WATER/SEDIMENT/EROSION

7.3.1 Surface Water

7.3.1.1 Monitoring Data

All discharges during the report period occurred in compliance with the EPL conditions. All site monitoring equipment is maintained and calibrated in accordance with manufacturer's instructions.

The EPL limits for discharged water are outlined below.

Table 18. EPL Discharge Concentration Limits

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Oil and Grease	milligrams per litre				10
pH	pH				6.5-8.5
Turbidity	nephelometric turbidity units				150

POINT 5

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Conductivity	microsiemens per centimetre				1450
Oil and Grease	milligrams per litre				10
pH	pH				6.5-8.5
Turbidity	nephelometric turbidity units				150

*L3.6 Exceedance of a quality limit specified in this Licence for the discharge of total suspended solids or turbidity from Point 1 or Point 5 is only permitted if the discharge from Point 1 or Point 5 occurs solely as a result of rainfall. The rainfall must be equal to, or greater than, a 90th percentile 5-day rain event.

Water quality testing has been undertaken of the water held in the dams during the reporting period as shown below. Only results that have been discharged are shown.

Graph 10. Water Quality Monitoring, Discharged from Point 5

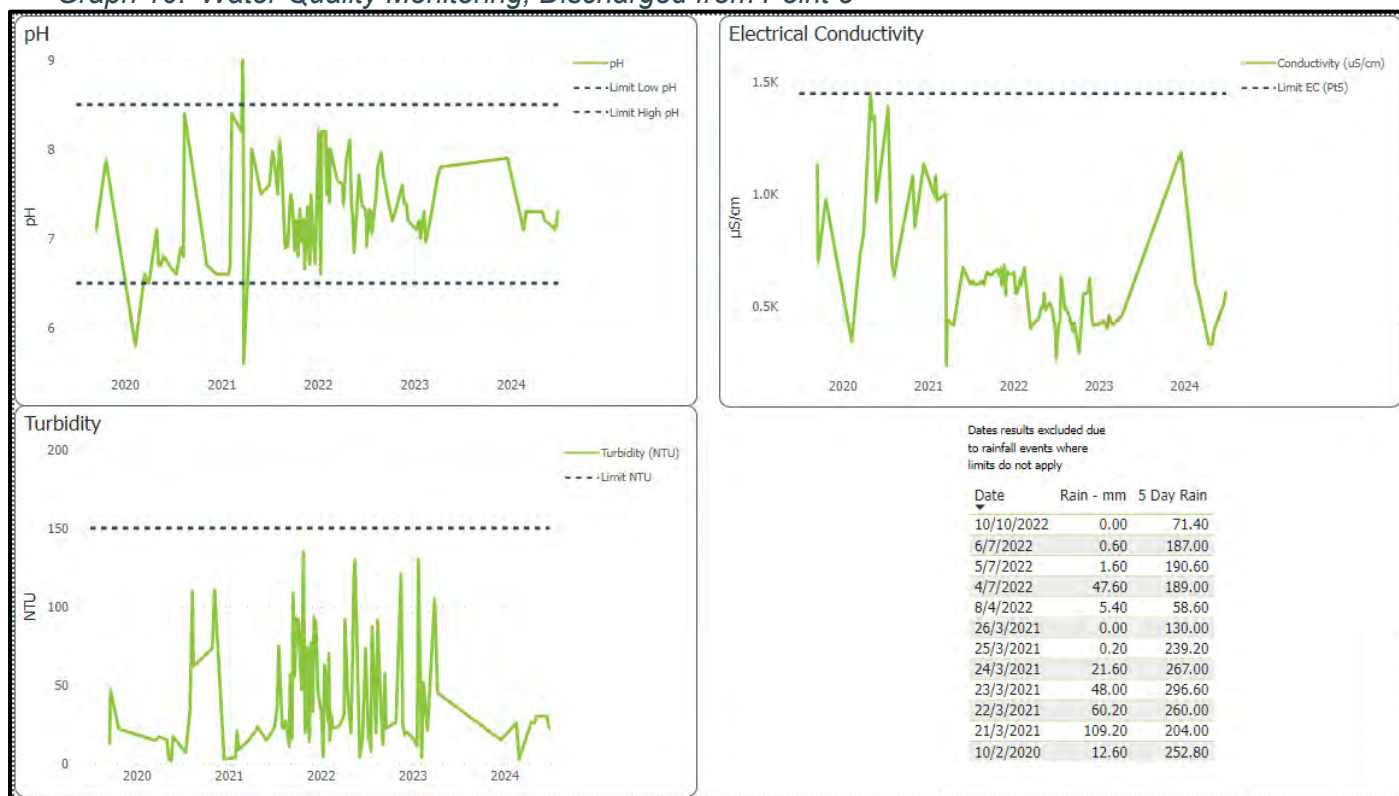


Table 19. Summary of Point 5 Discharged Results During Report Period

Analyte	Minimum	Average	Maximum	EPL Limit
pH	6.9	7.2	7.9	6.5 – 8.5
Electrical Conductivity (uS/cm)	259	514	1190	1450
Turbidity (NTU)	2.8	21.6	30	150*
Oil & Grease (mg/L)			<10	10

Table 20. Point 1 Discharged Results During Report Period

Analyte	Result	EPL Limit
Sampled 8/4/24		
pH	6.9	6.5 – 8.5
Electrical Conductivity (uS/cm)	325	1450
Turbidity (NTU)	1742	150*
Oil & Grease (mg/L)	<10	10

7.3.1.2 Non-Compliances

There were no surface water non-compliances during the report period.

7.3.1.3 Comparison to Predictions

The EIS states that the adoption of the water management measures described in the EIS and SoEE would ensure that the project meets the required EPL conditions. This has been achieved this report period.

7.3.1.4 Trends and Discrepancies Against Predicted and Actual Impacts

The pH and Conductivity of the dams is variable and no significant trends have been noted. Turbidity is also variable depending on whether the sample has been treated or not. Oil and Grease has not been detected during the report period.

7.3.1.5 Measures to Improve Performance in the Next Reporting Period

The site will continue to monitor surface water as required. The Water Management Plan will be reviewed and updated as required. As more data becomes available, future trends will be identified and compared to predictions.

7.3.2 Erosion and Sediment

7.3.2.1 Monitoring Data

Generally, the site is prone to moderate erosion, but this is limited to the exposed worked areas of the quarry. Erosion over the disturbed area is mitigated as much as possible through the establishment of vegetation, which binds the soil and traps silt. Rainfall that occurs over the active mine site does cause some minor erosion on unfinished surfaces, but the sediments are collected on the floor of the mine within the sediment dams. Eroded soils and sediment captured within the pit sump become a part of the surface water management process.

Slopes are kept moderate where possible in the pit to reduce erosion hazard and benches are present on the site.

The capacity of the dams has been monitored visually during the reporting period.

7.3.2.2 Non-Compliances

There were no non-compliances relating to the erosion and sediment management.

7.3.2.3 Comparison to Predictions

The site erosion and sediment control is performing adequately.

7.3.2.4 Measures to Improve Performance in the Next Reporting Period

The site will monitor sediment and erosion monthly. The Water Management Plan will be reviewed and updated as required. As more data becomes available, trends will be identified and compared to predictions.

7.4 GROUNDWATER

7.4.1 Monitoring Data

Quarrying operations has not proceeded below 46m AHD.

Four groundwater monitoring bores were installed on the site as shown in [Figure Two](#) in 2013. The bores are all registered under Licence 10BL605770 with the NSW Office of Water.

Groundwater sampling commenced mid-2017. GW3 groundwater monitoring bore, located in the stockpile area, was damaged some years ago and cannot be sampled.

In summary:

- GW1 and GW2 water levels are fairly stable, however, GW4 is frequently at a low standing water level, with insufficient water volume available to pump and sample. This report period has shown an influx of fresh water from the high rainfall in April, confirming that this bore responds to a perched aquifer or surface water inflow.
- The pH's of all GW's are fairly neutral, remaining between the 6.5 to 7.5 range for the report period;
- The conductivity, dissolved solids and chloride of GW1 is consistently higher than GW2 and both respond similarly over time;
- GW4 shows a minor decrease in pH and conductivity due to the influence of rainfall;
- Anions and Cations for GW1 and GW2 are fairly consistent and similar to each other, with GW4 showing the influence of fresh water;
- Common dissolved metals show no significant trends for all bores;
- Hydrocarbons were detected at very low levels in GW4 in one quarter, and not detected for the remainder of this report period;
- Nutrients within GW1 and GW2 are similar to each other and GW4 showed a large spike in NOx in the last quarter, possibly an influence from surface water;

Results are presented in the tables and graphs below. Note, only metals where positive results have been detected are graphed, levels presented as "0" are actually less than detectable.

Table 21. Groundwater Results

Groundwater Summary for Financial Year Period

2024

Sample Description	Min of pH	Average of pH	Max of pH	Min of Electrical Conductivity	Average of Electrical Conductivity	Max of Electrical Conductivity	Min of TDS	Average of TDS	Max of TDS
GW1	6.8	7.0	7.3	20,100	21,546	22,600	12,600	13,469	14,100
GW2	6.9	7.0	7.0	19,400	21,054	21,800	12,100	13,138	13,600
GW4	6.4	6.8	6.9	5,020	10,863	12,200	3,140	6,790	7,610
Total	6.4	6.9	7.3	5,020	17,821	22,600	3,140	11,133	14,100

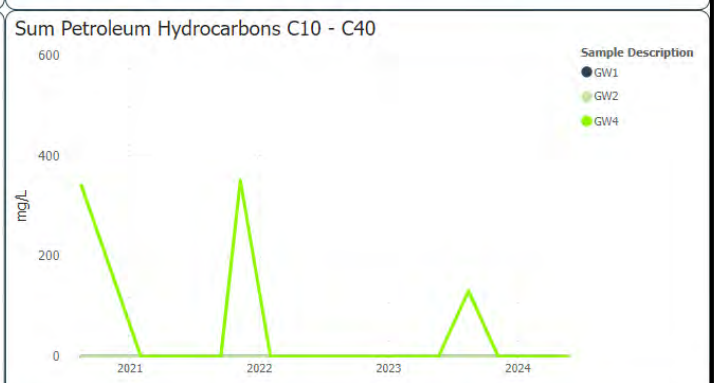
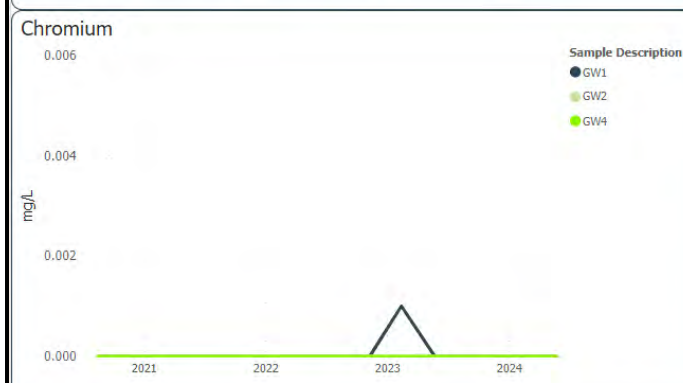
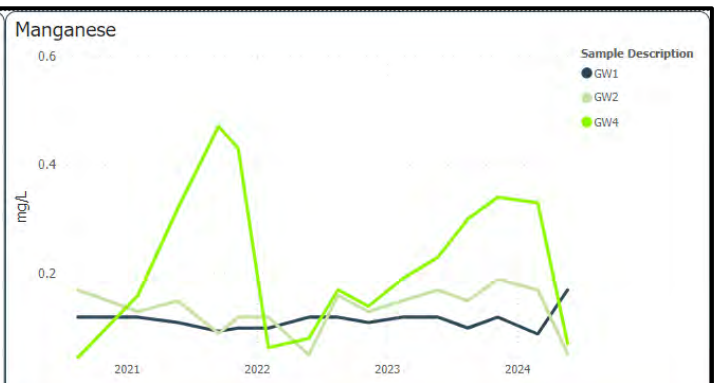
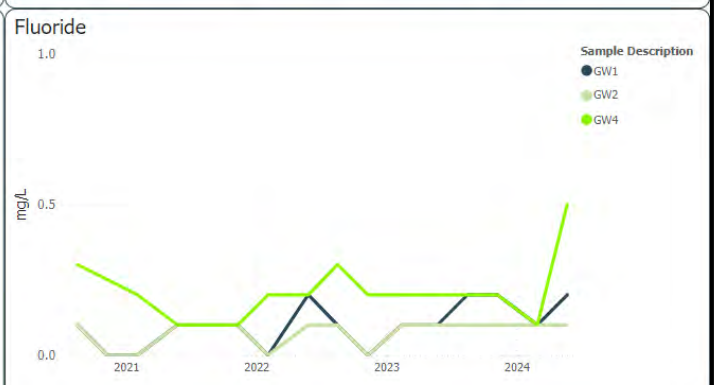
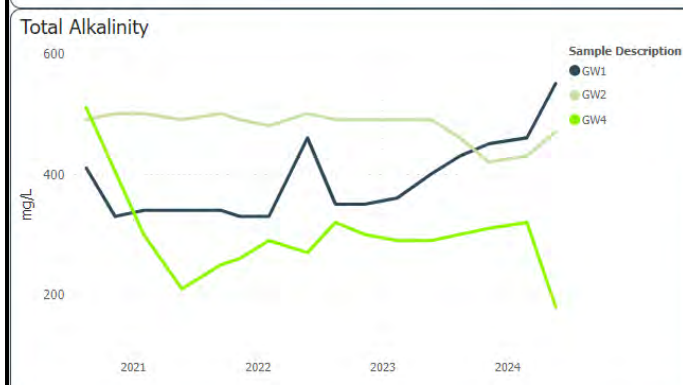
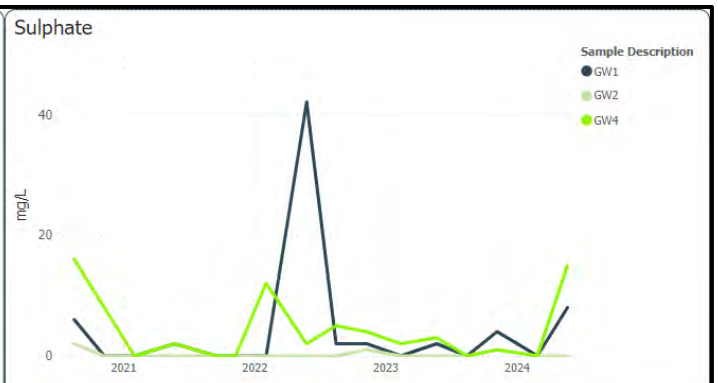
Sample Description	Min of Chloride, Cl	Average of Chloride, Cl	Max of Chloride, Cl	Min of Sulphate, SO4	Average of Sulphate, SO4	Max of Sulphate, SO4	Min of Total Alkalinity	Average of Total Alkalinity	Max of Total Alkalinity
GW1	7,500	8,150	8,500	0	3	8	430	473	550
GW2	7,500	7,725	8,100	0	0	1	420	445	470
GW4	1,600	3,300	4,100	0	4	15	180	278	320
Total	1,600	6,392	8,500	0	2	15	180	398	550

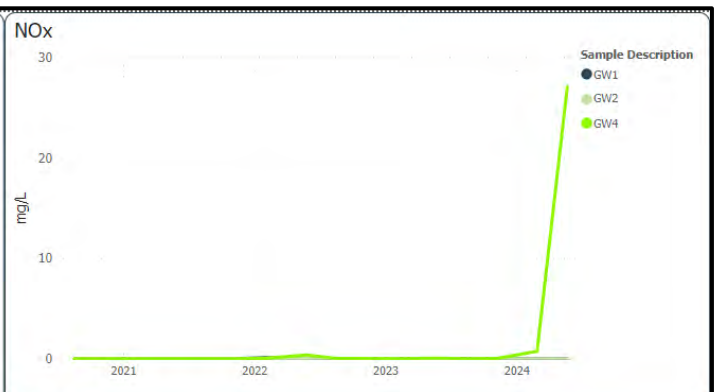
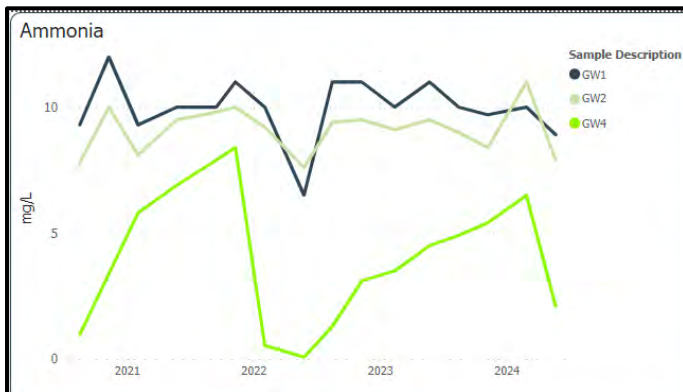
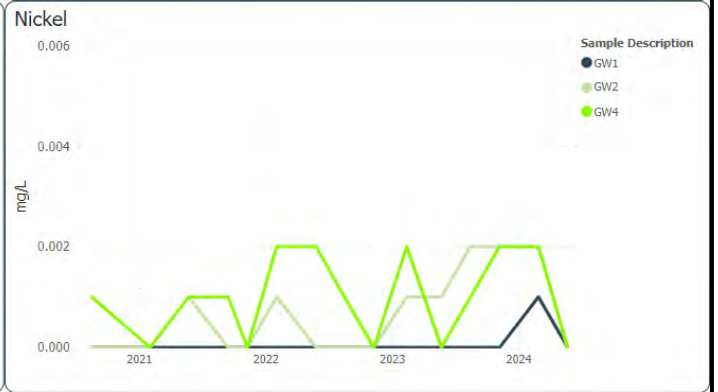
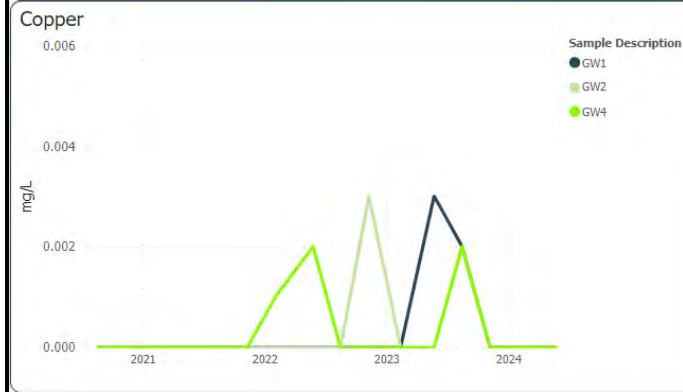
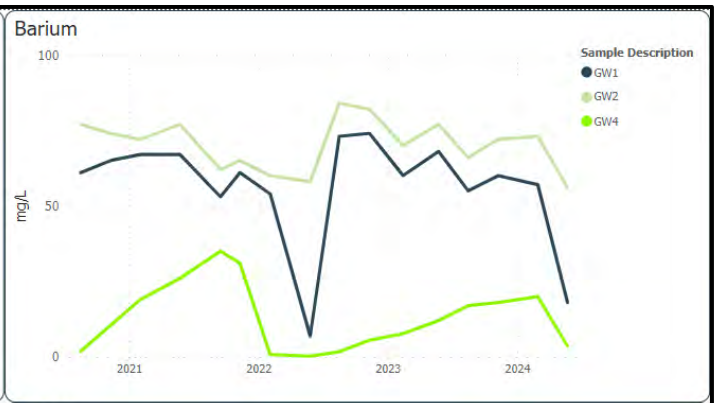
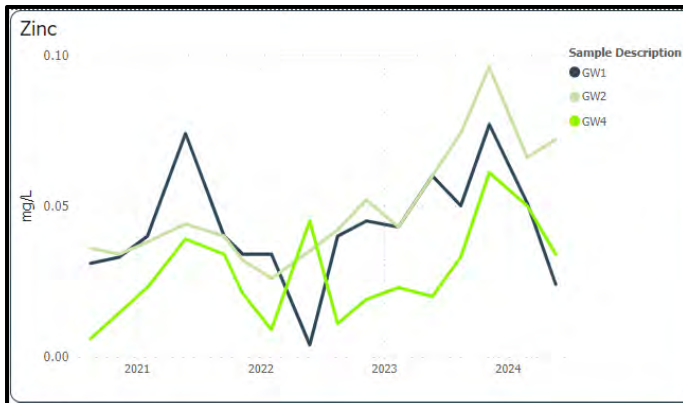
Sample Description	Min of Calcium-Dissolved	Average of Calcium-Dissolved	Max of Calcium-Dissolved	Min of Magnesium-Dissolved	Average of Magnesium-Dissolved	Max of Magnesium-Dissolved	Min of Potassium-Dissolved	Average of Potassium-Dissolved	Max of Potassium-Dissolved	Min of Sodium-Dissolved	Average of Sodium-Dissolved	Max of Sodium-Dissolved
GW1	270	313	340	240	273	300	51	60	66	4,000	4,550	4,900
GW2	290	303	320	200	215	240	48	57	62	4,200	4,550	4,800
GW4	15	70	110	5	24	36	12	28	37	990	1,998	2,500
Total	15	228	340	5	170	300	12	48	66	990	3,699	4,900

Sample Description	Min of Ammonia as N	Average of Ammonia as N	Max of Ammonia as N	Min of Total Nitrogen	Average of Total Nitrogen	Max of Total Nitrogen	Min of Phosphate as P	Average of Phosphate as P	Max of Phosphate as P	Min of Total Phosphorus	Average of Total Phosphorus	Max of Total Phosphorus
GW4	2.10	4.73	6.50	6.10	12.45	31.00	0.01	0.04	0.10	0.20	0.23	0.30
GW1	8.90	9.65	10.00	8.90	9.78	11.00	0.00	0.03	0.10	0.00	0.01	0.05
GW2	7.90	9.08	11.00	7.90	8.80	9.90	0.01	0.06	0.13	0.00	0.06	0.10
Total	2.10	7.82	11.00	6.10	10.34	31.00	0.00	0.04	0.13	0.00	0.10	0.30

Graph 11. Groundwater Analyte Trends









7.4.2 Non-Compliances

There were no non-compliances relating to the groundwater management.

7.4.3 Comparison to Predictions

The Groundwater Management Plan (GMP) predicted a negligible change in the groundwater regional flow as a result of the proposed activities.

7.4.4 Trends and Discrepancies Against Predicted and Actual Impacts

To date the groundwater quality and depth levels have remained fairly consistent. Changes in GW4 can be related to surface water influence and a low water volume.

7.4.5 Measures to Improve Performance in the Next Reporting Period

The site will continue to monitor the bores. The Groundwater Management Plan will be reviewed and updated as required. As more data becomes available, trends will be identified and compared to predictions.

7.5 NOISE

7.5.1 Monitoring Data

Approval conditions list the noise limits as follows.

Table 22. SSD Noise Criteria

Noise Criteria				
2. The Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence on privately-owned land.				
Table 2: Noise criteria dB(A)				
Activity	Receiver	Day/Evening/Shoulder	Night	
		L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{A1} (max)
Brick making and quarrying	R1, R2	47	Not Applicable	
	R3, R4, R14	48		
	R15, R17	45		
	All other receivers	44		
Brick making	All receivers	44	43	53
Notes:				
- To locate the receivers referred to in Table 2 refer to Appendix 3. - After the first review on any EPL granted for this development under Section 78 of the POEO Act, nothing in this consent prevents the EPA from imposing stricter noise limits on the quarrying operations on site under the EPL.				
Appendix 5 sets out the metrological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.				

Noise monitoring was undertaken during the reporting period in September 2023, November 2023, January and March 2024. Noise monitoring results indicated that the site-attributable contributions were estimated to satisfy the relevant noise criteria at all locations during the assessments (see [Appendix H](#)).

Table 23. Noise Results in Report Period

Location	Activities Occurring	Date / Time	L _{Aeq} (15min)	Limit	L _{A1} (max)	Limit
N1	Brick making + Quarrying	26/9/23 Day	<35	47		N/A
		2/11/23 Day	<33			
		16/1/24 Day	<35			
		6/3/24 Day	<35			
N1	Brick making	26/9/23 Evening	<29	44		N/A
		2/11/23 Evening	<27			
		16/1/24 Evening	<35			
		6/3/24 Evening	<35			
N1	Brick making	26/9/23 Night	<34	43	<34	53
		2/11/23 Night	<26		<26	
		16/1/24 Night	<35		<45	
		6/3/24 Night	<35		<35	
N3	Brick making + Quarrying	26/9/23 Day	<35	46		N/A
		2/11/23 Day	<35			
		16/1/24 Day	<35			
		6/3/24 Day	<35			

Location	Activities Occurring	Date / Time	L _{Aeq} (15min)	Limit	L _{A1} (max)	Limit
N3	Brick making	26/9/23 Evening 2/11/23 Evening 16/1/24 Evening 6/3/24 Evening	<31 <31 <35 <35	44		N/A
N3	Brick making	26/9/23 Night 2/11/23 Night 16/1/24 Night 6/3/24 Night	<30 <30 <35 <35	43	<30 <30 <45 <35	53
N14	Brick making + Quarrying	26/9/23 Day 2/11/23 Day 16/1/24 Day 6/3/24 Day	<35 <35 <35 <35	46		N/A
N14	Brick making	26/9/23 Evening 2/11/23 Evening 16/1/24 Evening 6/3/24 Evening	<35 <30 <35 <35	44		N/A
N14	Brick making	26/9/23 Night 2/11/23 Night 16/1/24 Night 6/3/24 Night	<23 <29 <35 <35	43	<23 <29 <45 <35	53
N20	Brick making + Quarrying	26/9/23 Day 2/11/23 Day 16/1/24 Day 6/3/24 Day	<37 <34 <35 <35	44		N/A
N20	Brick making	26/9/23 Evening 2/11/23 Evening 16/1/24 Evening 6/3/24 Evening	<30 <28 <35 <35	44		N/A
N20	Brick making	26/9/23 Night 2/11/23 Night 16/1/24 Night 6/3/24 Night	<29 <28 <35 <35	43	<29 <28 <45 <35	53
N35	Brick making + Quarrying	26/9/23 Day 2/11/23 Day 16/1/24 Day 6/3/24 Day	<30 <28 <35 <35	44		N/A
N35	Brick making	26/9/23 Evening 2/11/23 Evening 16/1/24 Evening 6/3/24 Evening	<26 <24 <35 <35	44		N/A
N35	Brick making	26/9/23 Night 2/11/23 Night 16/1/24 Night 6/3/24 Night	<20 <20 <35 <35	43	<20 <20 <45 <35	53

7.5.2 Non-Compliances

There were no noise non-compliances recorded during the reporting period. No noise complaints have been received during the reporting period.

7.5.3 Comparison to Predictions

The noise assessment in the EIS considered two operational scenarios:

- 24-hour processing and brick making activities; and
- Daytime quarrying campaigns, with processing and brick making also being carried out.

7.5.3.1 Processing and Brick Making Activities

For about 6 months each year, processing and brick making activities were predicted to be the only operational noise source on site. The assessment indicates that there would be no exceedances of the Project Specific Noise Levels (PSNL) at any receiver under this operational scenario.

The EIS also includes an assessment of the potential for sleep disturbance associated with the night-time processing and brick making activities. The assessment found that the project would not exceed the applicable sleep disturbance criteria at any locations.

None of the results in this report contradict the predictions.

7.5.3.2 Quarrying Campaigns

No comparison to the predictions can be made as mining did not occur during the noise monitoring rounds.

7.5.3.3 Construction Noise

During construction of the new site access road and the noise bund adjacent to Greendale Road, the EIS assessment predicts exceedances of the applicable ICNG criteria of 49 dB(A) (i.e. 10 dB above the background noise level) at receivers 3 and 4, which would exceed the criteria by 2 and 17 dB(A), respectively. No other exceedances are predicted to occur.

No construction has been undertaken during the reporting period therefore comparisons to the predictions in the EIS are not relevant.

7.5.4 Trends and Discrepancies Against Predicted and Actual Impacts

No trends or discrepancies have been identified to date.

7.5.5 Measures to Improve Performance in the Next Reporting Period

The site will continue to monitor noise in the next reporting period. The Noise Management Plan will be reviewed and updated as required. As more data becomes available, trends will be identified and compared to predictions.

7.6 BIODIVERSITY

7.6.1 Monitoring Data

No monitoring or maintenance of the Biodiversity Offset Area has been undertaken as yet.

7.6.2 Non-Compliances

The Biodiversity Strategy has not been implemented and the Conservation Bond has not been submitted.

7.6.3 Comparison to Predictions

No comparison to the predictions has been made.

7.6.4 Trends and Discrepancies Against Predicted and Actual Impacts

No trends or discrepancies have been identified.

7.6.5 Measures to Improve Performance in the Next Reporting Period

The monitoring program will commence in the next report period.

7.7 HERITAGE

7.7.1 Monitoring Data

No monitoring for heritage items has been undertaken during the report period.

7.7.2 Non-Compliances

There were no non-compliances recorded during the reporting period.

7.7.3 Measures to Improve Performance in the Next Reporting Period

The Heritage Management Plan will be reviewed and updated as required.

7.8 VISUAL

7.8.1 Monitoring Data

The site is required to minimise the visible impact of the development, in accordance with Schedule 3 Conditions 28 and 29. Overall the site has very little impact to the visual amenity of neighbouring properties and road users.

Under the Approval conditions the monitoring of a vegetation screen to be established on noise bunds must be undertaken. The noise bunds have been constructed and revegetation is underway.

The quarry does not utilise lighting and operates during daylight hours. The factory is lit for security purposes at night but is sufficient distance from residents for the impact to be minimal.

Photography monitoring is presented below.

7.8.2 Non-Compliances

There are no non-compliances with regards to visual impacts and no complaints have been received.

7.8.3 Comparison to Predictions

The EIS predicted that the overall visual character of the project would remain largely unchanged. The site would be generally unobtrusive when viewed from surrounding properties and public roads. To date the site is unchanged visually as predicted.

7.8.4 Measures to Improve Performance in the Next Reporting Period

Visual monitoring will continue annually.

Photoplate 1. Visual Monitoring

Plan of:	Annual Review for Bringelly Clay/Shale Mine Year Ending 30/06/2024 - Photoplate 1 Visual Monitoring	Location:	Bringelly Clay Mine, Off Greendale Road, Bringelly, NSW	Our Ref:	12640_BR_AR2024_C001 _V0_P1
Photoplate:	ONE	Council:	Camden Council	Plan By:	JD
Sheet:	1 of 1	Client:	PGH Bricks & Pavers Pty Ltd	Project Manager:	LT
Version/Date:	V0 26/08/2024	Source:	VGT	Office:	Thornton

This figure may be based on third party data which has not been verified by vgt and may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and vgt does not warrant its accuracy.



Photoplate 1: View of Site Entrance & Quarry from Greendale Road, 2021.



Photoplate 2: View of Site Entrance & Quarry from Greendale Road, 2022.



Photoplate 3: View of Site Entrance & Quarry from Greendale Road, 2023.



Photoplate 4: View of Site Entrance & Quarry from Greendale Road, 2024.



Photoplate 5: View of North Western Bundwalls from Greendale Road, 2021.



Photoplate 6: View of North Western Bundwalls from Greendale Road, 2022.



Photoplate 7: View of North Western Bundwalls from Greendale Road, 2023.



Photoplate 8: View of North Western Bundwalls from Greendale Road, 2024.



Photoplate 9: View of Quarry from Residence to the West, 2021.



Photoplate 10: View of Quarry from Residence to the West, 2022.



Photoplate 11: View of Quarry from Residence to the West, 2023.



Photoplate 12: View of Quarry from Residence to the West, 2024.



Photoplate 13: View of Site from Residents in the South East, 2021.



Photoplate 14: View of Site from Residents in the South East, 2022.



Photoplate 15: View of Site from Residents in the South East, 2023.



Photoplate 16: View of Site from Residents in the South East, 2024.



Photoplate 17: View of Site from Residents in the East, 2021.



Photoplate 18: View of Site from Residents in the East, 2022.



Photoplate 19: View of Site from Residents in the East, 2023.



Photoplate 20: View of Site from Residents in the East, 2024.

7.9 WASTE

7.9.1 Monitoring Data

The mine generates minimal overburden which is reused in rehabilitation. Waste generated by the brickworks is stored in the appropriate containers and removed by licenced waste contractors. Site waste streams data is collated and monitored internally. PGH reviews its purchasing and waste policies and procedures regularly to improve processes as required.

7.9.2 Non-Compliances

There have been no non-compliances related to the on-site sewerage treatment and disposal in the last 12 months. No waste has been imported to the site. Spill kits are available on site and by mining contractors and all fuel is stored in bunded areas.

7.9.3 Comparison to Predictions

The EIS predicted that the continuation and expansion of the operations on the site would result in the generation of the same types and quantities of wastes generated under existing operations. Wastes generated by the brickworks is similar to previous years.

7.9.4 Trends and Discrepancies Against Predicted and Actual Impacts

No trends or discrepancies have been identified.

7.9.5 Measures to Improve Performance in the Next Reporting Period

The waste management and minimisation measure will be reviewed in the next reporting period. A program of monitoring and characterising materials to be re-used in rehabilitation has been included in the Rehabilitation Risk Assessment and incorporated into the updated Rehabilitation Management Plan.

7.10 BUSHFIRE

7.10.1 Control Measures

The site maintains a Site Emergency Response Procedure which includes bushfire management measures. Slashing of fire breaks is undertaken as required to remove potential fuel material. PGH maintains fencing around the site to discourage trespassing and the risk of deliberately lit fires. Procedures and training exist for PGH personnel and contractors, within site Emergency Response Procedures for minimising fire risk and dealing with fires.

PGH bushfire policy does not permit staff to engage in firefighting activities or bushfire management. All firefighting is undertaken by the RFS. Hazard reduction is based on RFS advice and not undertaken by PGH. PGH ensure that the facility is suitably equipped and access available to fight fires on site.

Site management will liaise with RFS to minimise fire risk as advised and is responsible for managing fire risk within policy guidelines.

PGH commits to work with RFS on any reasonable request to improve property risk profile. The site has suitable access and ongoing dialogue with RFS will ensure that the facility is accessible for fighting fires. In addition, dams on site will be made available for RFS as required in the event of fire.

In the event of a fire, on site or in the surrounding area, PGH will work as much as practical in co-operation with RFS, emergency services and National Parks and Wildlife Service. The presence of a bushfire in the area will activate the PIRMP.

7.10.2 Non-Compliances

There are no non-compliances relating to bushfire management.

7.10.3 Comparison to Predictions

The expansion to the quarry extraction areas and consequent vegetation clearing was predicted to not enhance any risks to adjoining land, nor make the facilities any more likely to be subject to bushfire hazard. There have been no bushfires within the site during the reporting period.

7.10.4 Trends and Discrepancies Against Predicted and Actual Impacts

The site bushfire management is appropriate and there were no adverse impacts due to bushfire.

7.10.5 Measures to Improve Performance in the Next Reporting Period

Maintenance of fire breaks will continue over the next reporting period. The Bushfire Management Plan will be reviewed and updated as required.

7.11 PUBLIC SAFETY

7.11.1 Monitoring Data

In the interest of public safety and reducing the incidence of trespassers, fences and signage have been maintained along the perimeter of the mine site throughout the reporting period. There have been no incidents involving public safety and no incidences of trespassing. All visitors to the site must report to the gate office to sign in.

7.11.2 Measures to Improve Performance in the Next Reporting Period

Fences and signage will continue to be maintained and monitored during the next reporting period and repairs completed as required.

8 Rehabilitation

A Rehabilitation Management Plan Revision 2 dated 28/6/22 that meets the consent conditions is available on the website (<https://www.pghbricks.com.au/-nsw-environmental-reporting>) and was approved by the then DPE on 2/12/2022. There is also a Rehabilitation Management Plan that has been prepared in accordance with the Resources Regulator Form and Way requirements and is also available on the website. This document requires no approval.

8.1 MONITORING DATA

The Plant Manager (or delegate), in consultation with a qualified ecologist or bush regenerator, will undertake inspections of the site in accordance with the Rehabilitation Management Plan and the EMS to ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in the Approval. During these inspections, the facility's condition, and environmental controls, will be observed and recorded. More specifically, observations and inspections of the implementation measures and objectives of the RMP are to be undertaken. Records will include details of any maintenance of controls required and an implementation priority. Site assessments will continue until such time as the completion criteria have been achieved.

The Bringelly Clay Mine Annual Rehabilitation Report to the Resources Regulator is included in [Appendix I](#).

8.2 NON-COMPLIANCES

There are no non-compliances that relate to rehabilitation.

8.3 COMPARISON TO PREDICTIONS

Rehabilitation to date has been reviewed in the Annual Rehabilitation Report submitted to the Resources Regulator. Rehabilitation to date has been consistent with the Rehabilitation Objectives.

8.4 MEASURES TO IMPROVE PERFORMANCE IN THE NEXT REPORTING PERIOD

Monitoring will continue as required.

8.5 FURTHER DEVELOPMENT OF THE FINAL REHABILITATION PLAN

The Final Landuse Options Plan was submitted to the then DPE on 23/2/22 and approved on 3/6/22.

9 Completion Criteria

Completion Criteria and Rehabilitation Objectives have been submitted to the Resources Regulator portal in accordance with new requirements.

Further development of these will continue next report period.

10 Calculation of Security Deposit

A security deposit calculation was recalculated on 23/8/2024 in line with the Resource Regulator requirements. This security was estimated to be \$727,496.00. The estimate was made on the current footprint of the mine, using the spreadsheet published by the Resources Regulator. Updates to the security calculation will be undertaken in accordance with the new standard conditions.

11 Community Consultation

The Community Consultation Committee for the PGH Bringelly site is no longer having meetings as requested by the committee.

12 Complaints

No complaints were received during the reporting period.

13 Incidents and Non-Compliances

The air quality non-compliances have been reported to the DPHI through the Major Projects Portal. Details can be found in section [7.2](#).

13.1 PARTICULATE MATTER LESS THAN 10 MICRON

There were 3 non-compliances with the PM10 monitoring 24 hour averages. The Particulate Matter less than 10 micron exceeded the 24 hour average limit on 3 occasions: Saturday 16/9/23, Monday 16/10/23 and Sunday 22/10/23. In each case the result was queried with the laboratory and found to be valid. These were reported to the DPHI via the Major Projects portal within 7 days of receiving the results. The monitor has now been moved to a location closer to the project boundary, in consultation with DPHI.

13.2 NON-COMPLIANCES

The Independent Environmental Audit undertaken by Element Environmental outlined non-compliances relevant to this report period as discussed in section [4.2](#). The audit was completed after the end of this report period, and actions towards the recommendations will be described in the next Annual Report.

14 Improvement Measures

Table 24. Improvement Measures

Item	Due
Following submission of Annual Review and IEA all plans, strategies and programs will be reviewed and the review recorded. Any changes to plans will be submitted via the Major Projects Portal	December 31st
Provide annual quarry production data to RR using the online portal.	By 31st October for year ending 30th of June
Establish a vegetation screen on noise bunds, as soon as practicable after construction of the bunds.	As soon as practicable after construction of the bunds
Continue liaison with Community Consultative Committee	Annually
Continue Environmental Monitoring and compare with relevant limits and undertake measures to maintain compliance with criteria.	As required
Response and Action Plan to the Independent Environmental Audit 2024 to be developed, implemented and recorded.	30 th June 2025

Appendix A

SSD_5684 Approval Conditions Mod 1

Development Consent

Section 89E of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, I approve the development application referred to in schedule 1, subject to the conditions in schedules 2 to 5.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.

David Kitto
Executive Director
Resource Assessments and Business Systems

Sydney

2015

SCHEDULE 1

Application Number:

SSD_5684

Applicant:

Boral Bricks Pty Ltd

Consent Authority:

Minister for Planning

Land:

[Lot 100 in DP 1203966](#)

Development:

Bringelly Brickworks Extension Project

Modification 1 (October 2016 shown in [blue](#) text)

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DEFINITIONS

AHD	Australian Height Datum
Annual Review	The review required by condition 4 of schedule 5
Applicant	Boral Bricks Pty Ltd, or any other person or persons who rely on this consent to carry out the development that is subject to this consent
BCA	Building Code of Australia
Biodiversity offset strategy	The conservation and enhancement strategy described in the EIS, and shown conceptually in Appendix 4
Brick making operations	Includes the receipt, handling, processing, storage and transportation of raw materials on site, brick making on site and transportation of finished bricks on site
CCC	Community Consultative Committee
Conditions of consent	Conditions contained in schedules 1 to 5 inclusive
Construction	The demolition of buildings or works, carrying out of works and erection of buildings covered by this consent
CPI	Australian Bureau of Statistics Consumer Price Index
Date of commencement	The date notified to the Department by the Applicant under condition 8 of Schedule 2
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Development	The development described in the documents of condition 2(a) of Schedule 2
Development area	All land to which the development application applies, as listed under "Land" in schedule 1 and shown in Appendix 1
DPI Water	Department of Primary Industries - Water
DRE	Division of Resources and Energy, within the NSW Department of Industry
EEC	Endangered Ecological Community, as defined under the <i>Threatened Species Conservation Act 1995</i>
EIS	Environmental Impact Statement titled <i>Bringelly Brickworks and Quarry Expansion</i> (2 volumes), dated September 2013, as modified by the Response to Submissions titled, <i>Bringelly Brickworks and Quarry Expansion, Response to Submissions</i> dated February 2014 and the letter entitled <i>Bringelly Brickworks – Biodiversity Offsets</i> , dated 2 June 2014
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6pm to 10pm
Extension area	The area outside of the existing quarry footprint (i.e. cells D, E, F, G, H and I, as shown conceptually in Appendix 2)
Feasible	Feasible relates to engineering considerations and what is practical to build
GDE	Groundwater Dependent Ecosystem
GPS	Global Positioning System
Growth Centres SEPP	<i>State Environmental Planning Policy (Sydney Regional Growth Centres) 2006</i>
Ha	Hectare
Incident	A set of circumstances that: - causes or threatens to cause material harm to the environment; and/or - breaches or exceeds the limits or performance measures/criteria in this consent
Land	As defined in the EP&A Act, except for where the term is used in the noise and air quality conditions in schedules 3 and 4 of this consent

	where it is defined to mean the whole of a lot, or contiguous lots, owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
m	Metres
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the development
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NP&W Act	<i>National Parks and Wildlife Act 1974</i>
OEH	NSW Office of Environment and Heritage
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or the Applicant (or its subsidiary)
Quarrying operations	Includes the removal of overburden and extraction, handling, storage and transportation of extractive materials on site
Raw materials	Raw materials imported for use in brick making including clay/shale and additives (such as manganese and iron oxides)
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the development to a good condition, ensuring that it is safe, stable and non-polluting and appropriately revegetated
RMS	Roads and Maritime Services
Secretary	Secretary of the Department, or nominee
SEE (Mod 1)	Statement of Environmental Effects titled ' <i>Section 96(1A) Modification Supporting Information</i> ' dated August 2016 and prepared by Element Environment, including the Response to Submissions document dated September 2016
Site	The land listed under "Land" in schedule 1
Shoulder	The period between 6am to 7am on Monday to Saturday
South West Growth Centre	An area of land identified under the Growth Centres SEPP

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance criteria established under this consent, the Applicant **must** implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.

TERMS OF CONSENT

2. The Applicant **must**:
 - (a) carry out the development generally in accordance with the EIS **and SEE (Mod 1)**; and
 - (b) the conditions of this consent.

Note: The general layout of the development is shown in Appendix 2.

3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.
4. The Applicant **must** comply with any reasonable requirement/s of the Secretary arising the Department's assessment of:
 - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent;
 - (b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; or
 - (c) the implementation of any actions or measures contained in these documents.

LIMITS ON CONSENT

Quarrying and Brick Making Operations

5. The Applicant may carry out quarrying **operations** and brick making operations from the date of commencement of development under this consent until 1 March 2045.

Note: Under this consent, the Applicant is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary. Consequently, this consent will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.

Production Limits

6. The Applicant **must** not:
 - (a) extract more than 200,000 tonnes of clay/shale from the site in any calendar year;
 - (b) produce more than 263,500 tonnes of bricks at the site in any calendar year;
 - (c) carry out quarrying operations beyond 46 m AHD; and
 - (d) receive more than **321,000** tonnes of raw materials required for brick making to the site in any calendar year.

Transportation Limits

7. The Applicant **must** not:
 - (a) transport more than 263,500 tonnes of bricks from the site in a calendar year;
 - (b) receive more than 90 trucks to the site per day or more than 18 trucks per hour; and
 - (c) dispatch more than 90 trucks from the site per day or more than 18 trucks per hour.

NOTIFICATION OF COMMENCEMENT

8. **Prior to commencing development under this consent, the Applicant must notify the Department in writing of the date on which it will commence development permitted under this consent.**

SURRENDER OF EXISTING DEVELOPMENT CONSENT

9. Within 4 months of commencing development under this consent, the Applicant must surrender the development consent (DA 91/1194) for existing operations on the site in accordance with Section 104A of the EP&A Act.

Following the commencement of development under this consent, the conditions of this consent (including any notes) shall prevail to the extent of any inconsistency with the conditions of the existing development consent (DA 91/1194).

STRUCTURAL ADEQUACY

10. The Applicant must ensure that any new buildings and structures, and any alterations, or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

DEMOLITION

11. The Applicant must ensure that all demolition work on site is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

PROTECTION OF PUBLIC INFRASTRUCTURE

12. The Applicant must:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
 - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

Note: This condition does not apply to any damage to roads caused as a result of general road usage.

OPERATION OF PLANT AND EQUIPMENT

13. The Applicant must ensure that all plant and equipment used on site or any monitoring equipment used off site for monitoring the performance of the development is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

UPDATING AND STAGING STRATEGIES, PLANS OR PROGRAMS

14. With the approval of the Secretary, the Applicant may submit any strategies, plans or programs required by this consent on a progressive basis.

To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval.

With the agreement of the Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all parties under the applicable condition of this consent.

Notes:

- While any strategy, plan or program may be submitted on a progressive basis, the Applicant must ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.
- If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

15. Until they are replaced by an equivalent strategy, plan or program approved under this consent, the Applicant **must** implement the existing strategies, plans or programs for the site that have been approved under DA 91/1194.

IDENTIFICATION OF APPROVED LIMITS OF EXTRACTION

16. Prior to undertaking quarrying operations in the extension area, the Applicant **must**:
- (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the development area; and
 - (b) submit a survey plan of these boundaries with applicable GPS coordinates to the Secretary.
17. While quarrying operations are being carried out, the Applicant **must** ensure that these boundaries are clearly marked at all times to allow operating staff and inspecting officers to clearly identify the approved limits of extraction.

PRODUCTION DATA

18. The Applicant **must**:
- (a) provide annual quarry production data to DRE using the standard form for that purpose; and
 - (b) include a copy of this data in the Annual Review (see condition 4 of schedule 5).

DEVELOPER CONTRIBUTIONS

19. The Applicant **must** pay Camden Council road maintenance contributions of \$0.0811 for every tonne of material transported to and from the site, indexed to CPI. Each payment must be:
- (a) paid to Council at the end of each calendar year; and
 - (b) based on weighbridge records of all supplementary brick making materials transported to the site and bricks and spoil transported from the site.

Note: If the parties are not able to agree on any aspect of the maintenance contributions, either party may refer the matter to the Secretary for resolution.

SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

HOURS OF OPERATION

- The Applicant **must** comply with the operating hours set out in Table 1.

Table 1: Operating Hours

Activity	Operating Hours
- Quarrying operations - Deliveries - Dispatch of finished bricks	6am to 6pm, Monday to Friday 6am to 1pm, Saturday No activities on Sundays or Public Holidays
Brick making operations (except dispatch of finished bricks)	24 hours a day, 7 days a week
Construction activities	7am to 6pm, Monday to Friday 8am to 1pm, Saturday No construction to be undertaken on Sundays or Public Holidays

NOISE

Noise Criteria

- The Applicant **must** ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence on privately-owned land.

Table 2: Noise criteria dB(A)

Activity	Receiver	Day/Evening/Shoulder	Night	
		<i>L_{Aeq}(15 min)</i>	<i>L_{Aeq}(15 min)</i>	<i>L_{A1}(max)</i>
Brick making and quarrying	R1, R2	47	Not Applicable	
	R3, R4, R14	46		
	R15, R17	45		
	All other receivers	44		
Brick making	All receivers	44	43	53

Notes:

- To locate the receivers referred to in Table 2 refer to Appendix 3.
- After the first review on any EPL granted for this development under Section 78 of the POEO Act, nothing in this consent prevents the EPA from imposing stricter noise limits on the quarrying operations on site under the EPL.

Appendix 5 sets out the metrological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, these criteria do not apply if the Applicant has a written agreement with the relevant landowner/s to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.

Construction Noise

- The Applicant **must** manage noise generated during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road, in accordance with the guidelines specified in Table 2 of the *Interim Construction Noise Guideline*.

Note: Management guidelines are applicable to receivers 3 and 4, shown in Appendix 3.

Noise Bunds

4. The Applicant must ensure that the noise bund adjacent to the northern boundary of the extraction area is constructed prior to the commencement of quarrying operations in the extension area.
- 4A. The Applicant must ensure that the noise bund adjacent to Greendale Road is constructed prior to the commencement of brick making operations.

Operating Conditions

5. The Applicant **must**:
 - (a) implement all reasonable and feasible mitigation measures to minimise construction, operational and road noise of the development;
 - (b) implement periods of respite during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road;
 - (c) regularly assess noise monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the noise criteria in this consent;
 - (d) maintain the effectiveness of noise suppression equipment on plant and equipment on site;
 - (e) minimise the noise impacts of the development during meteorological conditions under which the noise criteria in this consent do not apply (see Appendix 5); and
 - (f) carry out regular noise monitoring to determine whether the development is complying with the relevant conditions of this consent, to the satisfaction of the Secretary.

Noise Management Plan

6. The Applicant **must** prepare a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (a) be prepared in consultation with the EPA;
 - (b) be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (c) describe the reasonable and feasible mitigation measures that would be implemented to ensure:
 - construction noise is minimise;
 - compliance with the relevant noise criteria and operating conditions in this consent;
 - best management practice is being employed; and
 - the noise impacts of the development are minimised during meteorological conditions under which the noise criteria in this consent do not apply;
 - (d) describe the proposed noise management system on site; and
 - (e) include a quarterly (or as otherwise agreed with the Secretary) noise monitoring program that:
 - uses attended monitoring to evaluate the compliance of the development against the noise criteria in this consent;
 - evaluates and reports on the effectiveness of the noise management system and the best practice noise management measures; and
 - defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

AIR QUALITY

Air Quality Criteria

7. The Applicant **must** implement all reasonable and feasible avoidance and mitigation measures so that particulate matter emissions generated by the development do not exceed the criteria in Tables 3 to 6 at any residence on privately-owned land.

Table 3: Long-Term Criteria for Particulate Matter

Pollutant	Averaging period	^a Criterion
Total suspended particulates (TSP)	Annual	^a 90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³

Table 4: Short-Term Criteria for Particulate Matter

Pollutant	Averaging period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³

Table 5: Long-Term Criteria for Deposited Dust

Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Table 6: Long and Short-Term Stack Emissions

Pollutant	Averaging period	^d Criterion
Sulphur Dioxide	10-minute	712 µg/m ³
	1-Hour	570 µg/m ³
	24-Hour	228 µg/m ³
	Annual	60 µg/m ³
Nitrogen Dioxide	1-Hour	246 µg/m ³
	Annual	62 µg/m ³
Hydrogen Chloride	1 hour	0.14 mg/m ³

Notes to Tables 3-6:

- ^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).
- ^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).
- ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.
- ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Secretary in consultation with EPA.

Operating Conditions

8. The Applicant **must**:
 - (a) implement all reasonable and feasible measures to minimise the stack and dust emissions of the development;
 - (b) minimise surface disturbance and maximise progressive rehabilitation;
 - (c) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see note (d) to Tables 3-6 above); and
 - (d) monitor and report on compliance with the relevant air quality conditions in this consent; to the satisfaction of the Secretary.

Air Quality Management Plan

9. The Applicant **must** prepare an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (a) be prepared in consultation with the EPA;
 - (b) be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (c) describe the measures that would be implemented to ensure:
 - compliance with the air quality criteria and operating conditions under this consent;
 - best practice management is being employed; and
 - the air quality impacts of the development are minimised during adverse meteorological conditions;
 - (d) describe the air quality management system; and
 - (e) include an air quality monitoring program that:
 - evaluates and reports on:
 - o the effectiveness of the air quality management system; and
 - o compliance with the air quality criteria and operating conditions; and
 - defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

METEOROLOGICAL MONITORING

10. For the life of the development, the Applicant **must** ensure that there is a suitable meteorological station operating in the vicinity of the site that:
- (a) complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline; and
 - (b) is capable of continuous measurement of stability class, in accordance with the *NSW Industrial Noise Policy*, or as otherwise approved by EPA.

TRANSPORT

Monitoring of Product Transport

11. The Applicant **must** keep accurate records of the:
- (a) **tonnage** of bricks transported from the site (monthly and annually);
 - (b) amount of raw material imported to the site (monthly and annually); and
 - (c) **tonnage of each type of raw materials imported to the site (monthly and annually);** and provide the Secretary with a summary of this information upon request.

Parking

12. The Applicant **must** provide sufficient parking on-site for all development-related traffic, in accordance with Camden Council's parking codes, to the satisfaction of the Secretary.

Operating Conditions

13. The Applicant **must** ensure that:
- (a) all development-related heavy vehicles enter and exit the site in a forward direction;
 - (b) all laden vehicles entering or exiting the site have their loads covered (with the exception of vehicles carrying bricks);
 - (c) all laden vehicles that have accessed the extraction and/or stockpile areas are cleaned of sand and other material that may fall on the road, before leaving the site;
 - (d) all heavy vehicles exiting the site travel east of the site along Greendale Road to The Northern Road and/or Bringelly Road;
 - (e) the dispatch of laden trucks is avoided during the peak drop-off and pick-up times at the Bringelly Public School to the greatest extent practicable, particularly prior to the upgrade of the Greendale Road/Bringelly Road intersection by RMS; and
 - (f) no trucks queue at the entrance to the site before 6am.

Access Road Intersection Construction

14. Within 12 months of commencing development under this consent, unless otherwise agreed with the Secretary, the Applicant must design and construct the new site access road intersection with Greendale Road in accordance with applicable AUSTROADS standards, to the satisfaction of Camden Council. The Applicant must notify the Secretary in writing within 30 days of obtaining Council approval.

Within 7 days of completing construction and the new site access road being operational, the existing site access road must be permanently closed.

Transport Management Plan

15. The Applicant **must** prepare a Transport Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with RMS, Camden Council, Liverpool City Council and Bringelly Public School, and be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (b) describe the measures that would be implemented to ensure compliance with the transport operating conditions under this consent, including specific measures to avoid **the arrival and**

- dispatch of laden trucks from the site during the peak drop-off and pick-up times at the Bringelly Public School;
- (c) include a Code of Conduct for heavy vehicle drivers that addresses:
- travelling speeds;
 - procedures to minimise noise including a regular Truck Noise Auditing Program;
 - procedures to minimise diesel exhaust emissions;
 - instructions to avoid grouping or convoying of trucks;
 - procedures to ensure that drivers adhere to the designated haulage routes and the haulage hours permitted under this consent;
 - instructions to drivers not to overtake each other on the haulage route, as far as practicable, and to maintain appropriate distances between vehicles; and
 - instruction to drivers to be properly safety conscious and to strictly obey all traffic regulations, particularly in relation to school zones along Greendale Road; and
- (d) describe the measures that would be put in place to ensure compliance with the drivers' Code of Conduct and include a program to monitor the effectiveness of the implementation of these measures.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

SOIL AND WATER

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development, including in respect of the extraction and/or interception of groundwater.

Water Supply

16. The Applicant **must** ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of operations under the consent to match its available water supply to the satisfaction of the Secretary.

Water Discharges

17. The Applicant **must** comply with the discharge limits in any EPL or with Section 120 of the POEO Act.

Water Management Plan

18. The Applicant **must** prepare a Water Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared by suitably qualified person/s approved by the Secretary;
 - (b) be prepared in consultation with the EPA and **DPI Water**;
 - (c) be submitted to the Secretary for approval **prior to the commencement of development under this consent**, unless the Secretary agrees otherwise;
 - (d) include a Site Water Balance that:
 - includes details of:
 - o quantity of water required to support operations;
 - o sources and security of water supply;
 - o water use and management on site;
 - o reporting procedures; and
 - o measures to be implemented to minimise potable water use on site;
 - (e) include a Surface Water Management Plan, that includes:
 - baseline data on surface water flows and quality in the watercourses that could be affected by the development;
 - a description of the surface water management system on site, including:
 - o clean water diversions;
 - o erosion and sediment controls;
 - o the dirty water management system; and
 - o water storages (addressing maximum harvestable rights if applicable);
 - performance criteria, including trigger levels for investigating any potentially adverse surface water quality impacts;
 - a program to monitor and report on:
 - o any surface water discharges;

- o the effectiveness of the water management system; and
 - o surface water flows and quality in local watercourses;
 - a plan to respond to any exceedances of the performance criteria.
- (f) a Groundwater Management Plan, which includes:
- baseline data on groundwater levels, yield and quality in surrounding aquifers;
 - groundwater assessment and performance criteria, including trigger levels for investigating potentially adverse groundwater impacts;
 - a program to monitor:
 - o groundwater inflows to the quarry pit; and
 - o impacts of the development on surrounding aquifers;
 - an analysis of the monitoring results to determine long-term water levels within the quarry void; and
 - a plan to respond to any exceedances of the performance criteria.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

BIODIVERSITY

Biodiversity Offset Strategy

19. The Applicant **must** implement the Biodiversity Offset Strategy described in the EIS, as summarised in Table 7 and shown conceptually in Appendix 4, to the satisfaction of the Secretary.

Table 7: Summary of the Biodiversity Offsets

Area	Offset Criteria	Size (Ha)
On-site offset	Existing vegetation to be enhanced to establish an area of native woodland comprising species associated with Cumberland Plain Woodland.	1.93

Security of Offsets

20. Within 2 years of **notifying the Department of commencement of development (see condition 8 of Schedule 2)**, unless otherwise agreed with the Secretary, the Applicant **must** make suitable arrangements to provide appropriate long-term security for the offset area, to the satisfaction of the Secretary.

Note: Mechanisms to provide appropriate long term security to the land within the Biodiversity Offset Strategy include a Biobanking Agreement, Voluntary Conservation Agreement or an alternative mechanism that provides for a similar conservation outcome. Any mechanism must remain in force in perpetuity.

Biodiversity Management Plan

21. The Applicant **must** prepare a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with the OEH and Camden Council;
 - (b) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - (c) describe how the implementation of the biodiversity offset strategy would be integrated with the overall rehabilitation of the site;
 - (d) describe the short, medium, and long term measures that would be implemented to:
 - manage the remnant vegetation and habitat on the site and in the offset area and;
 - implement the biodiversity offset strategy, including detailed performance and completion criteria;
 - (e) include performance and completion criteria for evaluating the performance of the biodiversity offset strategy, and triggering remedial action (if necessary);
 - (f) include a description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for:
 - maximising the salvage of resources within the approved disturbance area - including vegetative, soil and cultural heritage resources – for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area;

- minimising the impacts on fauna on site, including pre-clearance surveys and minimising the potential exposure to tailings;
 - controlling weeds and feral pests;
 - controlling erosion;
 - controlling access; and
 - bushfire management;
- (g) identify the potential risks to the successful implementation of the biodiversity offset strategy, and include a description of the contingency measures that would be implemented to mitigate against these risks; and
- (h) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

Conservation Bond

22. Within 6 months of the approval of the Biodiversity Management Plan, the Applicant **must** lodge a conservation bond with the Department to ensure that the biodiversity offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan.

The sum of the bond **must** be determined by:

- a. calculating the full cost of implementing the biodiversity offset strategy (other than land acquisition costs); and
- b. employing a suitably qualified quantity surveyor to verify the calculated costs,
- c. to the satisfaction of the Secretary.

The calculation of the conservation bond must be submitted to the Department for approval at least 1 month prior to lodgement of the final bond.

If the offset strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the Secretary, the Secretary will release the bond.

If the offset strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Secretary will call in all, or part of, the conservation bond, and arrange for the satisfactory completion of the relevant works.

Notes:

- *Alternative funding arrangements for long term management of the biodiversity offset strategy, such as provision of capital and management funding as agreed by OEH as part of a Biobanking Agreement or transfer to conservation reserve estate (or any other mechanism agreed with OEH) can be used to reduce the liability of the conservation bond.*
- *The sum of the bond may be reviewed in conjunction with any revision to the biodiversity offset strategy or the completion of major milestones within the approved plan.*

REHABILITATION

Rehabilitation Objectives

23. The Applicant **must** rehabilitate the site to the satisfaction of the Secretary. Rehabilitation must:
- a. comply with the objectives in Table 8; and
 - b. be generally consistent with the proposed rehabilitation strategy in the EIS, and the final land form shown conceptually in Appendix 4 (unless modified by the Final Land Use Options Plan, prepared in accordance with condition 25 of this consent).

Table 8: Rehabilitation Objectives

Feature	Objective
Site (as a whole)	• Safe, stable and non-polluting • Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of local native species and habitat

Surface infrastructure	To be decommissioned and removed (unless the Secretary agrees otherwise)
Final void	- Minimise the size, depth and slope of the batters of the final void - Minimise the drainage catchment of the final void
Quarry pit floor	Landscaped and revegetated using native flora species, above the anticipated final void water level
Community	Ensure public safety

Progressive Rehabilitation

24. The Applicant **must** rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.

Final Land Use Options Plan

25. The Applicant **must** prepare a Final Land Use Options Plan for the site to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with DRE and Camden Council;
 - be submitted to the Secretary for approval within 2 years of the date of [notifying the Department of commencement of development \(see condition 8 of Schedule 2\)](#), unless the Secretary agrees otherwise;
 - provide details of the conceptual final landform and associated final land uses for the site;
 - ensure that the conceptual final land form is compatible with surrounding land uses, and is consistent with the rehabilitation objectives in Table 8 and the objectives of the Growth Centres SEPP for the South West Growth Centre;
 - inform the Rehabilitation Management Plan (prepared in accordance with condition 26 of this consent); and
 - be reviewed every 7 years to account for applicable land use priorities, and if necessary updated.

Rehabilitation Management Plan

26. The Applicant **must** prepare a Rehabilitation Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH, DRE, [DPI Water](#) and Camden Council;
 - be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - provide details of the conceptual final landform and associated land uses for the site (which must be consistent with the Final Land Use Options Plan under condition 25 of this consent);
 - describe the short, medium and long term measures that would be implemented to:
 - manage remnant vegetation and habitat on site; and
 - ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this consent;
 - include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, including triggers for any necessary remedial action;
 - include a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria; and
 - include details of who would be responsible for monitoring, reviewing, and implementing the plan.

[The Applicant must implement the approved management plan as approved from time to time by the Secretary.](#)

Note: The Rehabilitation Management Plan must be reviewed, and if necessary updated, following any update of the Final Land Use Options Plan.

HERITAGE

Heritage Management Plan

27. The Applicant **must** prepare a Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH;
 - (a) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - b. describe the measures that would be implemented to:
 - manage identified heritage objects, previously unidentified heritage objects or the discovery of any human remains on site;
 - ensure ongoing consultation with Aboriginal stakeholders in the conservation and management of any Aboriginal cultural heritage values on site; and
 - protect sites identified adjacent to the development.

The Applicant **must** implement the approved management plan as approved from time to time by the Secretary.

VISUAL

28. The Applicant **must** establish a vegetation screen on both noise bunds, as soon as practicable after construction of the bunds, to minimise visibility of site infrastructure from outside the development area. Following establishment, the Applicant **must** maintain the vegetation screen, to the satisfaction of the Secretary.
29. The Applicant **must**:
- implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development; and
 - b) ensure that all external lighting associated with the development complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*, or its latest version.

BUSHFIRE MANAGEMENT

30. The Applicant **must**:
- ensure that the development is suitably equipped to respond to any fires on site; and
 - b) assist the Rural Fire Service, emergency services and National Parks and Wildlife Service as much as practicable if there is a fire in the surrounding area.

WASTE

31. Prior to importing onto the site any material that may be classified as a waste under the EPA *Waste Classification Guidelines 2009* (or its latest version), the Applicant must obtain a 'resource recovery exemption' under the POEO Act and provide evidence of this exemption to the Department.

Note: This condition does not apply to routine deliveries to the site.

32. The Applicant **must**:
- manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Camden Council; and
 - b) pump all sewage generated and stored on-site to a sewage treatment facility, unless otherwise agreed with the Secretary.
33. The Applicant **must**:
- minimise the waste generated by the development;
 - b) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and
 - c) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. As soon as practicable after obtaining monitoring results showing an exceedance of any relevant criteria in schedule 3, the Applicant **must** notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the development is again complying with the relevant criteria.

INDEPENDENT REVIEW

2. If an owner of privately-owned land considers the development to be exceeding the relevant criteria in schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Applicant **must**:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
 - consult with the landowner to determine his/her concerns;
 - conduct monitoring to determine whether the development is complying with the relevant criteria in schedule 3;
 - if the development is not complying with these criteria then identify the measures that could be implemented to ensure compliance with the relevant criteria; and
- (b) give the Secretary and landowner a copy of the independent review.

SCHEDULE 5
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. If the Secretary requires, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
 - (a) be submitted to the Secretary for approval within 6 months of the Secretary requiring preparation of the strategy by notice to the Applicant;
 - (b) provide the strategic framework for environmental management of the development;
 - (c) identify the statutory approvals that apply to the development;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance;
 - respond to emergencies; and
 - (f) include:
 - copies of any strategies, plans and programs approved under the conditions of this consent; and
 - a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.

The Applicant must implement any Environmental Management Strategy as approved from time to time by the Secretary.

Adaptive Management

2. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity:

- (a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Secretary; to the satisfaction of the Secretary.

Management Plan Requirements

3. The Applicant must ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria; and
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:

- impacts and environmental performance of the development; and
- effectiveness of any management measures (see (c) above);
- (e) a contingency plan to manage any unpredicted impacts and their consequences;
- (f) a program to investigate and implement ways to improve the environmental performance of the development over time;
- (g) a protocol for managing and reporting any:
 - incidents;
 - complaints;
 - non-compliances with statutory requirements; and
 - exceedances of the impact assessment criteria and/or performance criteria; and
- (h) a protocol for periodic review of the plan.

Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

Annual Review

4. By the end of September each year, the Applicant [must submit a report to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary](#). This review must:
 - (a) describe the development (including rehabilitation) that was carried out in the previous [financial](#) year, and the development that is proposed to be carried out over the current [financial](#) year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous [financial](#) year, which includes a comparison of these results against:
 - the relevant statutory requirements, limits or performance measures/criteria;
 - the monitoring results of previous years; and
 - the relevant predictions in the [documents in condition 2\(a\) of Schedule 2](#);
 - (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the development;
 - (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measures will be implemented over the current [financial](#) year to improve the environmental performance of the development.

Revision of Strategies, Plans and Programs

5. [Within 3 months of the submission of an:](#)
 - (a) [Annual Review under condition 4 above;](#)
 - (b) [incident report under condition 7 below;](#)
 - (c) [audit report under condition 9 below; and](#)
 - (d) [any modifications to this consent,](#)
 the Applicant must review the strategies, plans and programs required under this consent, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Secretary.

Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the development.

Community Consultative Committee

6. The Applicant [must](#) establish and operate a Community Consultative Committee (CCC) for the development to the satisfaction of the Secretary. This CCC must be operated in general accordance with the [Guidelines for Establishing and Operating Community Consultative Committees for Mining Developments](#) (Department of Planning, 2007, or its latest version), and be operating [prior to the commencement of development under this consent](#).

Notes:

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.*

- In accordance with the guideline, the Committee should comprise an independent chair and appropriate representation from the Applicant, Camden Council and the local community.

REPORTING

Incident Reporting

7. The Applicant **must** immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Applicant **must** provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Regular Reporting

8. The Applicant **must** provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

INDEPENDENT ENVIRONMENTAL AUDIT

9. Within a year of **commencing development under this consent**, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant **must** commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
 - (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL and/or Water Licence (including any assessment, plan or program required under these approvals);
 - (d) review the adequacy of any approved strategy, plan or program required under these approvals;
 - (e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals; **and be conducted and reported to the satisfaction of the Secretary.**

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.

10. Within **12 weeks of commencing** this audit, unless the Secretary agrees otherwise, the Applicant **must** submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report, including a timetable for the implementation of any measures proposed to address the recommendations in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.

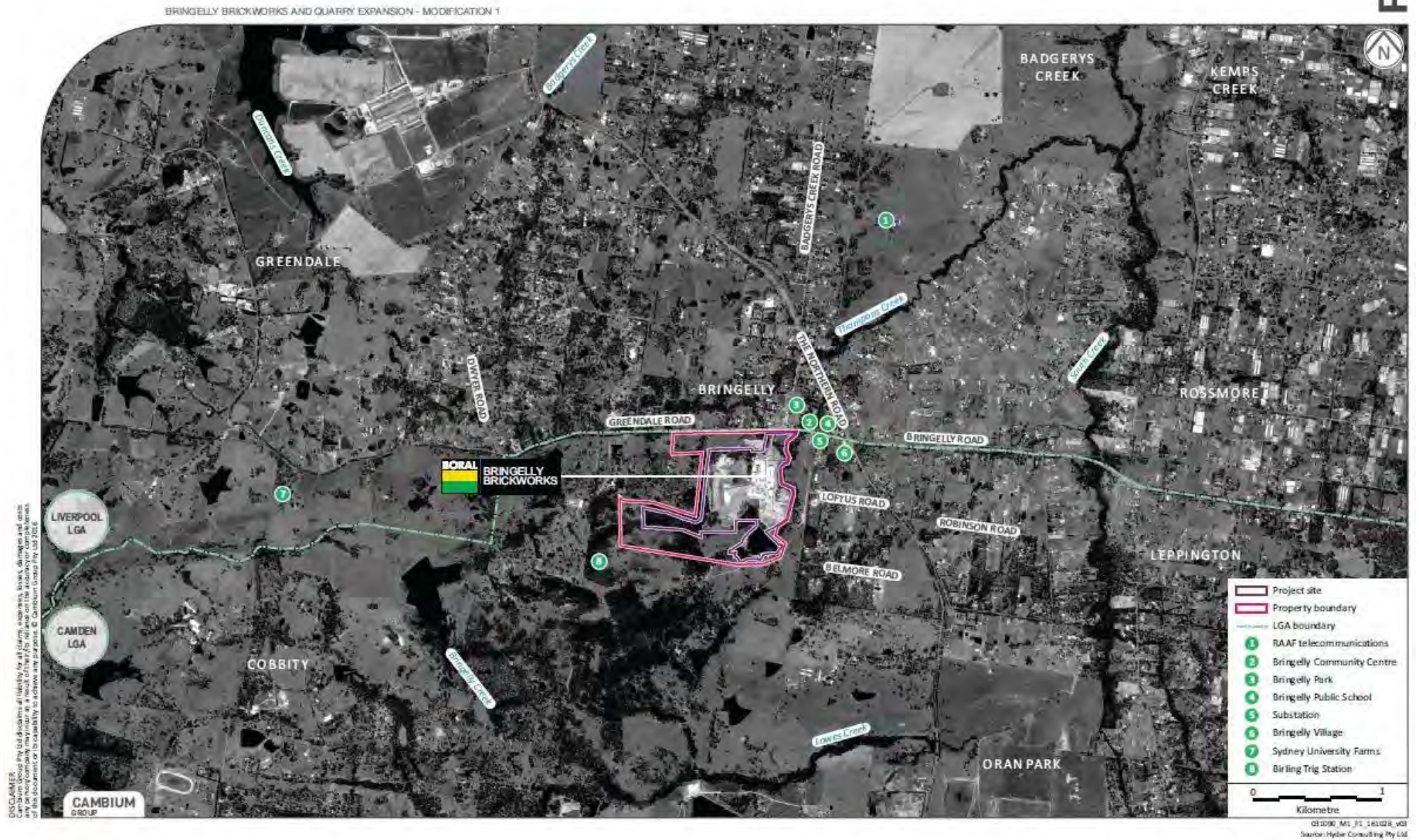
Within 7 days of commencing the audit, the Applicant must notify the Department in writing of the commencement of the audit.

ACCESS TO INFORMATION

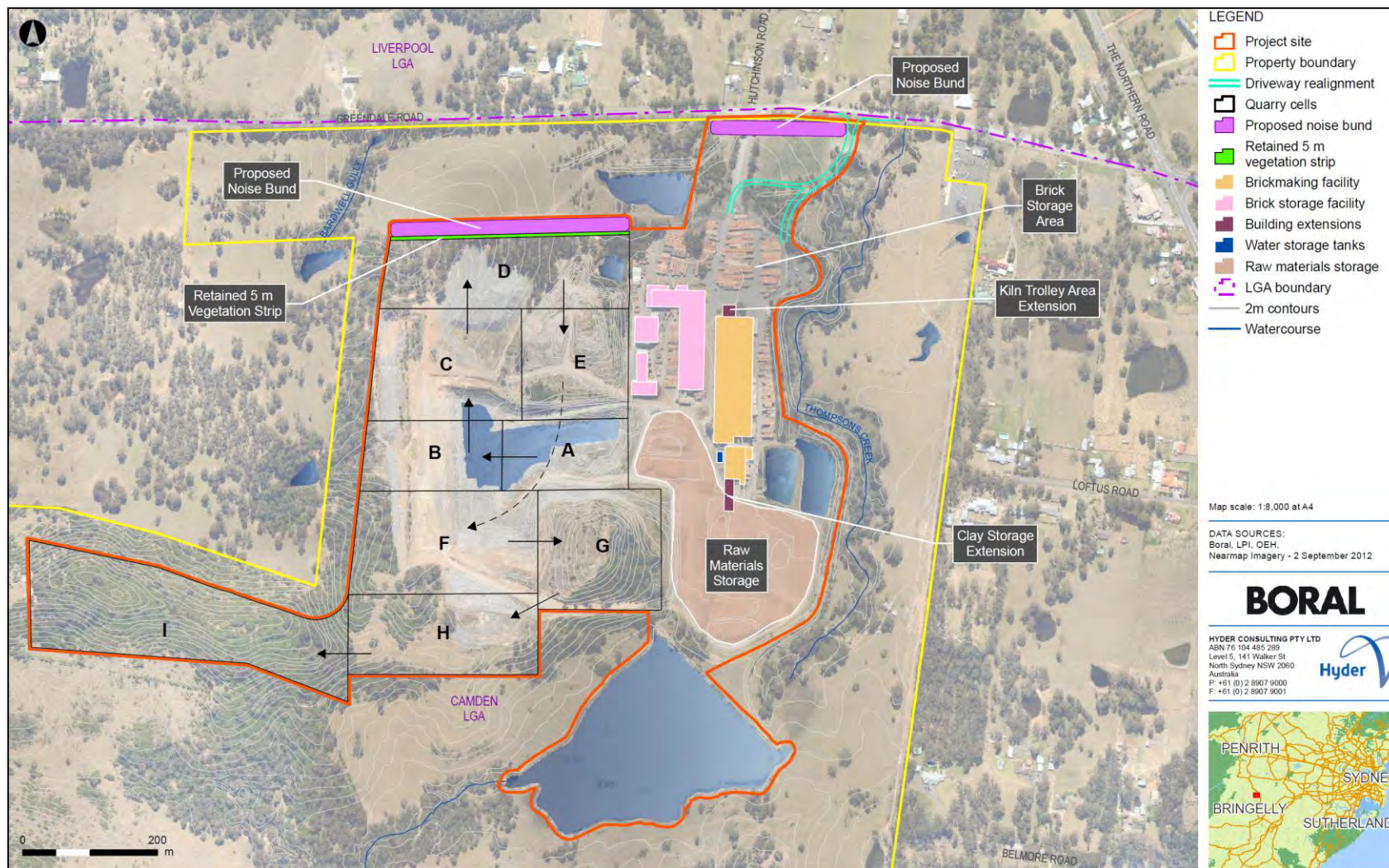
11. Within 6 months of **commencing development under this consent**, the Applicant **must**:
 - (a) make copies of the following publicly available on its website:
 - the documents in **condition 2(a) of Schedule 2**;
 - current statutory approvals for the development;
 - approved strategies, plans and programs required under the conditions of this consent;
 - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - a complaints register, which is to be updated monthly;
 - minutes of CCC meetings;
 - the annual reviews of the development (for the last 5 years);
 - any independent environmental audit of the development, and the Applicant's response to the recommendations in any audit;
 - any other matter required by the Secretary; and

(b) keep this information up-to-date,
to the satisfaction of the Secretary.

APPENDIX 1 DEVELOPMENT AREA



APPENDIX 2 DEVELOPMENT LAYOUT



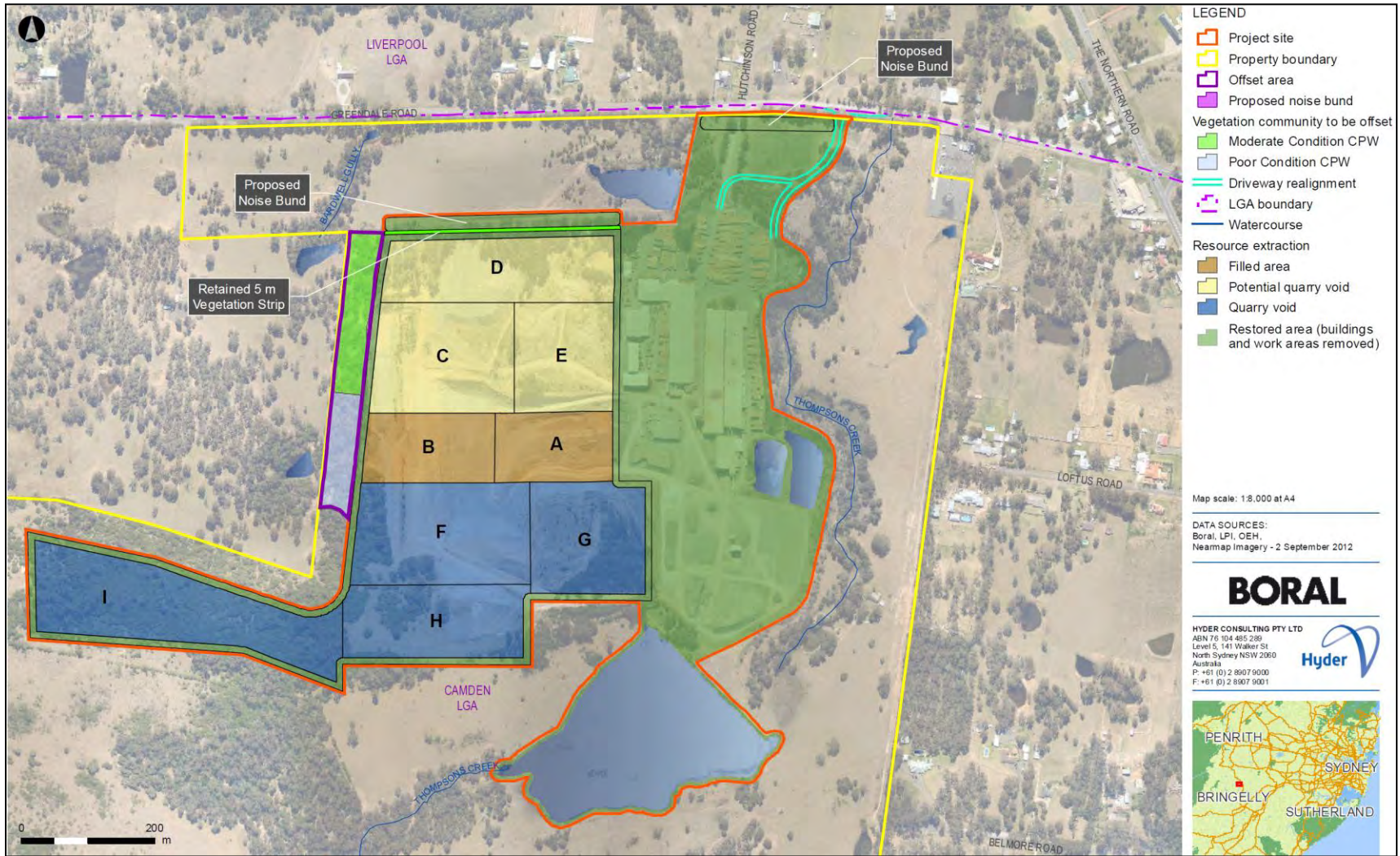
APPENDIX 3 RECEIVER LOCATIONS



Receiver number	Receiver address
1	55 Loftus Road
2	54 Loftus Road
3	20 Greendale Road
4	9 Greendale Road
5	5 Greendale Road (Bringelly Community Centre)
6	46 Loftus Road
7	36 Loftus Road
8	47 Loftus Road
9	37 Loftus Road
10	27 Loftus Road
11	26 Loftus Road
12	15 Loftus Road
13	5 Loftus Road
14	23 Greendale Road
15	27 Greendale Road
16	29 Greendale Road
17	25 Greendale Road
18	31 Greendale Road
19	35 Greendale Road
20	170 Tyson Road
21	196 Greendale Road
22	46 Belmore Road
23	55 Belmore Road
24	63 Belmore Road
25	67 Belmore Road
26	73 Belmore Road
27	83-85 Belmore Road
28	76 Belmore Road
29	86 Belmore Road
30	87 Belmore Road
31	93 Belmore Road
32	95-97 Belmore Road
33	107 Belmore Road
34	96 Belmore Road
35	108 Belmore Road
36	1037 Northern Road
37	10 Greendale Road
38	Bringelly Public School

APPENDIX 4

CONCEPTUAL FINAL LANDFORM AND BIODIVERSITY OFFSET STRATEGY



APPENDIX 5 NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 2 of the conditions are to apply under all meteorological conditions except the following:
 - (a) wind speeds greater than 3 m/s at 10 m above ground level; or
 - (b) temperature inversion conditions between 1.5 °C and 3°C/100 m and wind speeds greater than 2 m/s at 10 m above ground level; or
 - (c) temperature inversion conditions greater than 3°C/100 m.

Determination of Meteorological Conditions

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions **must** be that recorded by the meteorological station on or in the vicinity of the site.

Compliance Monitoring

3. Unless directed otherwise by the Secretary, quarterly attended monitoring is to be used to evaluate compliance with the relevant conditions of consent.

Note: The Secretary may direct that the frequency of attended monitoring increase or decrease at any time during the life of the development.

4. Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
 - (a) monitoring locations for the collection of representative noise data;
 - (b) meteorological conditions during which collection of noise data is not appropriate;
 - (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
 - (d) modifications to noise data collected including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.

Appendix B

Mine Lease 1731

Conditions

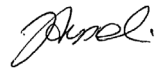
Instrument of Variation

Mining Lease 1731 (1992)

I, **JAMIE TRIPODI, Executive Director Assessments & Systems**, Mining Exploration and Geoscience in the Department of Regional NSW, with the delegated authority of the Minister under section 261B and clause 12 of Schedule 1B of the *Mining Act 1992* (the Act), **vary** the conditions of mining lease **ML 1731 (1992)** as described in Schedule A.

The conditions of **ML 1731 (1992)**, as varied, are set out in Schedule B.

The variation takes effect on 17 October 2022.



JAMIE TRIPODI

Executive Director Assessments & Systems

As delegate for the Minister administering the *Mining Act 1992*

Delegation date: 14 May 2018

Dated: 14 August 2022

Schedule A

Condition		Variation	New Condition
	Definitions	Definitions of 'Department', 'Environment' 'Environmental incident notifications and reports' and 'Harm to the environment' omitted as no longer used.	N/A
1	Notice to Landholders	Wording amended to modernise the condition	1. Notice to Landholders – see Schedule B
2	Rehabilitation	Condition omitted	N/A
3	Mining Operations Plan and Annual Rehabilitation Report	Condition omitted	N/A
4	Non-Compliance Reporting	Condition omitted	N/A
5	Environmental Incident Report	Condition omitted	N/A
7	Resource Recovery	Condition omitted	N/A
8	Security	Condition amended to modernise the wording. Condition has been re-numbered due to omission of other conditions.	2. Security– see Schedule B
9	Cooperation Agreement	Condition amended to modernise the wording. Condition has been re-numbered due to omission of other conditions.	3. Cooperation Agreement – see Schedule B
N/A		New condition attached	4. Assessable Prospecting Operations– see Schedule B
<u>SPECIAL CONDITIONS</u>			

Nil

Schedule B

Mining Lease Conditions

(Version as at February 2022)

Definitions

Words used in this mining lease have the same meaning as defined in the *Mining Act 1992* except where otherwise defined below:

Term	Definition
Act	means the <i>Mining Act 1992</i> .
Landholder	for the purposes of these conditions: • does not include a secondary landholder • includes, in the case of exempted areas, the controlling body for the exempted area.
Minister	means the Minister administering the Act.

Note:

1. The rights and duties of the Lease Holder(s) are those prescribed by the *Mining Act 1992* and the Mining Regulation 2016, subject to the terms and conditions of this mining lease.
2. This mining lease does not override any obligation on the lease holder(s) to comply with the requirements of other legislation and regulatory instruments which may apply (including all relevant development approvals) unless specifically provided under the *Mining Act 1992* or other legislation or regulatory instruments.

MINING LEASE CONDITIONS

Standard conditions

See Mining Regulation 2016, Schedule 8A, Part 2.

NOTE TO HOLDERS: The prescribed standard conditions in the Mining Regulation 2016, Schedule 8A, Part 2 apply in addition to the conditions in this Schedule 2 (but have not been replicated in this mining lease). The conditions imposed by the Mining Regulation 2016 prevail to the extent of any inconsistency with the conditions in this Schedule 2.

General conditions

1. Notice to Landholders

- (a) Within 90 days from the date of grant or renewal of this mining lease, the lease holder must give each landholder notice in writing:

- (i) that this mining lease has been granted or renewed; and
- (ii) whether the lease includes the surface.

The notice must include a plan identifying the lease area and each landholder and individual land parcel within the lease area.

- (b) If there are ten or more landholders to which notice must be given, the lease holder will be taken to have complied with condition 1(a) if a notice complying with condition 1(a) is published in a newspaper circulating in the region where the lease area is situated.

2. Security

The lease holder is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations under the mining lease, including obligations under the mining lease that may arise in the future.

The amount of the security deposit to be provided has been assessed at **\$776,000**.

3. Cooperation Agreement

The lease holder must make every reasonable attempt, and be able to demonstrate its attempts to the satisfaction of the Secretary, to enter into a cooperation agreement with the holder(s) of any overlapping authorisations issued under the *Mining Act 1992* and petroleum titles issued under the *Petroleum (Onshore) Act 1991*. The cooperation agreement should address but not be limited to:

- access arrangements
- operational interaction procedures
- dispute resolution
- information exchange
- well location
- timing of drilling

Mining Lease Conditions 2021	Version Date: February 2022
Mining Lease 1731 (Act 1992)	Page 4 of 5

- potential resource extraction conflicts; and
- rehabilitation issues.

4. Assessable Prospecting Operations

- (a) The lease holder must not carry out any assessable prospecting operation on land over which this lease has been granted unless:
 - (i) it is carried out in accordance with any necessary development consent; or
 - (ii) if development consent is not required, the prior written approval of the Minister has been obtained.
- (b) The Minister may require the lease holder to provide such information as required to assist the Minister to consider an application for approval.
- (c) An approval granted by the Minister under this condition may be granted subject to terms.
- (d) The lease holder must comply with the approval granted to the holder under this condition.

Special conditions

Nil

Exploration Reporting

Note: Exploration Reports (Geological and Geophysical)

The lease holder must lodge reports in accordance with the requirements in section 163C of the Mining Act 1992 and clauses 59, 60 and 61 of the Mining Regulation 2016 as well as any further requirements issued by the Secretary under clause 62 of the Mining Regulation.

Guidelines for the structure, content and data format requirements for reports are set out in the Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales.

Appendix C

EPA Licence 1808

Conditions



Environment Protection Licence

Licence - 1808

Licence Details	
Number:	1808
Anniversary Date:	01-June

Licensee
PGH BRICKS & PAVERS PTY LIMITED
LOCKED BAG 1345
NORTH RYDE NSW 1670

Premises
BRINGELLY
LOT 2 GREENDALE ROAD
BRINGELLY NSW 2556

Scheduled Activity
Ceramic works
Crushing, grinding or separating
Extractive activities
Mining for minerals

Fee Based Activity	Scale
Ceramics production	> 50000-200000 T annual production capacity
Crushing, grinding or separating	> 100000-500000 T annual processing capacity
Land-based extractive activity	> 100000-500000 T annual capacity to extract, process or store
Mining for minerals	> 100000-500000 T annual production capacity

Region
Metropolitan South - Wollongong
Level 3, NSW Govt Offices, 84 Crown Street
WOLLONGONG NSW 2500
Phone: (02) 4224 4100
Fax: (02) 4224 4110
PO Box 513
WOLLONGONG EAST NSW 2520

Environment Protection Licence

Licence - 1808

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Environment Protection Licence

Licence - 1808



Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Environment Protection Licence

Licence - 1808



The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

PGH BRICKS & PAVERS PTY LIMITED
LOCKED BAG 1345
NORTH RYDE NSW 1670

subject to the conditions which follow.

Environment Protection Licence

Licence - 1808

1 Administrative Conditions

A1 What the licence authorises and regulates

- A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Ceramic works	Ceramics production	> 50000 - 200000 T annual production capacity
Crushing, grinding or separating	Crushing, grinding or separating	> 100000 - 500000 T annual processing capacity
Extractive activities	Land-based extractive activity	> 100000 - 500000 T annual capacity to extract, process or store
Mining for minerals	Mining for minerals	> 100000 - 500000 T annual production capacity

A2 Premises or plant to which this licence applies

- A2.1 The licence applies to the following premises:

Premises Details
BRINGELLY
LOT 2 GREENDALE ROAD
BRINGELLY
NSW 2556
LOT 11 DP 1125892

A3 Information supplied to the EPA

- A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998;

Environment Protection Licence

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and

b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

P1.1 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

<i>Air</i>			
EPA identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
2	Discharge to Air; Air Emissions Monitoring	Discharge to Air; Air Emissions Monitoring	Kiln exhaust stack as marked on map showing locations of discharge points submitted to the EPA with Licence Information Form dated 9/05/00.

P1.2 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

P1.3 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

<i>Water and land</i>			
EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Discharge and Monitoring; Discharge to waters	Discharge and Monitoring; Discharge to waters	Outlet from Dam 1 on map labelled: Site Layout Plan, Figure 2, Water Management Plan dated 10.11.15 (EPA DOC15/464889-02). Discharge point is located on the NE corner of Dam 1.
5	Discharge and Monitoring; Discharge to waters	Discharge and Monitoring; Discharge to waters	Discharge from Dam 5 on map labelled: Site Layout Plan, Figure 2, Water Management Plan dated 10.11.15 (EPA DOC15/464889-02). Discharge point is located on the NW corner of Dam 5.

Environment Protection Licence

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3 Limit Conditions

L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

- L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.
- L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
Coarse Particulates (Air)	8400.00
Fine Particulates (Air)	33300.00
Fluoride (Air)	11700.00
Nitrogen Oxides - Summer (Air)	
Nitrogen Oxides (Air)	90300.00
Sulfur Oxides (Air)	186500.00

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

L3 Concentration limits

- L3.1 For each monitoring/discharge point or utilisation area specified in the table\ below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.
- L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.
- L3.4 Air Concentration Limits

Environment Protection Licence

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POINT 2

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Total Solid Particles	milligrams per cubic metre	100			
Hydrogen fluoride	milligrams per cubic metre	50			
Nitrogen Oxides	milligrams per cubic metre	2000			

L3.5 Water and/or Land Concentration Limits

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Oil and Grease	milligrams per litre	-	-	-	10
pH	pH	-	-	-	6.5-8.5
Turbidity	nephelometric turbidity units	-	-	-	150

POINT 5

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Conductivity	microsiemens per centimetre	-	-	-	1450
Oil and Grease	milligrams per litre	-	-	-	10
pH	pH	-	-	-	6.5-8.5
Turbidity	nephelometric turbidity units	-	-	-	150

L3.6 Exceedance of a quality limit specified in this Licence for the discharge of total suspended solids or turbidity from Point 1 or Point 5 is only permitted if the discharge from Point 1 or Point 5 occurs solely as a result of rainfall. The rainfall must be equal to, or greater than, a 90th percentile 5-day rain event.

L3.7 For the purposes of Condition L3.6, a 90th percentile 5-day rain event equates to rainfall of 50

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millimetres over a consecutive five day period.

- L3.8 For the purposes of the condition(s) above, rainfall data recorded by the meteorological station identified as the Bureau of Meteorology (BoM) *Badgerys Creek* Weather Station must be used to determine the rain event.

L4 Noise limits

- L4.1 Noise from the mobile plant must not exceed an LA10 (15 minute) noise emission criterion of 35 dB(A) at all times.

except as expressly provided by this licence.

- L4.2 Noise from the premises must not exceed an LA10 (15 minute) noise emission criterion of 35 dB(A) at all times.

except as expressly provided by this licence.

- L4.3 Noise from the premises is to be measured or computed at any point within 30 metres of the most affected residence to determine compliance with condition L4.1 and L4.2 5dB(A) must be added if the noise is tonal or impulsive in character

4 Operating Conditions

O1 Activities must be carried out in a competent manner

- O1.1 Licensed activities must be carried out in a competent manner.

This includes:

- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

- a) must be maintained in a proper and efficient condition; and
- b) must be operated in a proper and efficient manner.

O3 Dust

- O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.



Environment Protection Licence

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5 Monitoring and Recording Conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
- a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
- a) the date(s) on which the sample was taken;
 - b) the time(s) at which the sample was collected;
 - c) the point at which the sample was taken; and
 - d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

- M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:
- M2.2 Air Monitoring Requirements

POINT 2

Pollutant	Units of measure	Frequency	Sampling Method
Hydrogen fluoride	milligrams per cubic metre	Yearly	TM-9
Nitrogen Oxides	milligrams per cubic metre	Yearly	TM-11
Total Solid Particles	milligrams per cubic metre	Yearly	TM-15

M2.3 Water and/ or Land Monitoring Requirements

POINT 1

Pollutant	Units of measure	Frequency	Sampling Method

Environment Protection Licence

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Oil and Grease	milligrams per litre	Weekly during any discharge	Grab sample
pH	pH	Weekly during any discharge	Grab sample
Turbidity	nephelometric turbidity units	Weekly during any discharge	Grab sample

POINT 5

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	microsiemens per centimetre	<24hrs prior to discharge	Grab sample
Oil and Grease	milligrams per litre	<24hrs prior to discharge	Grab sample
pH	pH	<24hrs prior to discharge	Grab sample
Turbidity	nephelometric turbidity units	<24hrs prior to discharge	Grab sample

M3 Testing methods - concentration limits

- M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:
- any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or
 - if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or
 - if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The *Protection of the Environment Operations (Clean Air) Regulation 2010* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

- M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Testing methods - load limits

Note: Division 3 of the *Protection of the Environment Operations (General) Regulation 2009* requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the

Environment Protection Licence

Licence - 1808



Administrative Conditions of this licence.

M5 Recording of pollution complaints

- M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M5.2 The record must include details of the following:
- a) the date and time of the complaint;
 - b) the method by which the complaint was made;
 - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M6 Telephone complaints line

- M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M6.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M6.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

6 Reporting Conditions

R1 Annual return documents

- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
- 1. a Statement of Compliance,
 - 2. a Monitoring and Complaints Summary,
 - 3. a Statement of Compliance - Licence Conditions,
 - 4. a Statement of Compliance - Load based Fee,
 - 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
 - 6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and

Environment Protection Licence

Licence - 1808



7. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:

- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:

- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:

- a) the assessable pollutants for which the actual load could not be calculated; and
- b) the relevant circumstances that were beyond the control of the licensee.

R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.8 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- a) the licence holder; or
- b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

Environment Protection Licence

Licence - 1808



R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
- and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:

- a) the cause, time and duration of the event;
- b) the type, volume and concentration of every pollutant discharged as a result of the event;
- c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
- d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
- f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
- g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

7 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

Environment Protection Licence

Licence - 1808

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

G2 Other general conditions

G2.1 Completed Programs

Program	Description	Completed Date
PRP 1 - WATER MONITORING PROGRAM	Water monitoring program for conductivity in discharges into Thompsons Creek from Licensed Discharge Point 4.	30-May-2014
PRP 2 - WATER MANAGEMENT PLAN	Protect and reduce the impact on Thompsons Creek by preparing a Water Management Plan (WMP) which outlines options to improve on site water management and reduce pollutant loads discharged from the site to Thompsons Creek.	13-November-2015

8 Special Conditions

E1 Summary Table of Special Conditions Completed

E1.1

No.	Special Condition	Description	Completed Date
1	Water Quality	To submit a report confirming details of all surface water; process water and effluent management systems; all existing sedimentation controls; modifications required; and timetable for implementation.	1 Nov 2002
2	Surface water management options	To submit a report on the best utilisation of water from dams 5 & 6.	1 Mar 2005

Environment Protection Licence

Licence - 1808

Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Environment Protection Licence

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .



Environment Protection Licence

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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Ms Nadia Kanhoush

Environment Protection Authority

(By Delegation)

Date of this edition: 10-August-2000

Environment Protection Licence

Licence - 1808

End Notes

- 1 Licence varied by Change of contact details, issued on 20-Nov-2001, which came into effect on 20-Nov-2001.
- 2 Licence varied by notice 1016336, issued on 27-Jun-2002, which came into effect on 22-Jul-2002.
- 3 Licence varied by notice 1040220, issued on 23-Sep-2004, which came into effect on 18-Oct-2004.
- 4 Licence varied by notice 1043879, issued on 21-Jan-2005, which came into effect on 15-Feb-2005.
- 5 Licence varied by notice 1051526, issued on 05-Sep-2005, which came into effect on 30-Sep-2005.
- 6 Licence varied by notice 1062983, issued on 28-Aug-2006, which came into effect on 28-Aug-2006.
- 7 Licence varied by change to legislation, issued on 06-Jul-2007, which came into effect on 06-Jul-2007.
- 8 Licence varied by notice 1076143, issued on 19-Sep-2007, which came into effect on 19-Sep-2007.
- 9 Licence varied by notice 1079902, issued on 15-Nov-2007, which came into effect on 15-Nov-2007.
- 10 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 11 Licence varied by change to FBA for summer pollutants, issued on 16-Jan-2009, which came into effect on 16-Jan-2009.
- 12 Licence varied by notice 1503297 issued on 23-Jan-2012
- 13 Licence varied by notice 1510257 issued on 06-Feb-2013
- 14 Licence varied by notice 1520429 issued on 20-May-2014
- 15 Licence varied by notice 1524516 issued on 28-Aug-2014
- 16 Licence transferred through application 1530191 approved on 04-May-2015 , which came into effect on 04-May-2015
- 17 Licence format updated on 04-May-2015
- 18 Licence format updated on 05-May-2015
- 19 Licence varied by notice 1536325 issued on 04-Mar-2016
- 20 Licence varied by notice 1597020 issued on 11-Aug-2020

Appendix D

Bore Licences

Information about a water licence or approval

Use this tool to search for information about water licences and approvals issued under the *Water Act 1912* or *Water Management Act 2000*.

Select the type of licence or approval and enter the licence or approval number:

- **Water access licence (WAL):** a WAL number starts with the letters 'WAL' followed by several numbers; a WAL also has a reference number that starts with a two digit number, followed by 'AL' and then several numbers.
- **1912 water licence:** a water licence number starts with a two digit number, followed by a two letter code and then several numbers. Note: a PT reference number cannot be entered.
- **Approval:** an approval number starts with a two digit number, followed by a two letter code (WA, UA, CA or FW) and then several numbers.

Search for information about either a:

- ☐ [Water access licence \(WAL\) issued under the *Water Management Act 2000*](#)
- ☐ [Water Act 1912 Licences and Authorities](#)
- ☐ [Approval issued under the *Water Management Act 2000*](#)

Find out if a *Water Act 1912* licence has been converted

☒ Water licence conversion status

Water Licence Number

10 ▼

BL ▼

605629

Notes:

Water Act 1912 licences and authorities are being converted to water access licences and approvals under the *Water Management Act 2000* as water sharing plans commence (see [licence conversion](#)).

If a *Water Act 1912* licence has been converted, the search results will display the water access licences and approvals that have been created. Water access licences are registered in the [Water Access Licence Register](#) administered by NSW Land Registry Services. Those water access licences that do not display a WAL number in the search results are still to have their licence details confirmed and completed.

Due to privacy laws very little information on *Water Act 1912* licence and authorities can be made freely available. Full information for a particular licence or authority can be obtained if required for conveyancing by applying to WaterNSW. See [legal searches for water related interests](#).

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Search Results

The licence 10BL605629 has not been converted and is not subject to a water sharing plan.

Disclaimer: WaterNSW is making the information available on the understanding that it does not warrant that the information is suitable for any intended use. In using the information supplied, the user acknowledges that they are responsible for any deductions or conclusions arrived at from interpretation of the data.

Privacy: The information provided is limited to meet the requirements of section 57 of the *Privacy and Personal Information Act 1998*.

Exporting and printing: Search results show a maximum of 50 rows per page. Search results can only be printed page by page.

More information: Should you require further information or technical assistance, please submit your request to water.enquiries@waternsw.com.au or contact 1300 662 077

Information about a water licence or approval

Use this tool to search for information about water licences and approvals issued under the *Water Act 1912* or *Water Management Act 2000*.

Select the type of licence or approval and enter the licence or approval number:

- **Water access licence (WAL):** a WAL number starts with the letters 'WAL' followed by several numbers; a WAL also has a reference number that starts with a two digit number, followed by 'AL' and then several numbers.
- **1912 water licence:** a water licence number starts with a two digit number, followed by a two letter code and then several numbers. Note: a PT reference number cannot be entered.
- **Approval:** an approval number starts with a two digit number, followed by a two letter code (WA, UA, CA or FW) and then several numbers.

Search for information about either a:

☐ [Water access licence \(WAL\) issued under the *Water Management Act 2000*](#)

☒ **[Water Act 1912 Licences and Authorities](#)**

Licence Number	10 ▼	BL ▼	605629
or			
Land Reference	Lot		DP

Due to privacy laws very little information on *Water Act 1912* licence and authorities can be made freely available. However to assist in conveyancing the following searches are provided to identify where such licences and authorities apply. Full information for a particular licence or authority can be obtained if required for conveyancing by applying to WaterNSW. See [legal searches for water related interests](#).

Notes: Search by land reference may not return all licences that apply to a particular lot due to inaccuracies in land referencing information in WaterNSW's licence database. Land referencing information is currently in the process of being verified.

☐ [Approval issued under the *Water Management Act 2000*](#)

Find out if a *Water Act 1912* licence has been converted

☐ [Water licence conversion status](#)

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Lot/DP	Description
Lot 100, DP 1203966	Work Location
Lot 100, DP 1203966	Land Benefited

Disclaimer: WaterNSW is making the information available on the understanding that it does not warrant that the information is suitable for any intended use. In using the information supplied, the user acknowledges that they are responsible for any deductions or conclusions arrived at from interpretation of the data.

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Information about a water licence or approval

Use this tool to search for information about water licences and approvals issued under the *Water Act 1912* or *Water Management Act 2000*.

Select the type of licence or approval and enter the licence or approval number:

- **Water access licence (WAL):** a WAL number starts with the letters 'WAL' followed by several numbers; a WAL also has a reference number that starts with a two digit number, followed by 'AL' and then several numbers.
- **1912 water licence:** a water licence number starts with a two digit number, followed by a two letter code and then several numbers. Note: a PT reference number cannot be entered.
- **Approval:** an approval number starts with a two digit number, followed by a two letter code (WA, UA, CA or FW) and then several numbers.

Search for information about either a:

- ☐ [Water access licence \(WAL\) issued under the *Water Management Act 2000*](#)
- ☐ [Water Act 1912 Licences and Authorities](#)
- ☐ [Approval issued under the *Water Management Act 2000*](#)

Find out if a *Water Act 1912* licence has been converted

☒ Water licence conversion status

Water Licence Number

10 ▼

BL ▼

605770

Notes:

Water Act 1912 licences and authorities are being converted to water access licences and approvals under the *Water Management Act 2000* as water sharing plans commence (see [licence conversion](#)).

If a *Water Act 1912* licence has been converted, the search results will display the water access licences and approvals that have been created. Water access licences are registered in the [Water Access Licence Register](#) administered by NSW Land Registry Services. Those water access licences that do not display a WAL number in the search results are still to have their licence details confirmed and completed.

Due to privacy laws very little information on *Water Act 1912* licence and authorities can be made freely available. Full information for a particular licence or authority can be obtained if required for conveyancing by applying to WaterNSW. See [legal searches for water related interests](#).

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The licence 10BL605770 has not been converted and is not subject to a water sharing plan.

Disclaimer: WaterNSW is making the information available on the understanding that it does not warrant that the information is suitable for any intended use. In using the information supplied, the user acknowledges that they are responsible for any deductions or conclusions arrived at from interpretation of the data.

Privacy: The information provided is limited to meet the requirements of section 57 of the *Privacy and Personal Information Act 1998*.

Exporting and printing: Search results show a maximum of 50 rows per page. Search results can only be printed page by page.

More information: Should you require further information or technical assistance, please submit your request to water.enquiries@waternsw.com.au or contact 1300 662 077

Information about a water licence or approval

Use this tool to search for information about water licences and approvals issued under the *Water Act 1912* or *Water Management Act 2000*.

Select the type of licence or approval and enter the licence or approval number:

- **Water access licence (WAL):** a WAL number starts with the letters 'WAL' followed by several numbers; a WAL also has a reference number that starts with a two digit number, followed by 'AL' and then several numbers.
- **1912 water licence:** a water licence number starts with a two digit number, followed by a two letter code and then several numbers. Note: a PT reference number cannot be entered.
- **Approval:** an approval number starts with a two digit number, followed by a two letter code (WA, UA, CA or FW) and then several numbers.

Search for information about either a:

☐ [Water access licence \(WAL\) issued under the *Water Management Act 2000*](#)

☒ **[Water Act 1912 Licences and Authorities](#)**

Licence Number	10 ▼	BL ▼	605770
or Land Reference	Lot		DP

Due to privacy laws very little information on *Water Act 1912* licence and authorities can be made freely available. However to assist in conveyancing the following searches are provided to identify where such licences and authorities apply. Full information for a particular licence or authority can be obtained if required for conveyancing by applying to WaterNSW. See [legal searches for water related interests](#).

Notes: Search by land reference may not return all licences that apply to a particular lot due to inaccuracies in land referencing information in WaterNSW's licence database. Land referencing information is currently in the process of being verified.

☐ [Approval issued under the *Water Management Act 2000*](#)

Find out if a *Water Act 1912* licence has been converted

☐ [Water licence conversion status](#)

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Lot/DP	Description
Lot 100, DP 1203966	Work Location
Lot 100, DP 1203966	Land Benefited

Disclaimer: WaterNSW is making the information available on the understanding that it does not warrant that the information is suitable for any intended use. In using the information supplied, the user acknowledges that they are responsible for any deductions or conclusions arrived at from interpretation of the data.

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More information: Should you require further information or technical assistance, please submit your request to water.enquiries@waternsw.com.au or contact 1300 662 077

Appendix E

Surface Water Licences

Information about a water licence or approval

Use this tool to search for information about water licences and approvals issued under the *Water Act 1912* or *Water Management Act 2000*.

Select the type of licence or approval and enter the licence or approval number:

- **Water access licence (WAL):** a WAL number starts with the letters 'WAL' followed by several numbers; a WAL also has a reference number that starts with a two digit number, followed by 'AL' and then several numbers.
- **1912 water licence:** a water licence number starts with a two digit number, followed by a two letter code and then several numbers. Note: a PT reference number cannot be entered.
- **Approval:** an approval number starts with a two digit number, followed by a two letter code (WA, UA, CA or FW) and then several numbers.

Search for information about either a:

- ☐ Water access licence (WAL) issued under the *Water Management Act 2000*
- ☐ *Water Act 1912* Licences and Authorities

☒ **Approval issued under the *Water Management Act 2000***

Approval Number 10 ▼ CA ▼ 104657

Notes: The search results will list the conditions imposed on the approval and also list the number/s of any water access licence/s that nominate the water supply works associated with the approval.

This search tool does not include information about [controlled activity approvals](#). Information publicly available from a register of controlled activity approvals is available at our [local offices](#).

Find out if a *Water Act 1912* licence has been converted

- ☐ Water licence conversion status

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Search Results

Kind of Approval	Issue Date	Expiry Date	Approval Number	Status	Water Source
Water Supply Works And Water Use	01-JUL-2011	20-APR-2026	10CA104657	Current	Hawkesbury And Lower Nepean Rivers Water Source

Work Type	Description	Diameter	Status	No of Works	Location (Lot/DP)
Diversion Works - Pumps	80mm Centrifugal Pump	NA	Active	1	Lot 101, DP 1203966

Use Purpose(s)	Location(s)
Irrigation	

Water Access Licences nominating these works

Reference Number	WAL Number

10AL104656	26259

- Conditions**Plan Conditions****Water sharing plan****Greater Metropolitan Region Unregulated River Water Sources****Take of water**

- MW0655-00001 Any water supply work authorised by this approval must take water in compliance with the conditions of the access licence under which water is being taken.
- MW0911-00001 Before water is taken through the water supply work authorised by this approval, visible flow in the water source at the location at which water is proposed to be taken must be confirmed.
- If a logbook is required to be kept:
- A. confirmation that water may be taken, and
B. the method of confirmation, such as visual inspection, internet search
- must be recorded in the logbook.

Water management works

- MW2435-00001 Water must be taken through the approved metering equipment installed on the water supply work authorised by this approval.

Monitoring and recording

- MW2338-00001 The completed logbook must be retained for five (5) years from the last date recorded in the logbook.
- MW2336-00001 The purpose or purposes for which water is taken, as well as details of the type of crop, area cropped, and dates of planting and harvesting, must be recorded in the logbook each time water is taken.
- MW2337-00001 The following information must be recorded in the logbook for each period of time that water is taken:
- A. date, volume of water, start and end time when water was taken as well as the pump capacity per unit of time, and
B. the access licence number under which the water is taken, and
C. the approval number under which the water is taken, and
D. the volume of water taken for domestic consumption and/or stock watering.
- MW2339-00001 A logbook must be kept, unless the work is metered and fitted with a data logger. The logbook must be produced for inspection when requested by the relevant licensor.
- MW0482-00001 Where a water meter is installed on a water supply work authorised by this approval, the meter reading must be recorded in the logbook before taking water. This reading must be recorded every time water is to be taken.

Reporting

- MW0051-00001 Once the approval holder becomes aware of a breach of any condition on this approval, the approval holder must notify the Minister as soon as practicable. The Minister must be notified by:
- A. email: water.enquiries@dpi.nsw.gov.au,
or
B. telephone: 1800 353 104. Any notification by telephone must also be confirmed in writing within seven (7) business days of the telephone call.

MW3860-00001	A. When a water supply work authorised by this approval is no longer to be used permanently, the approval holder must: - notify the relevant licensor in writing of the intention to decommission the work at least 90 days before the start of decommissioning, and - decommission the work, unless the approval holder receives notice in writing from the Minister within 60 days of notifying DPI Water requiring that the work is not to be decommissioned or be decommissioned in accordance with specific requirements. B. Within 60 days of the work being decommissioned, the approval holder must notify the relevant licensor in writing that the work has been decommissioned.

Other Conditions

	Water management works
DK0888-00001	Any water supply work authorised by this approval used for the purpose of conveying, diverting or storing water must be constructed or installed to allow free passage of floodwaters flowing into or from a river or lake.
DK0878-00001	A. The construction, installation or use of the water supply work authorised by this approval must not cause or increase erosion to the channel or bank of the watercourse. B. If erosion is observed, the area must be stabilised with grass cover, stone pitching or any other material that will prevent any further occurrence of erosion.
DS2349-00001	The approval holder must make all reasonable efforts not to allow any used water to discharge, by any means including surface or subsurface drains or pipes, into or onto: - any adjoining public or crown road; - any other person's land; - any Crown land; - any river, creek or watercourse or aquifer.

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More information: Should you require further information or technical assistance, please submit your request to water.enquiries@waternsw.com.au or contact 1300 662 077

BOX 1W
(AP671374)



NEW SOUTH WALES

CERTIFICATE OF TITLE

WATER MANAGEMENT ACT, 2000



WAL TITLE REFERENCE

WAL26259

EDITION

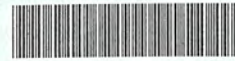
3

DATE OF ISSUE

22/11/2019

CERTIFICATE AUTHENTICATION CODE

SGJY-DX-NGFD



This certificate is issued under s87B of the Water Management Act, 2000.

WARNING NOTE: INFORMATION ON THIS REGISTER IS NOT GUARANTEED

TENURE TYPE: CONTINUING

HOLDER(S)

PGH BRICKS & PAVERS PTY LIMITED

(T AP671374)

ENCUMBRANCES

1. TERM TRANSFER: NIL

ACCESS LICENCE DETAILS

CATEGORY: UNREGULATED RIVER

SHARE COMPONENT:

SHARE - 150 UNITS

WATER SOURCE - HAWKESBURY AND LOWER NEPEAN RIVERS WATER SOURCE

WATER SHARING PLAN - GREATER METROPOLITAN REGION UNREGULATED RIVER

WATER SOURCES 2011

EXTRACTION COMPONENT:

TIMES/RATES/CIRCUMSTANCES - SUBJECT TO THE CONDITIONS OF THE WATER

ACCESS LICENCE

EXTRACTION FROM - RIVER, LAKE OR SURFACE WATER RUNOFF

EXTRACTION ZONE - UPPER SOUTH CREEK MANAGEMENT ZONE

NOMINATED WORKS:

WORK APPROVAL NUMBER(S) - 10CA104657

INTERSTATE TAGGING ZONE - NIL

CONDITIONS

LICENCE CONDITIONS FORM A PART OF THIS LICENCE AND AFFECT THE SHARE AND EXTRACTION COMPONENTS. CONDITION STATEMENTS ARE AVAILABLE FROM WATERSNSW

NOTES

A WATER LICENCE INFORMATION SHEET IS AVAILABLE FROM THE WATERSNSW

WEBSITE AND SHOULD BE REFERRED TO IN INTERPRETING THIS LICENCE.

WATERSNSW PHONE 1300 662 077, EMAIL CUSTOMER.HELPDESK@WATERSNSW.COM.AU

LICENCE REFERENCE NUMBER: 10AL104656

PREVIOUS WATER ACT LICENCE NUMBER(S): 10SL038385.

**** END OF CERTIFICATE ****

ANY ATTEMPT TO ALTER THIS CERTIFICATE COULD RESULT IN HEAVY FINES OR IMPRISONMENT (S.141 REAL PROPERTY ACT).

Information about a water licence or approval

Use this tool to search for information about water licences and approvals issued under the *Water Act 1912* or *Water Management Act 2000*.

Select the type of licence or approval and enter the licence or approval number:

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- **1912 water licence:** a water licence number starts with a two digit number, followed by a two letter code and then several numbers. Note: a PT reference number cannot be entered.
- **Approval:** an approval number starts with a two digit number, followed by a two letter code (WA, UA, CA or FW) and then several numbers.

Search for information about either a:

☒ **Water access licence (WAL) issued under the *Water Management Act 2000***

Water Access Licence (WAL) Number

WAL 26259

A WAL number starts with the letters 'WAL' followed by several numbers

Can't find your WAL number? Do you have a reference number? A reference number starts with a two digit number, followed by 'AL' and then several numbers. Use the following tool to find your WAL by entering your reference number. [Enter the reference number to find the WAL number.](#)

Notes:

The search results will list the conditions imposed on the water access licence. Any approved water supply work/s nominated on the water access licence are identified by the approval number/s for the work/s.

The information about a water access licence provided in the search results is a summary and may not always be up to date. If you require full and up to date details about a particular water access licence (including current holders, share and extraction component details, encumbrances and notations) you should search the [Water Access Licence Register](#) administered by NSW Land Registry Services.

- ☐ [Water Act 1912 Licences and Authorities](#)
- ☐ [Approval issued under the *Water Management Act 2000*](#)

Find out if a ***Water Act 1912*** licence has been converted

- ☐ [Water licence conversion status](#)

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Search Results

Category [Subcategory]	Status	Water Source	Tenure Type	Management Zone	Share Components (units or ML)

Unregulated River	Current	Hawkesbury And Lower Nepean Rivers Water Source	Continuing	Upper South Creek Management Zone	150.00

Extraction Times or Rates

Subject to conditions water may be taken at any time or rate

Nominated Work Approval(s)

10CA104657

- Conditions

Plan Conditions

Water sharing plan	Greater Metropolitan Region Unregulated River Water Sources

	Take of water

MW0112-00001	The maximum water allocation that may be carried over in the account for this access licence from one water year to the next water year is: A. a volume equal to 100 % of the share component of the licence, or B. 1 ML/unit share of the share component of the licence.
MW0036-00002	The volume of water taken in any three (3) consecutive water years from 1 July 2012 must be recorded in the logbook at the end of those three water years. The maximum volume of water permitted to be taken in those years must also be recorded in the logbook.
MW0605-00001	Water must be taken in compliance with the conditions of the approval for the nominated work on this access licence through which water is to be taken.
MW0670-00001	Water must only be taken if there is visible flow in the water source at the location where water is to be taken. This restriction does not apply if water is to be taken: A. from an off-river pool, an in-river pool, a runoff harvesting dam or an in-river dam pool, or B. from the following Weirs: Maldon, Douglas Park, Menangle, Camden, Sharpes, Cobbity, Mount Hunter Rivulet, Brownlow Hill, Theresa Park and Wallacia.
MW0080-00012	From 1 July 2011, water must not be taken from the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source when flows are in the Very Low Flow Class, which means that the flow is 0.2 ML/day or less at South Creek at the Great Western Highway gauge [No. 212048]. This restriction does not apply if water is to be taken from a runoff harvesting dam or an in-river dam pool.
MW0078-00004	In the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source, if the flow is less than 0.2 ML/day at South Creek at the Great Western Highway gauge [No. 212048] for a period of 24 or more consecutive hours, then there must be a minimum flow of 0.2 ML/day at that gauge for at least 24 hours before water can be taken.
MW0004-00002	From 1 July 2012, the total volume of water taken in any three (3) consecutive water years under this access licence must not exceed a volume which is equal to the lesser of either: A. the sum of: - water in the account from the available water determinations in those 3 consecutive water years, plus - water in the account carried over from the water year prior to those 3 consecutive water years, plus - any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus - any water re-credited by the Minister to the account in those 3 consecutive water years,

or

B. the sum of:

- i. the share component of this licence at the beginning of the first year in those 3 consecutive water years, plus
- ii. the share component of this licence at the beginning of the second year in those 3 consecutive water years, plus
- iii. the share component of this licence at the beginning of the third year in those 3 consecutive water years, plus
- iv. any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus
- v. any water re-credited by the Minister to the account in those 3 consecutive water years.

Monitoring and recording

MW2338-00001	The completed logbook must be retained for five (5) years from the last date recorded in the logbook.
MW2337-00001	The following information must be recorded in the logbook for each period of time that water is taken: A. date, volume of water, start and end time when water was taken as well as the pump capacity per unit of time, and B. the access licence number under which the water is taken, and C. the approval number under which the water is taken, and D. the volume of water taken for domestic consumption and/or stock watering.
MW2339-00001	A logbook must be kept, unless the work is metered and fitted with a data logger. The logbook must be produced for inspection when requested by the relevant licensor.

Reporting

MW0051-00002	Once the licence holder becomes aware of a breach of any condition on this access licence, the licence holder must notify the Minister as soon as practicable. The Minister must be notified by: A. email: water.enquiries@dpi.nsw.gov.au , or B. telephone: 1800 353 104. Any notification by telephone must also be confirmed in writing within seven (7) business days of the telephone call.

Other Conditions

NIL

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Information about a water licence or approval

Use this tool to search for information about water licences and approvals issued under the *Water Act 1912* or *Water Management Act 2000*.

Select the type of licence or approval and enter the licence or approval number:

- **Water access licence (WAL):** a WAL number starts with the letters 'WAL' followed by several numbers; a WAL also has a reference number that starts with a two digit number, followed by 'AL' and then several numbers.
- **1912 water licence:** a water licence number starts with a two digit number, followed by a two letter code and then several numbers. Note: a PT reference number cannot be entered.
- **Approval:** an approval number starts with a two digit number, followed by a two letter code (WA, UA, CA or FW) and then several numbers.

Search for information about either a:

- ☐ Water access licence (WAL) issued under the *Water Management Act 2000*
- ☐ *Water Act 1912* Licences and Authorities

☒ **Approval issued under the *Water Management Act 2000***

Approval Number 10 ▼ CA ▼ 104630

Notes: The search results will list the conditions imposed on the approval and also list the number/s of any water access licence/s that nominate the water supply works associated with the approval.

This search tool does not include information about [controlled activity approvals](#). Information publicly available from a register of controlled activity approvals is available at our [local offices](#).

Find out if a *Water Act 1912* licence has been converted

- ☐ Water licence conversion status

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Search Results

Kind of Approval	Issue Date	Expiry Date	Approval Number	Status	Water Source
Water Supply Works And Water Use	01-JUL-2011	18-JUN-2025	10CA104630	Current	Hawkesbury And Lower Nepean Rivers Water Source

Work Type	Description	Diameter	Status	No of Works	Location (Lot/DP)
Diversion Works - Pumps	100mm Centrifugal Pump	NA	Active	1	Lot 100, DP 1203966
		NA	Active		Lot 100, DP 1203966
Storages	Bywash Dam	NA	Active	1	Lot 100, DP 1203966

Use Purpose(s)	Location(s)

Irrigation	Lot 100, DP 1203966

Water Access Licences nominating these works

Reference Number	WAL Number
10AL104628	26257
10AL104629	25987

- Conditions

Plan Conditions

Water sharing plan	Greater Metropolitan Region Unregulated River Water Sources

Take of water

MW0655-00001	Any water supply work authorised by this approval must take water in compliance with the conditions of the access licence under which water is being taken.
MW0911-00001	Before water is taken through the water supply work authorised by this approval, visible flow in the water source at the location at which water is proposed to be taken must be confirmed. If a logbook is required to be kept: A. confirmation that water may be taken, and B. the method of confirmation, such as visual inspection, internet search must be recorded in the logbook.

Monitoring and recording

MW2338-00001	The completed logbook must be retained for five (5) years from the last date recorded in the logbook.
MW2336-00001	The purpose or purposes for which water is taken, as well as details of the type of crop, area cropped, and dates of planting and harvesting, must be recorded in the logbook each time water is taken.
MW2337-00001	The following information must be recorded in the logbook for each period of time that water is taken: A. date, volume of water, start and end time when water was taken as well as the pump capacity per unit of time, and B. the access licence number under which the water is taken, and C. the approval number under which the water is taken, and D. the volume of water taken for domestic consumption and/or stock watering.
MW2339-00001	A logbook must be kept, unless the work is metered and fitted with a data logger. The logbook must be produced for inspection when requested by the relevant licensor.
MW0482-00001	Where a water meter is installed on a water supply work authorised by this approval, the meter reading must be recorded in the logbook before taking water. This reading must be recorded every time water is to be taken.

Reporting

MW0051-00001	Once the approval holder becomes aware of a breach of any condition on this approval, the approval holder must notify the Minister as soon as practicable. The Minister must be notified by: A. email: water.enquiries@dpi.nsw.gov.au, or B. telephone: 1800 353 104. Any notification by telephone must also be confirmed in writing within seven (7) business days of the telephone call.
MW3860-	A. When a water supply work authorised by this approval is no longer to be used permanently,

- 00001 the approval holder must:
- notify the relevant licensor in writing of the intention to decommission the work at least 90 days before the start of decommissioning, and
 - decommission the work, unless the approval holder receives notice in writing from the Minister within 60 days of notifying DPI Water requiring that the work is not to be decommissioned or be decommissioned in accordance with specific requirements.
- B. Within 60 days of the work being decommissioned, the approval holder must notify the relevant licensor in writing that the work has been decommissioned.

Other Conditions

	Water management works
DK0888-00001	Any water supply work authorised by this approval used for the purpose of conveying, diverting or storing water must be constructed or installed to allow free passage of floodwaters flowing into or from a river or lake.
DK0871-00001	The water supply work authorised by this approval must be constructed and maintained in a way that will: - ensure the work's safe construction and operation, and - prevent the possibility of damage being caused by the work, or resulting from the work, to any public or private interest.
DK0878-00001	- The construction, installation or use of the water supply work authorised by this approval must not cause or increase erosion to the channel or bank of the watercourse. - If erosion is observed, the area must be stabilised with grass cover, stone pitching or any other material that will prevent any further occurrence of erosion.
DK0233-00078	The level of the crest of the bywash of the dam must be fixed at not higher than 1.99 m below the level of a benchmark established on a box tree on the right bank of the watercourse near the work and particulars of which are retained in the office of the relevant licensor.
DK1217-00001	The location of the dam(s) as shown on a plan retained in the office of the relevant licensor shall not be altered.
DS2349-00001	The approval holder must make all reasonable efforts not to allow any used water to discharge, by any means including surface or subsurface drains or pipes, into or onto: - any adjoining public or crown road; - any other person's land; - any Crown land; - any river, creek or watercourse or aquifer.

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BOX 1W
(AP671373)

NEW SOUTH WALES

CERTIFICATE OF TITLE

WATER MANAGEMENT ACT, 2000



WAL TITLE REFERENCE

WAL26257

EDITION

3

DATE OF ISSUE

22/11/2019

CERTIFICATE AUTHENTICATION CODE

SC3Z-RM-HTN9



This certificate is issued under s87B of the Water Management Act, 2000.

WARNING NOTE: INFORMATION ON THIS REGISTER IS NOT GUARANTEED

TENURE TYPE: SPECIFIC PURPOSE

HOLDER(S)

PGH BRICKS & PAVERS PTY LIMITED

(T AP671373)

ENCUMBRANCES

1. TERM TRANSFER: NIL
2. A SECURITY INTEREST (MORTGAGE OR CHARGE) CANNOT BE REGISTERED ON THIS LICENCE. SEE S71D(2) WATER MANAGEMENT ACT 2000.

ACCESS LICENCE DETAILS

CATEGORY: DOMESTIC AND STOCK

SHARE COMPONENT:

SHARE - 6.5 MEGALITRES PER YEAR
WATER SOURCE - HAWKESBURY AND LOWER NEPEAN RIVERS WATER SOURCE
WATER SHARING PLAN - GREATER METROPOLITAN REGION UNREGULATED RIVER
WATER SOURCES 2011

EXTRACTION COMPONENT:

TIMES/RATES/CIRCUMSTANCES - SUBJECT TO THE CONDITIONS OF THE WATER
ACCESS LICENCE
EXTRACTION FROM - RIVER, LAKE OR SURFACE WATER RUNOFF
EXTRACTION ZONE - UPPER SOUTH CREEK MANAGEMENT ZONE

NOMINATED WORKS:

WORK APPROVAL NUMBER(S) - 10CA104630
INTERSTATE TAGGING ZONE - NIL

CONDITIONS

LICENCE CONDITIONS FORM A PART OF THIS LICENCE AND AFFECT THE SHARE
AND EXTRACTION COMPONENTS. CONDITION STATEMENTS ARE AVAILABLE FROM
WATERSW

NOTES

A WATER LICENCE INFORMATION SHEET IS AVAILABLE FROM THE WATERSW
WEBSITE AND SHOULD BE REFERRED TO IN INTERPRETING THIS LICENCE.
WATERSW PHONE 1300 662 077, EMAIL CUSTOMER.HELPDESK@WATERSW.COM.AU
LICENCE REFERENCE NUMBER: 10AL104628
PREVIOUS WATER ACT LICENCE NUMBER(S): 10SL037783.

**** END OF CERTIFICATE ****

ANY ATTEMPT TO ALTER THIS CERTIFICATE COULD RESULT IN HEAVY FINES OR IMPRISONMENT (S.141 REAL PROPERTY ACT).

Information about a water licence or approval

Use this tool to search for information about water licences and approvals issued under the *Water Act 1912* or *Water Management Act 2000*.

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- **1912 water licence:** a water licence number starts with a two digit number, followed by a two letter code and then several numbers. Note: a PT reference number cannot be entered.
- **Approval:** an approval number starts with a two digit number, followed by a two letter code (WA, UA, CA or FW) and then several numbers.

Search for information about either a:

☒ **Water access licence (WAL) issued under the *Water Management Act 2000***

Water Access Licence (WAL) Number

WAL 26257

A WAL number starts with the letters 'WAL' followed by several numbers

Can't find your WAL number? Do you have a reference number? A reference number starts with a two digit number, followed by 'AL' and then several numbers. Use the following tool to find your WAL by entering your reference number. [Enter the reference number to find the WAL number.](#)

Notes:

The search results will list the conditions imposed on the water access licence. Any approved water supply work/s nominated on the water access licence are identified by the approval number/s for the work/s.

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- ☐ [Water Act 1912 Licences and Authorities](#)
- ☐ [Approval issued under the *Water Management Act 2000*](#)

Find out if a ***Water Act 1912*** licence has been converted

- ☐ [Water licence conversion status](#)

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Search

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Search Results

Category [Subcategory]	Status	Water Source	Tenure Type	Management Zone	Share Components (units or ML)

Domestic And Stock	Current	Hawkesbury And Lower Nepean Rivers Water Source	Specific Purpose	Upper South Creek Management Zone	6.50

Extraction Times or Rates

Subject to conditions water may be taken at any time or rate

Nominated Work Approval(s)

10CA104630

- Conditions

Plan Conditions

Water sharing plan	Greater Metropolitan Region Unregulated River Water Sources
	Take of water
MW0112-00001	The maximum water allocation that may be carried over in the account for this access licence from one water year to the next water year is: A. a volume equal to 100 % of the share component of the licence, or B. 1 ML/unit share of the share component of the licence.
MW4215-00001	Water may be taken for domestic consumption not exceeding 1 kL/house per day: A. when flows in the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source are in the Very Low Flow Class which means that the flow is 0.2 ML/day or less at the South Creek Great Western Highway gauge [No. 212048], or B. when there is no visible flow at the location at which the water proposed to be taken, or C. if water is taken from an in-river, off-river pool, natural pool, lake or lagoon, when the volume of water in that pool lake or lagoon is less than at full capacity.
MW0036-00002	The volume of water taken in any three (3) consecutive water years from 1 July 2012 must be recorded in the logbook at the end of those three water years. The maximum volume of water permitted to be taken in those years must also be recorded in the logbook.
MW0605-00001	Water must be taken in compliance with the conditions of the approval for the nominated work on this access licence through which water is to be taken.
MW4251-00001	Water must not be taken for stock watering: A. when flows in the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source are in the Very Low Flow Class, which means that the flow is 0.2 ML/day or less at the South Creek Great Western Highway gauge [No. 212048], or B. when there is no visible flow in the water source at the location where water is to be taken. These restrictions do not apply if water is to be taken from a runoff harvesting dam or an in-river dam pool.
MW0004-00002	From 1 July 2012, the total volume of water taken in any three (3) consecutive water years under this access licence must not exceed a volume which is equal to the lesser of either: A. the sum of: i. water in the account from the available water determinations in those 3 consecutive water years, plus ii. water in the account carried over from the water year prior to those 3 consecutive water years, plus iii. any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus iv. any water re-credited by the Minister to the account in those 3 consecutive water years, or B. the sum of: i. the share component of this licence at the beginning of the first year in those 3 consecutive water years, plus

- ii. the share component of this licence at the beginning of the second year in those 3 consecutive water years, plus
- iii. the share component of this licence at the beginning of the third year in those 3 consecutive water years, plus
- iv. any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus
- v. any water re-credited by the Minister to the account in those 3 consecutive water years.

Use of water

MA2455-00012 Water must be used for the purpose of domestic consumption and stock watering.

Monitoring and recording

MW2338-00001 The completed logbook must be retained for five (5) years from the last date recorded in the logbook.

MW2337-00001 The following information must be recorded in the logbook for each period of time that water is taken:

- A. date, volume of water, start and end time when water was taken as well as the pump capacity per unit of time, and
- B. the access licence number under which the water is taken, and
- C. the approval number under which the water is taken, and
- D. the volume of water taken for domestic consumption and/or stock watering.

MW2339-00001 A logbook must be kept, unless the work is metered and fitted with a data logger. The logbook must be produced for inspection when requested by the relevant licensor.

Reporting

MW0051-00002 Once the licence holder becomes aware of a breach of any condition on this access licence, the licence holder must notify the Minister as soon as practicable. The Minister must be notified by:

- A. email: water.enquiries@dpi.nsw.gov.au, or
- B. telephone: 1800 353 104. Any notification by telephone must also be confirmed in writing within seven (7) business days of the telephone call.

Other Conditions

NIL

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BOX 1W
(AP671375)



NEW SOUTH WALES

CERTIFICATE OF TITLE

WATER MANAGEMENT ACT, 2000



WAL TITLE REFERENCE	
WAL25987	
EDITION	DATE OF ISSUE
3	22/11/2019
CERTIFICATE AUTHENTICATION CODE	
D4LF-3P-5JY6	



This certificate is issued under s87B of the Water Management Act, 2000.

WARNING NOTE: INFORMATION ON THIS REGISTER IS NOT GUARANTEED

TENURE TYPE: CONTINUING

HOLDER(S)

PGH BRICKS & PAVERS PTY LIMITED

(T AP671375)

ENCUMBRANCES

1. TERM TRANSFER: NIL

ACCESS LICENCE DETAILS

CATEGORY: UNREGULATED RIVER

SHARE COMPONENT:

SHARE - 152.5 UNITS

WATER SOURCE - HAWKESBURY AND LOWER NEPEAN RIVERS WATER SOURCE

WATER SHARING PLAN - GREATER METROPOLITAN REGION UNREGULATED RIVER
WATER SOURCES 2011

EXTRACTION COMPONENT:

TIMES/RATES/CIRCUMSTANCES - SUBJECT TO THE CONDITIONS OF THE WATER
ACCESS LICENCE

EXTRACTION FROM - RIVER, LAKE OR SURFACE WATER RUNOFF

EXTRACTION ZONE - UPPER SOUTH CREEK MANAGEMENT ZONE

NOMINATED WORKS:

WORK APPROVAL NUMBER(S) - 10CA104630

INTERSTATE TAGGING ZONE - NIL

CONDITIONS

LICENCE CONDITIONS FORM A PART OF THIS LICENCE AND AFFECT THE SHARE
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WATERSW

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PREVIOUS WATER ACT LICENCE NUMBER(S): 10SL037783.

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- **1912 water licence:** a water licence number starts with a two digit number, followed by a two letter code and then several numbers. Note: a PT reference number cannot be entered.
- **Approval:** an approval number starts with a two digit number, followed by a two letter code (WA, UA, CA or FW) and then several numbers.

Search for information about either a:

☒ **Water access licence (WAL) issued under the *Water Management Act 2000***

Water Access Licence (WAL) Number

WAL 25987

A WAL number starts with the letters 'WAL' followed by several numbers

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- ☐ [Approval issued under the *Water Management Act 2000*](#)

Find out if a ***Water Act 1912*** licence has been converted

- ☐ [Water licence conversion status](#)

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Search

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Search Results

Category [Subcategory]	Status	Water Source	Tenure Type	Management Zone	Share Components (units or ML)

Unregulated River	Current	Hawkesbury And Lower Nepean Rivers Water Source	Continuing	Upper South Creek Management Zone	152.50

Extraction Times or Rates

Subject to conditions water may be taken at any time or rate

Nominated Work Approval(s)

10CA104630

- Conditions

Plan Conditions

Water sharing plan	Greater Metropolitan Region Unregulated River Water Sources

	Take of water

MW0112-00001	The maximum water allocation that may be carried over in the account for this access licence from one water year to the next water year is: A. a volume equal to 100 % of the share component of the licence, or B. 1 ML/unit share of the share component of the licence.
MW0036-00002	The volume of water taken in any three (3) consecutive water years from 1 July 2012 must be recorded in the logbook at the end of those three water years. The maximum volume of water permitted to be taken in those years must also be recorded in the logbook.
MW0605-00001	Water must be taken in compliance with the conditions of the approval for the nominated work on this access licence through which water is to be taken.
MW0080-00012	From 1 July 2011, water must not be taken from the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source when flows are in the Very Low Flow Class, which means that the flow is 0.2 ML/day or less at South Creek at the Great Western Highway gauge [No. 212048]. This restriction does not apply if water is to be taken from a runoff harvesting dam or an in-river dam pool.
MW0670-00001	Water must only be taken if there is visible flow in the water source at the location where water is to be taken. This restriction does not apply if water is to be taken: A. from an off-river pool, an in-river pool, a runoff harvesting dam or an in-river dam pool, or B. from the following Weirs: Maldon, Douglas Park, Menangle, Camden, Sharpes, Cobbity, Mount Hunter Rivulet, Brownlow Hill, Theresa Park and Wallacia.
MW0078-00004	In the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source, if the flow is less than 0.2 ML/day at South Creek at the Great Western Highway gauge [No. 212048] for a period of 24 or more consecutive hours, then there must be a minimum flow of 0.2 ML/day at that gauge for at least 24 hours before water can be taken.
MW0004-00002	From 1 July 2012, the total volume of water taken in any three (3) consecutive water years under this access licence must not exceed a volume which is equal to the lesser of either: A. the sum of: - water in the account from the available water determinations in those 3 consecutive water years, plus - water in the account carried over from the water year prior to those 3 consecutive water years, plus - any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus - any water re-credited by the Minister to the account in those 3 consecutive water years,

or

B. the sum of:

- i. the share component of this licence at the beginning of the first year in those 3 consecutive water years, plus
- ii. the share component of this licence at the beginning of the second year in those 3 consecutive water years, plus
- iii. the share component of this licence at the beginning of the third year in those 3 consecutive water years, plus
- iv. any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus
- v. any water re-credited by the Minister to the account in those 3 consecutive water years.

Monitoring and recording

MW2338-00001	The completed logbook must be retained for five (5) years from the last date recorded in the logbook.
MW2337-00001	The following information must be recorded in the logbook for each period of time that water is taken: A. date, volume of water, start and end time when water was taken as well as the pump capacity per unit of time, and B. the access licence number under which the water is taken, and C. the approval number under which the water is taken, and D. the volume of water taken for domestic consumption and/or stock watering.
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Appendix F

Conditions

Compliance

Worksheet

Bringelly Brickworks Extension Project
Applicable Period: 1 July 2023 to 30 June 2024
SSD Conditions: SSD_5684 Mod 1

Compliant							
Non Compliant							
Not Triggered	A requirement has an activation or timing trigger that has not been met at the phase of the development when the compliance assessment is undertaken, therefore an assessment of compliance is not relevant.						
Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
2		ADMINISTRATIVE CONDITIONS					
2	1	OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT In addition to meeting the specific performance criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.	At all times	Annual review of performance including management policies, strategies and plans	Annual Review	Compliant	
2		TERMS OF CONSENT					
2	2	The Applicant must: (a) carry out the development generally in accordance with the EIS and SEE (Mod 1); and (b) the conditions of this consent.	At all times	Annual review of performance including management policies, strategies and plans	Annual Review, EMS, Management Plans, MOP and ARR.	Non Compliant	
2	3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.	At all times	Not applicable	Not applicable	Compliant	
2	4	The Applicant must comply with any reasonable requirement/s of the Secretary arising the Department's assessment of: (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent; (b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; or (c) the implementation of any actions or measures contained in these documents.	At all times	Annual review of performance including management policies, strategies and plans	Annual Review	Compliant	All comments from DPIE have been addressed
2		LIMITS ON CONSENT					
2		Quarrying and Brick Making Operations					
2	5	The Applicant may carry out quarrying operations and brick making operations from the date of commencement of development under this consent until 1 March 2045. Note: Under this consent, the Applicant is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary. Consequently, this consent will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.	At all times	Not applicable	Not applicable	Compliant	Operations on the site are currently being undertaken.
2		Production Limits					
2	6	The Applicant must not: (a) extract more than 200,000 tonnes of clay/shale from the site in any calendar year; (b) produce more than 263,500 tonnes of bricks at the site in any calendar year; (c) carry out quarrying operations beyond 46 m AHD; and (d) receive more than 321,000 tonnes of raw materials required for brick making to the site in any calendar year	Calendar year	Review weighbridge records, sales records, mining records and survey data	Weighbridge records, sales records, mining records and survey data	Compliant	
2		Transportation Limits					
2	7	The Applicant must not: (a) transport more than 263,500 tonnes of bricks from the site in a calendar year; (b) receive more than 90 trucks to the site per day or more than 18 trucks per hour; and (c) dispatch more than 90 trucks from the site per day or more than 18 trucks per hour.	Calendar year	Review weighbridge records, sales records.	Weighbridge records, sales records.	Non Compliant	
2		NOTIFICATION OF COMMENCEMENT					
2	8	Prior to commencing development under this consent, the Applicant must notify the Department in writing of the date on which it will commence development permitted under this consent.	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant	Correspondence sent to DPIE. Date of commencement is 24/2/2020.
2		SURRENDER OF EXISTING DEVELOPMENT CONSENT					
2	9	Within 4 months of commencing development under this consent, the Applicant must surrender the development consent (DA 91/1194) for existing operations on the site in accordance with Section 104A of the EP&A Act. Following the commencement of development under this consent, the conditions of this consent (including any notes) shall prevail to the extent of any inconsistency with the conditions of the existing development consent (DA 91/1194).	Within 4 months of commencing development	Correspondence	Correspondence	Compliant	Correspondence dated 28/7/2020 sent to DPIE.
2		STRUCTURAL ADEQUACY					

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
2	10	The Applicant must ensure that any new buildings and structures, and any alterations, or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. Notes: - Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works. - Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.	Prior to occupation	Review certificates of construction and occupation	Certificates of construction and occupation	Compliant	No construction or alterations have been undertaken.
2		DEMOLITION					
2	11	The Applicant must ensure that all demolition work on site is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.	As required	Review of demolition documentation	Demolition documentation	Compliant	No demolition has been undertaken on the site.
2		PROTECTION OF PUBLIC INFRASTRUCTURE					
2	12	The Applicant must: (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development. Note: This condition does not apply to any damage to roads caused as a result of general road usage.	As required	Not applicable	Not applicable	Compliant	Not required
		OPERATION OF PLANT AND EQUIPMENT					
2	13	The Applicant must ensure that all plant and equipment used on site or any monitoring equipment used off site for monitoring the performance of the development is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	As required	As per individual management plans and equipment maintenance records	As per individual management plans, calibration reports, equipment service records	Compliant	Plant and Equipment on-site is regularly serviced. Monitoring equipment off-site (noise) is maintained by contractors and calibration certificates are supplied with reports.
2		UPDATING AND STAGING STRATEGIES, PLANS OR PROGRAMS					
2	14	With the approval of the Secretary, the Applicant may submit any strategies, plans or programs required by this consent on a progressive basis. To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval. With the agreement of the Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all parties under the applicable condition of this consent. Notes: - While any strategy, plan or program may be submitted on a progressive basis, the Applicant must ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times. - If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.	As required	Assess if any revision of strategies, plans or programs have been undertaken	Approval correspondence from the Secretary.	Compliant	
2	15	Until they are replaced by an equivalent strategy, plan or program approved under this consent, the Applicant must implement the existing strategies, plans or programs for the site that have been approved under DA 91/1194.	Until Mod 1 has commenced	As per DA91/1194 strategies, plans or programs until updated plans are approved.	ARR	Compliant	
2		IDENTIFICATION OF APPROVED LIMITS OF EXTRACTION					
2	16	Prior to undertaking quarrying operations in the extension area, the Applicant must: (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the development area; and (b) submit a survey plan of these boundaries with applicable GPS coordinates to the Secretary.	Prior to undertaking quarrying operations in the extension area	Survey	Survey plans with co-ordinates have been supplied to DPIE in the EMS submitted for approval	Compliant	Mine lease survey plan has been undertaken for the mine lease. The ML boundarys are pegged. The all DA extraction limits have been pegged.
2	17	While quarrying operations are being carried out, the Applicant must ensure that these boundaries are clearly marked at all times to allow operating staff and inspecting officers to clearly identify the approved limits of extraction.	At all times	Visual observation	Photography and site inspection records	Compliant	Mine lease survey plan has been undertaken for the mine lease. The ML boundarys are pegged. The all DA extraction limits have been pegged.
2		PRODUCTION DATA					

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments																								
2	18	The Applicant must: (a) provide annual quarry production data to DRE using the standard form for that purpose; and (b) include a copy of this data in the Annual Review (see condition 4 of schedule 5).	By 31st October each year for year ending 30th of June.	Maintenance of mining records	Mining records and DRE standard form	Compliant	Production data included in this report and results submitted to DRE each year. Submitted online in portal, copy available on request																								
2		DEVELOPER CONTRIBUTIONS																													
2	19	The Applicant must pay Camden Council road maintenance contributions of \$0.0811 for every tonne of material transported to and from the site, indexed to CPI. Each payment must be: (a) paid to Council at the end of each calendar year; and (b) based on weighbridge records of all supplementary brick making materials transported to the site and bricks and spoil transported from the site. Note: If the parties are not able to agree on any aspect of the maintenance contributions, either party may refer the matter to the Secretary for resolution.	by 31st December each year.	Council receipts	Council receipts	Compliant	Invoices from Camden Council received and paid.																								
3	ENVIRONMENTAL PERFORMANCE CONDITIONS																														
3		Hours of Operation																													
3	1	The Applicant must comply with the operating hours set out in Table 1.	Daily	Site inductions, employee hours	Employee hours logged in kronus system	Compliant																									
		<table><caption>Table 1: Operating Hours</caption><tr><th>Activity</th><th>Operating Hours</th></tr><tr><td>Quarrying operations</td><td>6am to 6pm, Monday to Friday</td></tr><tr><td>Deliveries</td><td>6am to 1pm, Saturday</td></tr><tr><td>Dispatch of finished bricks</td><td>No activities on Sundays or Public Holidays</td></tr><tr><td>Brick making operations (except dispatch of finished bricks)</td><td>24 hours a day, 7 days a week</td></tr><tr><td>Construction activities</td><td>7am to 6pm, Monday to Friday 8am to 1pm, Saturday No construction to be undertaken on Sundays or Public Holidays</td></tr></table>	Activity	Operating Hours	Quarrying operations	6am to 6pm, Monday to Friday	Deliveries	6am to 1pm, Saturday	Dispatch of finished bricks	No activities on Sundays or Public Holidays	Brick making operations (except dispatch of finished bricks)	24 hours a day, 7 days a week	Construction activities	7am to 6pm, Monday to Friday 8am to 1pm, Saturday No construction to be undertaken on Sundays or Public Holidays																	
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3		NOISE																													
3		Noise Criteria																													
3	2	The Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence on privately-owned land. Notes: - To locate the receivers referred to in Table 2 refer to Appendix 3. - After the first review on any EPL granted for this development under Section 78 of the POEO Act, nothing in this consent prevents the EPA from imposing stricter noise limits on the quarrying operations on site under the EPL. Appendix 5 sets out the metrological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria. However, these criteria do not apply if the Applicant has a written agreement with the relevant landowner/s to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.	Quarterly for the first 2 years then reviewed	NSW Industrial Noise Policy	Noise monitoring results	Compliant																									
		<table><caption>Table 2: Noise criteria dB(A)</caption><tr><th rowspan="2">Activity</th><th rowspan="2">Receiver</th><th>Day/Evening/Shoulder</th><th colspan="2">Night</th></tr><tr><th>L_{Aeq}(15 min)</th><th>L_{Aeq}(15 min)</th><th>L_A(max)</th></tr><tr><td rowspan="4">Brick making and quarrying</td><td>R1, R2</td><td>47</td><td rowspan="4">Not Applicable</td><td rowspan="4"></td></tr><tr><td>R3, R4, R14</td><td>46</td></tr><tr><td>R15, R17</td><td>45</td></tr><tr><td>All other receivers</td><td>44</td></tr><tr><td>Brick making</td><td>All receivers</td><td>44</td><td>43</td><td>53</td></tr></table>	Activity	Receiver	Day/Evening/Shoulder	Night		L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _A (max)	Brick making and quarrying	R1, R2	47	Not Applicable		R3, R4, R14	46	R15, R17	45	All other receivers	44	Brick making	All receivers	44	43	53					
Activity	Receiver	Day/Evening/Shoulder			Night																										
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3		Construction Noise																													
3	3	The Applicant must manage noise generated during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road, in accordance with the guidelines specified in Table 2 of the Interim Construction Noise Guideline. Note: Management guidelines are applicable to receivers 3 and 4, shown in Appendix 3.	During Construction	Interim Construction Noise Guideline	Noise monitoring results	Compliant																									
3		Noise Bunds																													
3	4	The Applicant must ensure that the noise bund adjacent to the northern boundary of the extraction area is constructed prior to the commencement of quarrying operations in the extension area.	Prior to undertaking quarrying operations in the extension area	NSW Road Noise Policy	Visual observation and photographic evidence	Compliant																									
3	4a	The Applicant must ensure that the noise bund adjacent to Greendale Road is constructed prior to the commencement of brick making operations.	Prior to commencement of brickmaking operations	NSW Road Noise Policy	Visual observation and photographic evidence	Non Compliant																									
3		Operating Conditions																													

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
3	5	The Applicant must: (a) implement all reasonable and feasible mitigation measures to minimise construction, operational and road noise of the development;	At all times	Deploy Noise Management Plan. Scheduled equipment inspections	Annual review, equipment service records and noise monitoring results	Compliant	
		(b) implement periods of respite during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road;	During Construction	Interim Construction Noise Guideline	Noise monitoring results.	Compliant	
		(c) regularly assess noise monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the noise criteria in this consent;	Quarterly and as required	NSW Industrial Noise Policy	Noise monitoring results. Annual Review. Absence of complaints.	Compliant	
		(d) maintain the effectiveness of noise suppression equipment on plant and equipment on site;	At all times	Deploy Noise Management Plan. Scheduled equipment inspections	Annual review, equipment service records and noise monitoring results. Absence of complaints.	Compliant	
		(e) minimise the noise impacts of the development during meteorological conditions under which the noise criteria in this consent do not apply (see Appendix 5); and	During the applicable periods of meteorological conditions	NSW Industrial Noise Policy Meteorological monitoring	Noise monitoring results. Meteorological data. Absence of complaints.	Compliant	
		(f) carry out regular noise monitoring to determine whether the development is complying with the relevant conditions of this consent, to the satisfaction of the Secretary.	Quarterly	NSW Industrial Noise Policy	Noise monitoring results	Compliant	
3		Noise Management Plan					
3	6	The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with the EPA;	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant	
		(b) be submitted to the Secretary for approval prior to the commencement of development under this consent, unless the Secretary agrees otherwise;	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant	
		(c) describe the reasonable and feasible mitigation measures that would be implemented to ensure: - construction noise is minimise; - compliance with the relevant noise criteria and operating conditions in this consent; - best management practice is being employed; and - the noise impacts of the development are minimised during meteorological conditions under which the noise criteria in this consent do not apply;	Prior to undertaking quarrying operations in the extension area	Not applicable	Noise Management Plan	Compliant	
		(d) describe the proposed noise management system on site; and	Prior to undertaking quarrying operations in the extension area	Not applicable	Noise Management Plan	Compliant	
		(e) include a quarterly (or as otherwise agreed with the Secretary) noise monitoring program that: - uses attended monitoring to evaluate the compliance of the development against the noise criteria in this consent; - evaluates and reports on the effectiveness of the noise management system and the best practice noise management measures; and - defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.	Prior to undertaking quarrying operations in the extension area	Not applicable	Noise Management Plan	Compliant	
		The Applicant must implement the approved management plan as approved from time to time by the Secretary.	Prior to undertaking quarrying operations in the extension area	Not applicable	Noise Management Plan. Annual Review.	Compliant	
3		AIR QUALITY					

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments																																											
3		Air Quality Criteria																																																
3	7	The Applicant must implement all reasonable and feasible avoidance and mitigation measures so that particulate matter emissions generated by the development do not exceed the criteria in Tables 3 to 6 at any residence on privately-owned land. <table><caption>Table 3: Long-Term Criteria for Particulate Matter</caption><tr><th>Pollutant</th><th>Averaging period</th><th>^d Criterion</th></tr><tr><td>Total suspended particulates (TSP)</td><td>Annual</td><td>^a 80 µg/m³</td></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>Annual</td><td>^a 30 µg/m³</td></tr></table><table><caption>Table 4: Short-Term Criteria for Particulate Matter</caption><tr><th>Pollutant</th><th>Averaging period</th><th>^d Criterion</th></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>24 hour</td><td>^a 50 µg/m³</td></tr></table><table><caption>Table 5: Long-Term Criteria for Deposited Dust</caption><tr><th>Pollutant</th><th>Averaging Period</th><th>Maximum increase in deposited dust level</th><th>Maximum total deposited dust level</th></tr><tr><td>^c Deposited dust</td><td>Annual</td><td>^b 2 g/m²/month</td><td>^a 4 g/m²/month</td></tr></table><table><caption>Table 6: Long and Short-Term Stack Emissions</caption><tr><th>Pollutant</th><th>Averaging period</th><th>^d Criterion</th></tr><tr><td rowspan="4">Sulphur Dioxide</td><td>10-minute</td><td>712 µg/m³</td></tr><tr><td>1-Hour</td><td>570 µg/m³</td></tr><tr><td>24-Hour</td><td>228 µg/m³</td></tr><tr><td>Annual</td><td>60 µg/m³</td></tr><tr><td rowspan="2">Nitrogen Dioxide</td><td>1-Hour</td><td>246 µg/m³</td></tr><tr><td>Annual</td><td>62 µg/m³</td></tr><tr><td>Hydrogen Chloride</td><td>1 hour</td><td>0.14 mg/m³</td></tr></table> Notes to Tables 3-6: ^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources). ^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own). ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method. ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Secretary in consultation with EPA.	Pollutant	Averaging period	^d Criterion	Total suspended particulates (TSP)	Annual	^a 80 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³	Pollutant	Averaging period	^d Criterion	Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³	Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level	^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month	Pollutant	Averaging period	^d Criterion	Sulphur Dioxide	10-minute	712 µg/m ³	1-Hour	570 µg/m ³	24-Hour	228 µg/m ³	Annual	60 µg/m ³	Nitrogen Dioxide	1-Hour	246 µg/m ³	Annual	62 µg/m ³	Hydrogen Chloride	1 hour	0.14 mg/m ³	At all times	EPA Approved methods for the Sampling and Analysis of Air Pollutants in NSW	Air quality monitoring results	Non Compliant	There were 3 non-compliances with the PM10 monitoring 24 hour averages. The Particulate Matter less than 10 micron exceeded the 24 hour average limit on 3 occasions: Saturday 16/9/23, Monday 16/10/23 and Sunday 22/10/23. In each case the result was queried with the laboratory and found to be valid. These were reported to the DPE via the Major Projects portal within 7 days of receiving the results. The action taken, in agreement with the DPE was to relocate the monitor.
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3		Operating Conditions																																																
3	8	The Applicant must: (a) implement all reasonable and feasible measures to minimise the stack and dust emissions of the development; (b) minimise surface disturbance and maximise progressive rehabilitation;	At all times	Not applicable	Air quality monitoring results	Compliant																																												
			At all times	Visual observation	ARR Annual Review Photographic evidence	Compliant																																												
		(c) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see note (d) to Tables 3-6 above); and	During adverse meteorological conditions	Meterological data. Visual observation.	Air quality monitoring results. Absence of complaints.	Compliant																																												
		(d) monitor and report on compliance with the relevant air quality conditions in this consent; to the satisfaction of the Secretary.	Quarterly	EPA Approved methods for the Sampling and Analysis of Air Pollutants in NSW	Air quality monitoring results. Absence of complaints.	Compliant																																												
3		Air Quality Management Plan																																																
3	9	The Applicant must prepare an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with the EPA;	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant																																												
		(b) be submitted to the Secretary for approval prior to the commencement of development under this consent, unless the Secretary agrees otherwise;	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant																																												

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		(c) describe the measures that would be implemented to ensure: - compliance with the air quality criteria and operating conditions under this consent; - best practice management is being employed; and - the air quality impacts of the development are minimised during adverse meteorological conditions;	Prior to undertaking quarrying operations in the extension area	Not applicable	Air Quality Management Plan	Compliant	
		(d) describe the air quality management system; and	Prior to undertaking quarrying operations in the extension area	Not applicable	Air Quality Management Plan	Compliant	
		(e) include an air quality monitoring program that: - evaluates and reports on: -- the effectiveness of the air quality management system; and -- compliance with the air quality criteria and operating conditions; and - defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.	Prior to undertaking quarrying operations in the extension area	Not applicable	Air Quality Management Plan	Compliant	
		The Applicant must implement the approved management plan as approved from time to time by the Secretary.	Prior to undertaking quarrying operations in the extension area	Not applicable	Air Quality Management Plan	Compliant	
3		METEOROLOGICAL MONITORING					
3	10	For the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in the vicinity of the site that: (a) complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline; and (b) is capable of continuous measurement of stability class, in accordance with the NSW Industrial Noise Policy, or as otherwise approved by EPA.	Prior to undertaking quarrying operations in the extension area	EPA Approved methods for the Sampling and Analysis of Air Pollutants in NSW - USEPA (2000) EPA 454/R-99-005 NSW Industrial Noise Policy.	Meteorological monitoring results.	Compliant	
3		TRANSPORT					
		Monitoring of Product Transport					
3	11	The Applicant must keep accurate records of the: (a) tonnage of bricks transported from the site (monthly and annually); (b) amount of raw material imported to the site (monthly and annually); and (c) tonnage of each type of raw materials imported to the site (monthly and annually); and provide the Secretary with a summary of this information upon request.	Included in Annuar Review	Review of weighbridge records.	Weighbridge records	Compliant	
		Parking					
3	12	The Applicant must provide sufficient parking on-site for all development-related traffic, in accordance with Camden Council's parking codes, to the satisfaction of the Secretary.	Prior to undertaking quarrying operations in the extension area	Visual observation. Camden Council parking codes.	Site inspection records	Compliant	
3		Operating Conditions					
3	13	The Applicant must ensure that: (a) all development-related heavy vehicles enter and exit the site in a forward direction;	At all times	Transport Management Plan	Weighbridge operator/staff observations	Compliant	Pers comm staff indicate vehicles enter and exit in a forward direction. The traffic flow direction is signposted to assist.
		(b) all laden vehicles entering or exiting the site have their loads covered (with the exception of vehicles carrying bricks);	At all times	Transport Management Plan	Weighbridge operator/staff observations	Compliant	Pers Comm staff indicate all loads are covered exporting finished bricks.
		(c) all laden vehicles that have accessed the extraction and/or stockpile areas are cleaned of sand and other material that may fall on the road, before leaving the site;	At all times	Transport Management Plan	Weighbridge operator/staff observations	Compliant	Pers comm staff inspect vehicles prior to leaving the site and a pressurised washer is used to clean vehicles if required,.

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Compliant
Non Compliant
Not Triggered

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
		(d) all heavy vehicles exiting the site travel east of the site along Greendale Road to The Northern Road and/or Bringelly Road;	At all times	Transport Management Plan	Weighbridge operator/staff observations	Compliant	Pers comm staff indicate all heavy vehicles turn right onto Greendale road when exiting the site.
		(e) the dispatch of laden trucks is avoided during the peak drop-off and pick-up times at the Bringelly Public School to the greatest extent practicable, particularly prior to the upgrade of the Greendale Road/Bringelly Road intersection by RMS; and	At all times	Transport Management Plan	Weighbridge operator/staff observations	Compliant	
		(f) no trucks queue at the entrance to the site before 6am.	At all times	Transport Management Plan	Weighbridge operator/staff observations	Compliant	Pers Comm staff indicates no trucks are permitted to queue at the entrance prior to 6am.
		Access Road Intersection Construction					
3	14	Within 12 months of commencing development under this consent, unless otherwise agreed with the Secretary, the Applicant must design and construct the new site access road intersection with Greendale Road in accordance with applicable AUSTROADS standards, to the satisfaction of Camden Council. The Applicant must notify the Secretary in writing within 30 days of obtaining Council approval. Within 7 days of completing construction and the new site access road being operational, the existing site access road must be permanently closed.	Within 12 month of commencing development	Visual observation	Correspondence	Non Compliant	The new access road intersection has not been constructed.
3		Transport Management Plan					
3	15	The Applicant must prepare a Transport Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with RMS, Camden Council, Liverpool City Council and Bringelly Public School, and be submitted to the Secretary for approval prior to the commencement of development under this consent, unless the Secretary agrees otherwise;	Prior to undertaking quarrying operations in the extension area	Not applicable	Transport Management Plan	Compliant	
		(b) describe the measures that would be implemented to ensure compliance with the transport operating conditions under this consent, including specific measures to avoid the arrival and dispatch of laden trucks from the site during the peak drop-off and pick-up times at the Bringelly Public School;	Prior to undertaking quarrying operations in the extension area	Not applicable	Transport Management Plan	Compliant	
		(c) include a Code of Conduct for heavy vehicle drivers that addresses: - travelling speeds; - procedures to minimise noise including a regular Truck Noise Auditing Program; - procedures to minimise diesel exhaust emissions; - instructions to avoid grouping or convoying of trucks; - procedures to ensure that drivers adhere to the designated haulage routes and the haulage hours permitted under this consent; - instructions to drivers not to overtake each other on the haulage route, as far as practicable, and to maintain appropriate distances between vehicles; and - instruction to drivers to be properly safety conscious and to strictly obey all traffic regulations, particularly in relation to school zones along Greendale Road; and	Prior to undertaking quarrying operations in the extension area	Not applicable	Transport Management Plan	Compliant	
		(d) describe the measures that would be put in place to ensure compliance with the drivers' Code of Conduct and include a program to monitor the effectiveness of the implementation of these measures.	Prior to undertaking quarrying operations in the extension area	Not applicable	Transport Management Plan	Compliant	
		The Applicant must implement the approved management plan as approved from time to time by the Secretary.	Prior to undertaking quarrying operations in the extension area	Not applicable	Transport Management Plan	Compliant	
3		SOIL AND WATER					

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
		Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development, including in respect of the extraction and/or interception of groundwater.	Prior to extraction or interception of groundwater	Review of water licences held	Surface Water Licences WAL26259 (150ML), WAL26257 (6.5ML) and WAL25987 (152.5ML) are current. Monitoring Bore licence 10BL605770 held in perpetuity. Monitoring Bore licence 10BL605629 held but bores are destroyed.	Compliant	
		Water Supply					
3	16	The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of operations under the consent to match its available water supply to the satisfaction of the Secretary.	At all times	Annual water balance review	Water Balance	Compliant	Water balance in approved WMP
3		Water Discharges					
3	17	The Applicant must comply with the discharge limits in any EPL or with Section 120 of the POEO Act.	On discharge	EPL approved water sampling and analysis methods. Surface Water Management Plan.	EPL return. Annual Review. Annual Rehabilitation Report	Compliant	
3		Water Management Plan					
3	18	The Applicant must prepare a Water Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be prepared by suitably qualified person/s approved by the Secretary;	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant	
		(b) be prepared in consultation with the EPA and DPI Water;	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant	
		(c) be submitted to the Secretary for approval prior to the commencement of development under this consent, unless the Secretary agrees otherwise;	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant	
		(d) include a Site Water Balance that: - includes details of: -- quantity of water required to support operations; -- sources and security of water supply; -- water use and management on site; -- reporting procedures; and -- measures to be implemented to minimise potable water use on site;	Prior to undertaking quarrying operations in the extension area	Not applicable	Not applicable	Compliant	

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments									
		(e) include a Surface Water Management Plan, that includes: - baseline data on surface water flows and quality in the watercourses that could be affected by the development; - a description of the surface water management system on site, including: -- clean water diversions; -- erosion and sediment controls; -- the dirty water management system; and -- water storages (addressing maximum harvestable rights if applicable); - performance criteria, including trigger levels for investigating any potentially adverse surface water quality impacts; - a program to monitor and report on: -- any surface water discharges; -- the effectiveness of the water management system; and -- surface water flows and quality in local watercourses;	Prior to undertaking quarrying operations in the extension area	Not applicable	Not applicable	Compliant										
		(f) a Groundwater Management Plan, which includes: - baseline data on groundwater levels, yield and quality in surrounding aquifers; - groundwater assessment and performance criteria, including trigger levels for investigating potentially adverse groundwater impacts; - a program to monitor: -- groundwater inflows to the quarry pit; and -- impacts of the development on surrounding aquifers; - an analysis of the monitoring results to determine long-term water levels within the quarry void; and - a plan to respond to any exceedances of the performance criteria.	Prior to undertaking quarrying operations in the extension area	Not applicable	Not applicable	Compliant										
		The Applicant must implement the approved management plan as approved from time to time by the Secretary.	Prior to undertaking quarrying operations in the extension area	Not applicable	Water Management Plan	Compliant										
		BIODIVERSITY														
		Biodiversity Offset Strategy														
3	19	The Applicant must implement the Biodiversity Offset Strategy described in the EIS, as summarised in Table 7 and shown conceptually in Appendix 4, to the satisfaction of the Secretary. <table><tr><th colspan="3">Table 7: Summary of the Biodiversity Offsets</th></tr><tr><th>Area</th><th>Offset Criteria</th><th>Size (Ha)</th></tr><tr><td>On-site offset</td><td>Existing vegetation to be enhanced to establish an area of native woodland comprising species associated with Cumberland Plain Woodland.</td><td>1.93</td></tr></table>	Table 7: Summary of the Biodiversity Offsets			Area	Offset Criteria	Size (Ha)	On-site offset	Existing vegetation to be enhanced to establish an area of native woodland comprising species associated with Cumberland Plain Woodland.	1.93	On commencement	Visual observations	Photographic evidence Annual review Annual Rehabilitation Report	Non Compliant	
Table 7: Summary of the Biodiversity Offsets																
Area	Offset Criteria	Size (Ha)														
On-site offset	Existing vegetation to be enhanced to establish an area of native woodland comprising species associated with Cumberland Plain Woodland.	1.93														
3		Security of Offsets														
3	20	Within 2 years of notifying the Department of commencement of development (see condition 8 of Schedule 2), unless otherwise agreed with the Secretary, the Applicant must make suitable arrangements to provide appropriate long-term security for the offset area, to the satisfaction of the Secretary. Note: Mechanisms to provide appropriate long term security to the land within the Biodiversity Offset Strategy include a Biobanking Agreement, Voluntary Conservation Agreement or an alternative mechanism that provides for a similar conservation outcome. Any mechanism must remain in force in perpetuity.	Within 2 years of notifying the Department of commencement of development	Correspondence	Correspondence	Non Compliant										
3		Biodiversity Management Plan														
3	21	The Applicant must prepare a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with the OEH and Camden Council;	Prior to undertaking quarrying operations in the extension area	Not applicable	Biodiversity Management Plan	Compliant										
		(b) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;	Prior to undertaking quarrying operations in the extension area	Not applicable	Biodiversity Management Plan	Compliant										
		(c) describe how the implementation of the biodiversity offset strategy would be integrated with the overall rehabilitation of the site;	Prior to undertaking quarrying operations in the extension area	Not applicable	Biodiversity Management Plan	Compliant										

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
		(d) describe the short, medium, and long term measures that would be implemented to: ☐ manage the remnant vegetation and habitat on the site and in the offset area and; ☐ implement the biodiversity offset strategy, including detailed performance and completion criteria;	Prior to undertaking quarrying operations in the extension area	Not applicable	Biodiversity Management Plan	Compliant	
		(e) include performance and completion criteria for evaluating the performance of the biodiversity offset strategy, and triggering remedial action (if necessary);	Prior to undertaking quarrying operations in the extension area	Not applicable	Biodiversity Management Plan	Compliant	
		(f) include a description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for: ☐ maximising the salvage of resources within the approved disturbance area - including vegetative, soil and cultural heritage resources – for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area; ☐ minimising the impacts on fauna on site, including pre-clearance surveys and minimising the potential exposure to tailings; ☐ controlling weeds and feral pests; ☐ controlling erosion; ☐ controlling access; and	Prior to undertaking quarrying operations in the extension area	Not applicable	Biodiversity Management Plan	Compliant	
		(g) identify the potential risks to the successful implementation of the biodiversity offset strategy, and include a description of the contingency measures that would be implemented to mitigate against these risks; and	Prior to undertaking quarrying operations in the extension area	Not applicable	Biodiversity Management Plan	Compliant	
		(h) include details of who would be responsible for monitoring, reviewing, and implementing the plan.	Prior to undertaking quarrying operations in the extension area	Not applicable	Biodiversity Management Plan	Compliant	
		The Applicant must implement the approved management plan as approved from time to time by the Secretary.	Prior to undertaking quarrying operations in the extension area	Not applicable	Biodiversity Management Plan	Compliant	
3		Conservation Bond					
3	22	Within 6 months of the approval of the Biodiversity Management Plan, the Applicant must lodge a conservation bond with the Department to ensure that the biodiversity offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan. The sum of the bond must be determined by: a. calculating the full cost of implementing the biodiversity offset strategy (other than land acquisition costs); and b. employing a suitably qualified quantity surveyor to verify the calculated costs, c. to the satisfaction of the Secretary. The calculation of the conservation bond must be submitted to the Department for approval at least 1 month prior to lodgement of the final bond. If the offset strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the Secretary, the Secretary will release the bond. If the offset strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Secretary will call in all, or part of, the conservation bond, and arrange for the satisfactory completion of the relevant works. Notes: ☐ Alternative funding arrangements for long term management of the biodiversity offset strategy, such as provision of capital and management funding as agreed by OEH as part of a Biobanking Agreement or transfer to conservation reserve estate (or any other mechanism agreed with OEH) can be used to reduce the liability of the conservation bond. ☐ The sum of the bond may be reviewed in conjunction with any revision to the biodiversity offset strategy or the completion of major milestones within the approved plan.	Within 6 months of the approval of the Biodiversity Management Plan.	Correspondence	Correspondence	Non Compliant	Conservation bond not submitted within 6 months of commencement.
3		REHABILITATION BOND					
3		Rehabilitation Objectives					
3	23	The Applicant must rehabilitate the site to the satisfaction of the Secretary. Rehabilitation must: a. comply with the objectives in Table 8; and	During rehabilitation	Visual observations.	Photographic evidence	Compliant	

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments												
		b. be generally consistent with the proposed rehabilitation strategy in the EIS, and the final land form shown conceptually in Appendix 4 (unless modified by the Final Land Use Options Plan, prepared in accordance with condition 25 of this consent). <i>Table 8: Rehabilitation Objectives</i> <table><tr><th>Feature</th><th>Objective</th></tr><tr><td>Site (as a whole)</td><td> - Safe, stable and non-polluting - Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of local native species and habitat </td></tr><tr><td>Surface infrastructure</td><td> - To be decommissioned and removed (unless the Secretary agrees otherwise) </td></tr><tr><td>Final void</td><td> - Minimise the size, depth and slope of the batters of the final void - Minimise the drainage catchment of the final void </td></tr><tr><td>Quarry pit floor</td><td> - Landscaped and revegetated using native flora species, above the anticipated final void water level </td></tr><tr><td>Community</td><td> - Ensure public safety </td></tr></table>	Feature	Objective	Site (as a whole)	- Safe, stable and non-polluting - Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of local native species and habitat	Surface infrastructure	To be decommissioned and removed (unless the Secretary agrees otherwise)	Final void	- Minimise the size, depth and slope of the batters of the final void - Minimise the drainage catchment of the final void	Quarry pit floor	Landscaped and revegetated using native flora species, above the anticipated final void water level	Community	Ensure public safety	During rehabilitation	Visual observations. Review of Rehabilitation Management Plan, Environmental Management Strategy, Final Land Use Options Plan. Review of Mine Operations Plan.	Photographic evidence Annual review Annual Rehabilitation Report	Compliant	Rehabilitation to date has been reviewed in the ARR submitted to the DPE annually and approved. Rehabilitation to date has been consistent with the Objectives.
Feature	Objective																		
Site (as a whole)	- Safe, stable and non-polluting - Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of local native species and habitat																		
Surface infrastructure	To be decommissioned and removed (unless the Secretary agrees otherwise)																		
Final void	- Minimise the size, depth and slope of the batters of the final void - Minimise the drainage catchment of the final void																		
Quarry pit floor	Landscaped and revegetated using native flora species, above the anticipated final void water level																		
Community	Ensure public safety																		
		Progressive Rehabilitation																	
3	24	The Applicant must rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.	During rehabilitation	Visual observations. Review of Rehabilitation Management Plan, Environmental Management Strategy, Final Land Use Options Plan. Review of Mine Operations Plan.	Photographic evidence Annual review Annual Rehabilitation Report	Compliant													
3		Final Land Use Options Plan																	
3	25	The Applicant must prepare a Final Land Use Options Plan for the site to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with DRE and Camden Council;	within 2 years of the date of notifying the Department of commencement of development	Correspondence	Correspondence	Compliant													
		(b) be submitted to the Secretary for approval within 2 years of the date of notifying the Department of commencement of development (see condition 8 of Schedule 2), unless the Secretary agrees otherwise;	within 2 years of the date of notifying the Department of commencement of development	Correspondence	Correspondence	Compliant													
		(c) provide details of the conceptual final landform and associated final land uses for the site;	within 2 years of the date of notifying the Department of commencement of development	Review of Final Land Use Options Plan	Final Land Use Options Plan	Compliant													
		(d) ensure that the conceptual final land form is compatible with surrounding land uses, and is consistent with the rehabilitation objectives in Table 8 and the objectives of the Growth Centres SEPP for the South West Growth Centre;	within 2 years of the date of notifying the Department of commencement of development	Review of Final Land Use Options Plan	Final Land Use Options Plan	Compliant													
		(e) inform the Rehabilitation Management Plan (prepared in accordance with condition 26 of this consent); and	within 2 years of the date of notifying the Department of commencement of development	Review of Rehabilitation Management Plan	Rehabilitation Management Plan	Compliant													

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
		(f) be reviewed every 7 years to account for applicable land use priorities, and if necessary updated.	Every 7 years	Review of Final Land Use Options Plan	Final Land Use Options Plan	Compliant	
3		Rehabilitation Management Plan					
3	26	The Applicant must prepare a Rehabilitation Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with OEH, DRE, DPI Water and Camden Council;	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant	
		(b) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant	
		(c) provide details of the conceptual final landform and associated land uses for the site (which must be consistent with the Final Land Use Options Plan under condition 25 of this consent);	Prior to undertaking quarrying operations in the extension area	Review of Rehabilitation Management Plan	Rehabilitation Management Plan	Compliant	
		(d) describe the short, medium and long term measures that would be implemented to: ☐ manage remnant vegetation and habitat on site; and ☐ ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this consent;	Prior to undertaking quarrying operations in the extension area	Review of Rehabilitation Management Plan	Rehabilitation Management Plan	Compliant	
		(e) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, including triggers for any necessary remedial action;	Prior to undertaking quarrying operations in the extension area	Review of Rehabilitation Management Plan	Rehabilitation Management Plan	Compliant	
		(f) include a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria; and	Prior to undertaking quarrying operations in the extension area	Review of Rehabilitation Management Plan	Rehabilitation Management Plan	Compliant	
		(g) include details of who would be responsible for monitoring, reviewing, and implementing the plan.	Prior to undertaking quarrying operations in the extension area	Review of Rehabilitation Management Plan	Rehabilitation Management Plan	Compliant	
		The Applicant must implement the approved management plan as approved from time to time by the Secretary. Note: The Rehabilitation Management Plan must be reviewed, and if necessary updated, following any update of the Final Land Use Options Plan.	Prior to undertaking quarrying operations in the extension area	Not applicable	Rehabilitation Management Plan	Compliant	
		HERITAGE					
3		Heritage Management Plan					
3	27	The Applicant must prepare a Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must: a. be prepared in consultation with OEH;	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant	
		(a) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;	Prior to undertaking	Correspondence	Correspondence	Compliant	
		b. describe the measures that would be implemented to: ☐ manage identified heritage objects, previously unidentified heritage objects or the discovery of any human remains on site; ☐ ensure ongoing consultation with Aboriginal stakeholders in the conservation and management of any Aboriginal cultural heritage values on site; and ☐ protect sites identified adjacent to the development.	Prior to undertaking quarrying operations in the extension area	Not applicable	Heritage Management Plan	Compliant	
		The Applicant must implement the approved management plan as approved from time to time by the Secretary.	As required	Not applicable	Heritage Management Plan	Compliant	
		VISUAL					

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
3	28	The Applicant must establish a vegetation screen on both noise bunds, as soon as practicable after construction of the bunds, to minimise visibility of site infrastructure from outside the development area. Following establishment, the Applicant must maintain the vegetation screen, to the satisfaction of the Secretary.	As soon as practicable after construction of the bunds	Visual observations	Photographic evidence Annual review Annual Rehabilitation	Compliant	
3	29	The Applicant must; a) implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development; and b) ensure that all external lighting associated with the development complies with Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting, or its latest version.	At all times	Visual observations	Absence of complaints.	Compliant	The quarry does not utilise lighting and operates during daylight hours. The factory is lit for security purposes at night but is sufficient distance from residents for the impact to be minimal.
		BUSHFIRE MANAGEMENT					
3	30	The Applicant must: a) ensure that the development is suitably equipped to respond to any fires on site; and b) assist the Rural Fire Service, emergency services and National Parks and Wildlife Service as much as practicable if there is a fire in the surrounding area.	At all times	Site audit for suitable equipment	Annual Review	Compliant	The site maintains appropriate fire fighting equipment for the brickplant and offices. Any bushfire in the vegetation around the mine is dealt with by the RFS. The site maintains a Site Emergency Response Procedure.
		WASTE					
3	31	Prior to importing onto the site any material that may be classified as a waste under the EPA Waste Classification Guidelines 2009 (or its latest version), the Applicant must obtain a 'resource recovery exemption' under the POEO Act and provide evidence of this exemption to the Department. Note: This condition does not apply to routine deliveries to the site.	Prior to importation of waste	Correspondence	Correspondence	Compliant	No waste has been imported onto the site.
3	32	The Applicant must: a) manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Camden Council; and b) pump all sewage generated and stored on-site to a sewage treatment facility, unless otherwise agreed with the Secretary.	At all times	Review of EPL returns and site documents	EPL return.	Compliant	There have been no EPL non-compliances related to the on-site sewerage treatment and disposal in the last 12 months.
3	33	The Applicant must: a) minimise the waste generated by the development;	At all times	Visual observations Review of waste management plans or policies or procedures	Visual observations Waste management plans or policies or procedures	Compliant	The quarry generates minimal waste (overburden) which is reused in rehabilitation. Waste generated by the brickworks is stored in the appropriate containers and removed by licenced waste contractors. PGH reviews its purchasing and waste policies and procedures regularly to improve processes as required.
		b) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and	At all times	Visual observations Review of waste management plans or policies or procedures	Visual observations Waste management plans or policies or procedures	Compliant	The quarry generates minimal waste (overburden) which is reused in rehabilitation. Waste generated by the brickworks is stored in the appropriate containers and removed by licenced waste contractors.
		c) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.	Annually	Visual observations Review of waste management plans or policies or procedures	Visual observations Waste management plans or policies or procedures Annual Review	Compliant	
4		ADDITIONAL PROCEDURES					
4		NOTIFICATION OF LANDOWNERS					

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Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
4	1	As soon as practicable after obtaining monitoring results showing an exceedance of any relevant criteria in schedule 3, the Applicant must notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the development is again complying with the relevant criteria.	As soon as practicable after obtaining monitoring results that exceed criteria	Correspondence	Correspondence	Compliant	
4		INDEPENDENT REVIEW					
4	2	If an owner of privately-owned land considers the development to be exceeding the relevant criteria in schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land. If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Applicant must: (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to: ☐ consult with the landowner to determine his/her concerns; ☐ conduct monitoring to determine whether the development is complying with the relevant criteria in schedule 3; ☐ if the development is not complying with these criteria then identify the measures that could be implemented to ensure compliance with the relevant criteria; and (b) give the Secretary and landowner a copy of the independent review.	Within 2 months of the Secretary's decision	Independent Review	Independent Review	Not Triggered	
5	ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING						
5		ENVIRONMENTAL MANAGEMENT					
5		Environmental Management Strategy					
5	1	If the Secretary requires, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must: (a) be submitted to the Secretary for approval within 6 months of the Secretary requiring preparation of the strategy by notice to the Applicant;	Within 6 months of the Secretary requiring preparation of the strategy	Correspondence	Correspondence	Compliant	
		(b) provide the strategic framework for environmental management of the development;	Within 6 months of the Secretary requiring preparation of the strategy	Not applicable	Environmental Management Strategy	Compliant	
		(c) identify the statutory approvals that apply to the development;	Within 6 months of the Secretary requiring preparation of the strategy	Not applicable	Environmental Management Strategy	Compliant	
		(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Within 6 months of the Secretary requiring preparation of the strategy	Not applicable	Environmental Management Strategy	Compliant	
		(e) describe the procedures that would be implemented to: ☐ keep the local community and relevant agencies informed about the operation and environmental performance of the development; ☐ receive, handle, respond to, and record complaints; ☐ resolve any disputes that may arise during the course of the development; ☐ respond to any non-compliance; ☐ respond to emergencies; and	Within 6 months of the Secretary requiring preparation of the strategy	Not applicable	Environmental Management Strategy	Compliant	
		(f) include: ☐ copies of any strategies, plans and programs approved under the conditions of this consent; and ☐ a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.	Within 6 months of the Secretary requiring preparation of the strategy	Not applicable	Environmental Management Strategy	Compliant	
		The Applicant must implement any Environmental Management Strategy as approved from time to time by the Secretary.	As required	Not applicable	Environmental Management Strategy	Compliant	
5		Adaptive Management					

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A requirement has an activation or timing trigger that has not been met at thephase of the development when the compliance assessment is undertaken,therefore an assessment of compliance is not relevant.							
Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
5	2	The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity: (a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur; (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and (c) implement remediation measures as directed by the Secretary; to the satisfaction of the Secretary.	When exceedance of criteria in Schedule 3 occurs.	Review of each monitoring data set.	Annual Review Reports of exceedances and any managmeent plans developed as a result of the exceedences.	Compliant	
5		Management Plan Requirements					
5	3	The Applicant must ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include: (a) detailed baseline data; (b) a description of: ☐ the relevant statutory requirements (including any relevant approval, licence or lease conditions); ☐ any relevant limits or performance measures/criteria; and ☐ the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures; (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; (d) a program to monitor and report on the: ☐ impacts and environmental performance of the development; and ☐ effectiveness of any management measures (see (c) above); (e) a contingency plan to manage any unpredicted impacts and their consequences; (f) a program to investigate and implement ways to improve the environmental performance of the development over time; (g) a protocol for managing and reporting any: ☐ incidents; ☐ complaints; ☐ non-compliances with statutory requirements; and ☐ exceedances of the impact assessment criteria and/or performance criteria; and (h) a protocol for periodic review of the plan. Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.	As required	Review of relevant Management Plans	Relevant Management Plans	Compliant	
		Annual Review					
5	4	By the end of September each year, the Applicant must submit a report to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary. This review must: (a) describe the development (including rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year; (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, which includes a comparison of these results against: ☐ the relevant statutory requirements, limits or performance measures/criteria; ☐ the monitoring results of previous years; and ☐ the relevant predictions in the documents in condition 2(a) of Schedule 2; (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance; (d) identify any trends in the monitoring data over the life of the development; (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and (f) describe what measures will be implemented over the current financial year to improve the environmental performance of the development.	End of September each year.	Review of all data and plans for site for the financial year	Monitoring data	Non Compliant	AR 2023 not submitted
5		Revision of Strategies, Plans & Programs					

Bringelly Brickworks Extension Project
Applicable Period: 1 July 2023 to 30 June 2024
SSD Conditions: SSD_5684 Mod 1

Compliant							
Non Compliant							
Not Triggered	A requirement has an activation or timing trigger that has not been met at the phase of the development when the compliance assessment is undertaken, therefore an assessment of compliance is not relevant.						
Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
5	5	Within 3 months of the submission of an: (a) Annual Review under condition 4 above; (b) incident report under condition 7 below; (c) audit report under condition 9 below; and (d) any modifications to this consent, the Applicant must review the strategies, plans and programs required under this consent, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Secretary. Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the development.	Within 3 months of described conditions	Not applicable	Correspondence	Non Compliant	Plans and strategies not reviewed
5		Community Consultative Committee					
5	6	The Applicant must establish and operate a Community Consultative Committee (CCC) for the development to the satisfaction of the Secretary. This CCC must be operated in general accordance with the Guidelines for Establishing and Operating Community Consultative Committees for Mining Developments (Department of Planning, 2007, or its latest version), and be operating prior to the commencement of development under this consent. Notes: ☐ The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent. ☐ In accordance with the guideline, the Committee should comprise an independent chair and appropriate	Prior to undertaking quarrying operations in the extension area	Correspondence	Correspondence	Compliant	The CCC has been established.
		REPORTING					
5		Incident Reporting					
5	7	The Applicant must immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Applicant must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.	Immediately notify after any incident and report within 7 days of incident	Not applicable	Correspondence	Compliant	PM10 exceedances reported to the DPE. Monitor relocated
		Regular Reporting					
5	8	The Applicant must provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.	As required	Review of website	Website	Compliant	
5		INDEPENDENT ENVIRONMENTAL AUDIT					
5	9	Within a year of commencing development under this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. This audit must: (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; (b) include consultation with the relevant agencies; (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL and/or Water Licence (including any assessment, plan or program required under these approvals); (d) review the adequacy of any approved strategy, plan or program required under these approvals; (e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals; and be conducted and reported to the satisfaction of the Secretary. Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.	Within a year of commencing development under this consent, and every 3 years thereafter,	Review of all data, documents, correspondence, reports and plans for site.	Audit report	Compliant	Independent Audit was undertaken by Element Environment Pty Ltd in February 2024
5	10	Within 12 weeks of commencing this audit, unless the Secretary agrees otherwise, the Applicant must submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report, including a timetable for the implementation of any measures proposed to address the recommendations in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented. Within 7 days of commencing the audit, the Applicant must notify the Department in writing of the commencement of the audit.	Audit report to be supplied to Secretary within 12 weeks of commencing audit. Notify the Department within 7 days of commencing the audit.	Correspondence	Correspondence	Compliant	
5		ACCESS TO INFORMATION					

Bringelly Brickworks Extension Project
Applicable Period: 1 July 2023 to 30 June 2024
SSD Conditions: SSD_5684 Mod 1

Compliant
Non Compliant
Not Triggered

A requirement has an activation or timing trigger that has not been met at the phase of the development when the compliance assessment is undertaken, therefore an assessment of compliance is not relevant.

Schedule	Condition	Condition Text	Timing for Compliance	Monitoring Methodology	Evidence	Details of compliance status	Comments
5	11	Within 6 months of commencing development under this consent, the Applicant must: (a) make copies of the following publicly available on its website: ☐ the documents in condition 2(a) of Schedule 2; ☐ current statutory approvals for the development; ☐ approved strategies, plans and programs required under the conditions of this consent; ☐ a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; ☐ a complaints register, which is to be updated monthly; ☐ minutes of CCC meetings; ☐ the annual reviews of the development (for the last 5 years); ☐ any independent environmental audit of the development, and the Applicant's response to the recommendations in any audit; ☐ any other matter required by the Secretary; and (b) keep this information up-to-date, to the satisfaction of the Secretary.	Within 6 months of commencing development under this consent.	Review of website	Website	Compliant	The approved Plans and Strategies have been uploaded to the website.
Appendix 5		NOISE COMPLIANCE ASSESSMENT					
		Applicable Metrological Conditions					
	1	The noise criteria in Table 2 of the conditions are to apply under all meteorological conditions except the following: (a) wind speeds greater than 3 m/s at 10 m above ground level; or (b) temperature inversion conditions between 1.5 °C and 3°C/100 m and wind speeds greater than 2 m/s at 10 m above ground level; or (c) temperature inversion conditions greater than 3°C/100 m.	When meteorological conditions apply	NSW Industrial Noise Policy Meteorological monitoring	Noise monitoring results. Meteorological data	Compliant	A weather station has been installed in early 2017. Generally the site does not operate during inversion conditions as these are commonly experienced outside of operating hours. No complaints have been received during the report period.
		Determination of Meteorological Conditions					
	2	Except for wind speed at microphone height, the data to be used for determining meteorological conditions must be that recorded by the meteorological station on or in the vicinity of the site.	During meteorological monitoring	On-site meteorological station.	Meteorological data.	Compliant	A weather station has been installed in early 2017.
		Compliance Monitoring					
	3	Unless directed otherwise by the Secretary, quarterly attended monitoring is to be used to evaluate compliance with the relevant conditions of consent. Note: The Secretary may direct that the frequency of attended monitoring increase or decrease at any time during the life of the development.	Quarterly	NSW Industrial Noise Policy	Noise monitoring results.	Compliant	Current management measures have been satisfactory to date and no complaints have been received the the last 12 months.
	4	Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the NSW Industrial Noise Policy (as amended from time to time), in particular the requirements relating to: (a) monitoring locations for the collection of representative noise data; (b) meteorological conditions during which collection of noise data is not appropriate; (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and (d) modifications to noise data collected including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.	Quarterly	NSW Industrial Noise Policy	Noise monitoring results.	Compliant	Monitoring has been undertaken as required by consent conditions.

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Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments															
1	Administrative Conditions																	
A1.1	What the licence authorises and regulates This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation. Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition. <table><thead><tr><th>Scheduled Activity</th><th>Fee Based Activity</th><th>Scale</th></tr></thead><tbody><tr><td>Ceramic Works produced</td><td>Ceramics production</td><td>> 50000 - 200000 T</td></tr><tr><td>Crushing, grinding or separating</td><td>Crushing, Grinding or Separating</td><td>> 100000 - 500000 T processed</td></tr><tr><td>Extractive Activities processed or stored</td><td>Land-based extractive activity</td><td>> 100000 - 500000 T extracted,</td></tr><tr><td>Mining for minerals</td><td>Mining for Minerals</td><td>> 100000 - 500000 T produced</td></tr></tbody></table>	Scheduled Activity	Fee Based Activity	Scale	Ceramic Works produced	Ceramics production	> 50000 - 200000 T	Crushing, grinding or separating	Crushing, Grinding or Separating	> 100000 - 500000 T processed	Extractive Activities processed or stored	Land-based extractive activity	> 100000 - 500000 T extracted,	Mining for minerals	Mining for Minerals	> 100000 - 500000 T produced	Compliant	
Scheduled Activity	Fee Based Activity	Scale																
Ceramic Works produced	Ceramics production	> 50000 - 200000 T																
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Extractive Activities processed or stored	Land-based extractive activity	> 100000 - 500000 T extracted,																
Mining for minerals	Mining for Minerals	> 100000 - 500000 T produced																
A2.1	The licence applies to the following premises: Premises Details BRINGELLY LOT 2 GREENDALE ROAD BRINGELLY NSW 2556 LOT 11 DP 1125892	Compliant																
A3.1	Information supplied to the EPA Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence. In this condition the reference to "the licence application" includes a reference to: a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.	Compliant																
2	Discharges to Air and Water and Applications to Land																	
P1.1	Location of monitoring/discharge points and areas The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point. <table><thead><tr><th colspan="4">Air</th></tr><tr><th>EPA identi- fication no.</th><th>Type of Monitoring Point</th><th>Type of Discharge Point</th><th>Location Description</th></tr></thead><tbody><tr><td>2</td><td>Discharge to Air; Air Emissions Monitoring</td><td>Discharge to Air; Air Emissions Monitoring</td><td>Kiln exhaust stack as marked on map showing locations of discharge points submitted to the EPA with Licence Information Form dated 9/05/00.</td></tr></tbody></table>	Air				EPA identi- fication no.	Type of Monitoring Point	Type of Discharge Point	Location Description	2	Discharge to Air; Air Emissions Monitoring	Discharge to Air; Air Emissions Monitoring	Kiln exhaust stack as marked on map showing locations of discharge points submitted to the EPA with Licence Information Form dated 9/05/00.	Compliant				
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Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments																
P1.2	The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.	Compliant																	
P1.3	The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point. <table><tr><th colspan="4">Water and land</th></tr><tr><th>EPA Identification no.</th><th>Type of Monitoring Point</th><th>Type of Discharge Point</th><th>Location Description</th></tr><tr><td>1</td><td>Discharge and Monitoring; Discharge to waters</td><td>Discharge and Monitoring; Discharge to waters</td><td>Outlet from Dam 1 on map labelled: Site Layout Plan, Figure 2, Water Management Plan dated 10.11.15 (EPA DOC15/464889-02). Discharge point is located on the NE corner of Dam 1.</td></tr><tr><td>5</td><td>Discharge and Monitoring; Discharge to waters</td><td>Discharge and Monitoring; Discharge to waters</td><td>Discharge from Dam 5 on map labelled: Site Layout Plan, Figure 2, Water Management Plan dated 10.11.15 (EPA DOC15/464889-02). Discharge point is located on the NW corner of Dam 5.</td></tr></table>	Water and land				EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description	1	Discharge and Monitoring; Discharge to waters	Discharge and Monitoring; Discharge to waters	Outlet from Dam 1 on map labelled: Site Layout Plan, Figure 2, Water Management Plan dated 10.11.15 (EPA DOC15/464889-02). Discharge point is located on the NE corner of Dam 1.	5	Discharge and Monitoring; Discharge to waters	Discharge and Monitoring; Discharge to waters	Discharge from Dam 5 on map labelled: Site Layout Plan, Figure 2, Water Management Plan dated 10.11.15 (EPA DOC15/464889-02). Discharge point is located on the NW corner of Dam 5.	Compliant	
Water and land																			
EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description																
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5	Discharge and Monitoring; Discharge to waters	Discharge and Monitoring; Discharge to waters	Discharge from Dam 5 on map labelled: Site Layout Plan, Figure 2, Water Management Plan dated 10.11.15 (EPA DOC15/464889-02). Discharge point is located on the NW corner of Dam 5.																
3	Limit Conditions																		
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Compliant																	
L2.1	Load limits The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.	Compliant																	
L2.2	The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol. <table><tr><th>Assessable Pollutant</th><th>Load limit (kg)</th></tr><tr><td>Coarse Particulates (Air)</td><td>8400.00</td></tr><tr><td>Fine Particulates (Air)</td><td>33300.00</td></tr><tr><td>Fluoride (Air)</td><td>11700.00</td></tr><tr><td>Nitrogen Oxides - Summer (Air)</td><td></td></tr><tr><td>Nitrogen Oxides (Air)</td><td>90300.00</td></tr><tr><td>Sulfur Oxides (Air)</td><td>186500.00</td></tr></table> Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.	Assessable Pollutant	Load limit (kg)	Coarse Particulates (Air)	8400.00	Fine Particulates (Air)	33300.00	Fluoride (Air)	11700.00	Nitrogen Oxides - Summer (Air)		Nitrogen Oxides (Air)	90300.00	Sulfur Oxides (Air)	186500.00	Compliant			
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L3.1	Concentration limits For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	Compliant																	
L3.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	Compliant																	

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Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments																																																						
L3.3	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.	Compliant																																																							
L3.4	Air Concentration Limits POINT 2 <table><tr><th>Pollutant</th><th>Units of measure</th><th>100 percentile concentration limit</th><th>Reference conditions</th><th>Oxygen correction</th><th>Averaging period</th></tr><tr><td>Total Solid Particles</td><td>milligrams per cubic metre</td><td>100</td><td></td><td></td><td></td></tr><tr><td>Hydrogen fluoride</td><td>milligrams per cubic metre</td><td>50</td><td></td><td></td><td></td></tr><tr><td>Nitrogen Oxides</td><td>milligrams per cubic metre</td><td>2000</td><td></td><td></td><td></td></tr></table>	Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period	Total Solid Particles	milligrams per cubic metre	100				Hydrogen fluoride	milligrams per cubic metre	50				Nitrogen Oxides	milligrams per cubic metre	2000				Compliant																															
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L3.5	Water and/or Land Concentration Limits POINT 1 <table><tr><th>Pollutant</th><th>Units of Measure</th><th>50 percentile concentration limit</th><th>90 percentile concentration limit</th><th>3DGM concentration limit</th><th>100 percentile concentration limit</th></tr><tr><td>Oil and Grease</td><td>milligrams per litre</td><td></td><td></td><td></td><td>10</td></tr><tr><td>pH</td><td>pH</td><td></td><td></td><td></td><td>6.5-8.5</td></tr><tr><td>Turbidity</td><td>nephelometric turbidity units</td><td></td><td></td><td></td><td>150</td></tr></table> POINT 5 <table><tr><th>Pollutant</th><th>Units of Measure</th><th>50 percentile concentration limit</th><th>90 percentile concentration limit</th><th>3DGM concentration limit</th><th>100 percentile concentration limit</th></tr><tr><td>Conductivity</td><td>microsiemens per centimetre</td><td></td><td></td><td></td><td>1450</td></tr><tr><td>Oil and Grease</td><td>milligrams per litre</td><td></td><td></td><td></td><td>10</td></tr><tr><td>pH</td><td>pH</td><td></td><td></td><td></td><td>6.5-8.5</td></tr><tr><td>Turbidity</td><td>nephelometric turbidity units</td><td></td><td></td><td></td><td>150</td></tr></table>	Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	Oil and Grease	milligrams per litre				10	pH	pH				6.5-8.5	Turbidity	nephelometric turbidity units				150	Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	Conductivity	microsiemens per centimetre				1450	Oil and Grease	milligrams per litre				10	pH	pH				6.5-8.5	Turbidity	nephelometric turbidity units				150	Compliant	
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L3.6	Exceedance of a quality limit specified in this Licence for the discharge of total suspended solids or turbidity from Point 1 or Point 5 is only permitted if the discharge from Point 1 or Point 5 occurs solely as a result of rainfall. The rainfall must be equal to, or greater than, a 90th percentile 5-day rain event.	Compliant																																																							

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Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments
L3.7	For the purposes of Condition L3.6, a 90th percentile 5-day rain event equates to rainfall of 50 millimetres over a 5 day period.	Compliant	
L3.8	For the purposes of the condition(s) above, rainfall data recorded by the meteorological station identified as the Bureau of Meteorology (BoM) Badgerys Creek Weather Station must be used to determine the rain event.	Compliant	
L4.1	Noise from the mobile plant must not exceed an LA10 (15 minute) noise emission criterion of 35 dB(A) at all times. except as expressly provided by this licence.	Compliant	
L4.2	Noise from the premises must not exceed an LA10 (15 minute) noise emission criterion of 35 dB(A) at all times. except as expressly provided by this licence.	Compliant	
L4.3	Noise from the premises is to be measured or computed at any point within 30 metres of the most affected residence to determine compliance with condition L4.1 and L4.2. 5dB(A) must be added if the noise is tonal or impulsive in character.	Compliant	
4	Operating Conditions		
O1.1	Activities must be carried out in a competent manner Licensed activities must be carried out in a competent manner. This includes: a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	Compliant	
O2.1	Maintenance of plant and equipment All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.	Compliant	
O3.1	Dust The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	Compliant	
5	Monitoring and Recording Conditions		
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Compliant	Records are kept of all monitoring and reported in the EPL Annual Return, the ARR and this Annual Review.
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	Compliant	Records are kept of all monitoring and reported in the EPL Annual Return, the ARR and this Annual Review.

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Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments																																				
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	Compliant	Contractors or PGH sampling staff maintain these records.																																				
M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	Compliant																																					
M2.2	Air Monitoring Requirements POINT 2 <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Hydrogen fluoride</td><td>milligrams per cubic metre</td><td>Yearly</td><td>TM-9</td></tr><tr><td>Nitrogen Oxides</td><td>milligrams per cubic metre</td><td>Yearly</td><td>TM-11</td></tr><tr><td>Total Solid Particles</td><td>milligrams per cubic metre</td><td>Yearly</td><td>TM-15</td></tr></table>	Pollutant	Units of measure	Frequency	Sampling Method	Hydrogen fluoride	milligrams per cubic metre	Yearly	TM-9	Nitrogen Oxides	milligrams per cubic metre	Yearly	TM-11	Total Solid Particles	milligrams per cubic metre	Yearly	TM-15	Compliant																					
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M2.3	Water and/ or Land Monitoring Requirements POINT 1 <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Oil and Grease</td><td>milligrams per litre</td><td>Weekly during any discharge</td><td>Grab sample</td></tr><tr><td>pH</td><td>pH</td><td>Weekly during any discharge</td><td>Grab sample</td></tr><tr><td>Turbidity</td><td>nephelometric turbidity units</td><td>Weekly during any discharge</td><td>Grab sample</td></tr></table> POINT 5 <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Conductivity</td><td>microsiemens per centimetre</td><td><24hrs prior to discharge</td><td>Grab sample</td></tr><tr><td>Oil and Grease</td><td>milligrams per litre</td><td><24hrs prior to discharge</td><td>Grab sample</td></tr><tr><td>pH</td><td>pH</td><td><24hrs prior to discharge</td><td>Grab sample</td></tr><tr><td>Turbidity</td><td>nephelometric turbidity units</td><td><24hrs prior to discharge</td><td>Grab sample</td></tr></table>	Pollutant	Units of measure	Frequency	Sampling Method	Oil and Grease	milligrams per litre	Weekly during any discharge	Grab sample	pH	pH	Weekly during any discharge	Grab sample	Turbidity	nephelometric turbidity units	Weekly during any discharge	Grab sample	Pollutant	Units of measure	Frequency	Sampling Method	Conductivity	microsiemens per centimetre	<24hrs prior to discharge	Grab sample	Oil and Grease	milligrams per litre	<24hrs prior to discharge	Grab sample	pH	pH	<24hrs prior to discharge	Grab sample	Turbidity	nephelometric turbidity units	<24hrs prior to discharge	Grab sample	Compliant	
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Bringelly Brickworks Extension Project

EPL1808

Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments
M3.1	Testing methods - concentration limits Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence the pollutant; or b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place. must be done in accordance with: a) any methodology which is required by or under the Act to be used for the testing of the concentration of Note: The Protection of the Environment Operations (Clean Air) Regulation 2010 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".	Compliant	
M3.2	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.	Compliant	
M4	Testing methods - load limits Note: Division 3 of the Protection of the Environment Operations (General) Regulation 2009 requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the Administrative Conditions of this licence.	Compliant	
M5.1	Recording of pollution complaints The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	Compliant	There have been no complaints in the last 12 months.
M5.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.	Compliant	There have been no complaints in the last 12 months.
M5.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	Compliant	There have been no complaints in the last 12 months.
M5.4	The record must be produced to any authorised officer of the EPA who asks to see them.	Compliant	There have been no request for complaints records to date.

Bringelly Brickworks Extension Project

EPL1808

Compliant

Non Compliant

Not Triggered

Condition	Commitment	Details of compliance status	Comments
M6.1	Telephone complaints line The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or	Compliant	A phone line is operated and the number is signposted at the entrance to the site.
M6.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	Compliant	A phone line is operated and the number is signposted at the entrance to the site.
M6.3	The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.	Compliant	
6	Reporting Conditions		
R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: 1. a Statement of Compliance, 2. a Monitoring and Complaints Summary, 3. a Statement of Compliance - Licence Conditions, 4. a Statement of Compliance - Load based Fee, 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan, 6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data, 7. a Statement of Compliance - Environmental Management Systems and Practices; and 8. a Statement of Compliance - Environmental Improvement Works. At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.	Compliant	An Annual Return has been submitted each year.
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below. Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.	Compliant	
R1.3	Where this licence is transferred from the licensee to a new licensee: a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.	Compliant	
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.	Compliant	
R1.5	The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	Compliant	An Annual Return has been submitted each year.

Bringelly Brickworks Extension Project

EPL1808

Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments
R1.6	Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify: a) the assessable pollutants for which the actual load could not be calculated; and b) the relevant circumstances that were beyond the control of the licensee.	Compliant	
R1.7	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	Compliant	
R1.8	Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) the licence holder; or b) by a person approved in writing by the EPA to sign on behalf of the licence holder.	Compliant	
R2.1	Notification of environmental harm Notifications must be made by telephoning the Environment Line service on 131 555.	Compliant	
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred. Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	Compliant	
R3.1	Written report Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	Compliant	
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	Compliant	
R3.3	The request may require a report which includes any or all of the following information: a) the cause, time and duration of the event; b) the type, volume and concentration of every pollutant discharged as a result of the event; c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and g) any other relevant matters.	Compliant	

Bringelly Brickworks Extension Project

EPL1808

Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments												
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	Compliant													
7	General Conditions														
G1.1	Copy of licence kept at the premises or plant A copy of this licence must be kept at the premises to which the licence applies.	Compliant													
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	Compliant													
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.	Compliant													
G2.1	Completed Programs <table><tr><th>PRP</th><th>Description</th><th>Completed Date</th></tr><tr><td>PRP 1 - WATER MONITORING PROGRAM</td><td>Water monitoring program for conductivity in discharges into Thompsons Creek from Licensed Discharge Point 4.</td><td>30-May-2014</td></tr><tr><td>PRP 2 - WATER MANAGEMENT PLAN</td><td>Protect and reduce the impact on Thompsons Creek by preparing a Water Management Plan (WMP) which outlines options to improve on site water management and reduce pollutant loads discharged from the site to Thompsons Creek.</td><td>13-November-2015</td></tr></table>	PRP	Description	Completed Date	PRP 1 - WATER MONITORING PROGRAM	Water monitoring program for conductivity in discharges into Thompsons Creek from Licensed Discharge Point 4.	30-May-2014	PRP 2 - WATER MANAGEMENT PLAN	Protect and reduce the impact on Thompsons Creek by preparing a Water Management Plan (WMP) which outlines options to improve on site water management and reduce pollutant loads discharged from the site to Thompsons Creek.	13-November-2015	Compliant				
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8	Special Conditions														
E1.1	Summary Table of Special Conditions Completed <table><tr><th>No.</th><th>Special Condition</th><th>Description</th><th>Completed Date</th></tr><tr><td>1</td><td>Water Quality</td><td>To submit a report confirming details of all surface water; process water and effluent management systems; all existing sedimentation controls; modifications required; and timetable for implementation.</td><td>1 Nov 2002</td></tr><tr><td>2</td><td>Surface water management options</td><td>To submit a report on the best utilisation of water from dams 5 & 6.</td><td>1 Mar 2005</td></tr></table>	No.	Special Condition	Description	Completed Date	1	Water Quality	To submit a report confirming details of all surface water; process water and effluent management systems; all existing sedimentation controls; modifications required; and timetable for implementation.	1 Nov 2002	2	Surface water management options	To submit a report on the best utilisation of water from dams 5 & 6.	1 Mar 2005	Compliant	
No.	Special Condition	Description	Completed Date												
1	Water Quality	To submit a report confirming details of all surface water; process water and effluent management systems; all existing sedimentation controls; modifications required; and timetable for implementation.	1 Nov 2002												
2	Surface water management options	To submit a report on the best utilisation of water from dams 5 & 6.	1 Mar 2005												

Bringelly Brickworks Extension Project

ML1731 (Act 1992) and Variation from 1/5/2017

- Compliant
- Non Compliant
- Not Triggered

Number	Condition	Details of compliance status	Comments
1 a)	Within 90 days from the date of grant or renewal of this mining lease, the lease holder must give each landholder notice in writing: (i) that this mining lease has been granted or renewed; and (ii) whether the lease includes the surface. The notice must include a plan identifying the lease area and each landholder and individual land parcel within the lease area.	Compliant	PGH are the landholder.
1 b)	If there are ten or more landholders to which notice must be given, the lease holder will be taken to have complied with condition 1(a) if a notice complying with condition 1(a) is published in a newspaper circulating in the region where the lease area is situated.	Compliant	PGH are the landholder.
2	Security The lease holder is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations under the mining lease, including obligations under the mining lease that may arise in the future. The amount of the security deposit to be provided has been assessed at \$776,000.	Compliant	
3	Cooperation Agreement The lease holder must make every reasonable attempt, and be able to demonstrate its attempts to the satisfaction of the Secretary, to enter into a cooperation agreement with the holder(s) of any overlapping authorisations issued under the Mining Act 1992 and petroleum titles issued under the Petroleum (Onshore) Act 1991. The cooperation agreement should address but not be limited to: • access arrangements • operational interaction procedures • dispute resolution • information exchange • well location • timing of drilling • potential resource extraction conflicts; and • rehabilitation issues.	Compliant	
4	Assessable Prospecting Operations (a) The lease holder must not carry out any assessable prospecting operation on land over which this lease has been granted unless: (i) it is carried out in accordance with any necessary development consent; or (ii) if development consent is not required, the prior written approval of the Minister has been obtained. (b) The Minister may require the lease holder to provide such information as required to assist the Minister to consider an application for approval. (c) An approval granted by the Minister under this condition may be granted subject to terms. (d) The lease holder must comply with the approval granted to the holder under this condition.	Compliant	
	Exploration Reporting Note: Exploration Reports (Geological and Geophysical) The lease holder must lodge reports in accordance with the requirements in section 163C of the Mining Act 1992 and clauses 59, 60 and 61 of the Mining Regulation 2016 as well as any further requirements issued by the Secretary under clause 62 of the Mining Regulation. Guidelines for the structure, content and data format requirements for reports are set out in the Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales	Compliant	An exploration report is submitted annually

Bringelly Brickworks Extension Project

Water Licence 10BL605770 for monitoring bores

Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments
1	The licence shall lapse if the work is not commenced and completed within 3 years of the date of the issue of the licence.	Compliant	The bores have been installed.
2	The licensee shall within 2 months of completion or after the issue of the licence of the work is existing, furnish to NSW Office of Water: a) details of the work set out in the attached Form "A" (completed by a driller). b) A plan showing accurately the location of the work, in relation to portion and property boundaries. c) A one litre water sample for all licences other than those for stock, domestic, test bores and farming purposes. d) details of any water analysis and/or pumping tests.	Compliant	The Form A, location plan and analysis details have been provided to DPI Water in 2015 with the application for the bore licence.
3	The licensee shall allow NSW Office of Water or any person authorised by it, full and free access to the works, either during or after construction, for the purpose of carrying out inspection or test of the works and its fittings and shall carry out any work or alterations deemed necessary by the department for the protection and proper maintenance of the works, or the control of the water extracted and for the protection of the quality and the prevention from pollution or contamination of sub-surface water.	Compliant	Not required to date.
4	If during the construction of the work, saline ot polluted water is encountered above the producing aquifer, such water shall be sealed offby: a) inserting the appropriate length of casing to a depth sufficient to exclude the saline or polluted water from the work b) cementing between the casing(s) and the walls of the bore hole from the bottom of the casing to ground level.	Compliant	Not required to date.
5	a) the licensee shall notify NSW Office of Water if a flowing supply of water is obtained. The bore shall then be lined with casing and cemented and a suitable closing gear shall be attached to the bore head as specified by NSW Office of Water. B) if a flowing supply of water is obtained from the work, the licensee shall only distribute water from the bore head by a system of pipelines and shall not distribute it in drains, natural or artificial channels or depressions.	Compliant	Not required to date.
6	If a work is abandoned at any time the licensee shall notify NSW Office of Water that the work has been abandoned and seal off the aquifer by: a) backfilling the work to the ground level with clay or cement after withdrawing the casing (lining); or b) Such methods as agreed to or directed by NSW Office of Water.	Compliant	Not required to date.
7	The licensee shall not allow any tailwater/drainage to discharge into or onto: any adjoining public or crown road; any other persons land; any Crown land; any river, creek or watercourse; any native vegetation as described under the native Vegetation Conservation Act 1997; Any wetlands of environmental significance.	Compliant	There is no discharge from the monitoring bores.
8	Works used for the purpose of conveying, distributing or storing water taken by means of the licenced work shall not be costructed or installed so as to obstruct the reasonable passage of flood waters flowing into or from a river.	Compliant	Not required to date.
9	If the bore authorised by this licence is lines with steel or plastic casing the inside diameter of that casing shall not exceed 220mm.	Compliant	bore diameters are approxiamtely 60mm.
10	Water shall not be pumped from the bore authorised by this licence from any purpose other than groundwater investigation.	Compliant	
11	Subject to condition (12) the licensee shall within 2 months of the date of completion of the bore authorised by the licence, 1) backfill it with clay or cement to ground level after withdrawing any casing (lining) or: 2) render it ineffective by any other means acceptable to the Department.	Compliant	Not required to date.
12	Condition 11 shall have no force or effect if: 1) at the relevant time there is wothj NSW Office of Water, an application in respect of which the Department has not made a decision to convert the groundwater investigation bore into a production bore; or 2) The licensee has completed the bore for the purpose of measuring water levels or water quality by the addition of casing with a diameter not exceeding 220mm.	Compliant	Not required to date.

Bringelly Brickworks Extension Project

Water Licence WAL26259- Surface Water

Compliant
Non-Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments
	Unregulated River; Hawkesbury and Lower Nepean Rivers Water Source; Upper South Creek Management Zone; Share components 150.0		
MW0112-00001	The maximum water allocation that may be carried over in the account for this access licence from one water year to the next water year is: A. a volume equal to 100 % of the share component of the licence, or B. 1 ML/unit share of the share component of the licence.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0036-00002	The volume of water taken in any three (3) consecutive water years from 1 July 2012 must be recorded in the logbook at the end of those three water years. The maximum volume of water permitted to be taken in those years must also be recorded in the logbook.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0605-00001	Water must be taken in compliance with the conditions of the approval for the nominated work on this access licence through which water is to be taken. This restriction does not apply if water is to be taken: A. from an off-river pool, an in-river pool, a runoff harvesting dam or an in-river dam pool, or B. from the following Weirs: Maldon, Douglas Park, Menangle, Camden, Sharpes, Cobbity, Mount Hunter Rivulet, Brownlow Hill, Theresa Park and Wallacia.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0080-00012	From 1 July 2011, water must not be taken from the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source when flows are in the Very Low Flow Class, which means that the flow is 0.2 ML/day or less at South Creek at the Great Western Highway gauge [No. 212048]. This restriction does not apply if water is to be taken from a runoff harvesting dam or an in-river dam pool.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0078-00004	In the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source, if the flow is less than 0.2 ML/day at South Creek at the Great Western Highway gauge [No. 212048] for a period of 24 or more consecutive hours, then there must be a minimum flow of 0.2 ML/day at that gauge for at least 24 hours before water can be taken.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0004-00002	From 1 July 2012, the total volume of water taken in any three (3) consecutive water years under this access licence must not exceed a volume which is equal to the lesser of either: A. the sum of: i. water in the account from the available water determinations in those 3 consecutive water years, plus ii. water in the account carried over from the water year prior to those 3 consecutive water years, plus iii. any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus iv. any water re-credited by the Minister to the account in those 3 consecutive water years, or B. the sum of: i. the share component of this licence at the beginning of the first year in those 3 consecutive water years, plus ii. the share component of this licence at the beginning of the second year in those 3 consecutive water years, plus iii. the share component of this licence at the beginning of the third year in those 3 consecutive water years, plus iv. any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus v. any water re-credited by the Minister to the account in those 3 consecutive water years.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2338-00001	The completed logbook must be retained for five (5) years from the last date recorded in the logbook.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2337-00001	The following information must be recorded in the logbook for each period of time that water is taken: A. date, volume of water, start and end time when water was taken as well as the pump capacity per unit of time, and B. the access licence number under which the water is taken, and C. the approval number under which the water is taken, and	Compliant	No water has been drawn from the WALs over the reporting period.
MW2339-00001	A logbook must be kept, unless the work is metered and fitted with a data logger. The logbook must be produced for inspection when requested by the relevant licensor.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0051-00002	Once the licence holder becomes aware of a breach of any condition on this access licence, the licence holder must notify the Minister as soon as practicable. The Minister must be notified by: A. email: water.enquiries@dpi.nsw.gov.au, or B. telephone: 1800 353 104. Any notification by telephone must also be confirmed in writing within seven (7) business days of the telephone call.	Compliant	No water has been drawn from the WALs over the reporting period.

Bringelly Brickworks Extension Project

Water Licence WAL26257- Surface Water

Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments
	Domestic and Stock; Hawkesbury and Lower Nepean Rivers Water Source; Upper South Creek Management Zone; Share components 6.50		
MW0112-00001	The maximum water allocation that may be carried over in the account for this access licence from one water year to the next water year is: A. a volume equal to 100 % of the share component of the licence, or B. 1 ML/unit share of the share component of the licence.	Compliant	No water has been drawn from the WALs over the reporting period.
MW4215-00001	Water may be taken for domestic consumption not exceeding 1 kL/house per day: A. when flows in the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source are in the Very Low Flow Class which means that the flow is 0.2 ML/day or less at the South Creek Great Western Highway gauge [No. 212048], or B. when there is no visible flow at the location at which the water proposed to be taken, or C. if water is taken from an in-river, off-river pool, natural pool, lake or lagoon, when the volume of water in that pool lake or lagoon is less than at full capacity.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0036-00002	The volume of water taken in any three (3) consecutive water years from 1 July 2012 must be recorded in the logbook at the end of those three water years. The maximum volume of water permitted to be taken in those years must also be recorded in the logbook.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0605-00001	Water must be taken in compliance with the conditions of the approval for the nominated work on this access licence through which water is to be taken. This restriction does not apply if water is to be taken: A. from an off-river pool, an in-river pool, a runoff harvesting dam or an in-river dam pool, or B. from the following Weirs: Maldon, Douglas Park, Menangle, Camden, Sharpes, Cobbity, Mount Hunter Rivulet, Brownlow Hill, Theresa Park and Wallacia.	Compliant	No water has been drawn from the WALs over the reporting period.
MW4251-00001	Water must not be taken for stock watering: A. when flows in the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source are in the Very Low Flow Class, which means that the flow is 0.2 ML/day or less at the South Creek Great Western Highway gauge [No. 212048], or B. when there is no visible flow in the water source at the location where water is to be taken. These restrictions do not apply if water is to be taken from a runoff harvesting dam or an in-river dam pool.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0004-00002	From 1 July 2012, the total volume of water taken in any three (3) consecutive water years under this access licence must not exceed a volume which is equal to the lesser of either: A. the sum of: i. water in the account from the available water determinations in those 3 consecutive water years, plus ii. water in the account carried over from the water year prior to those 3 consecutive water years, plus iii. any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus iv. any water re-credited by the Minister to the account in those 3 consecutive water years, or B. the sum of: i. the share component of this licence at the beginning of the first year in those 3 consecutive water years, plus ii. the share component of this licence at the beginning of the second year in those 3 consecutive water years, plus iii. the share component of this licence at the beginning of the third year in those 3 consecutive water years, plus iv. any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus v. any water re-credited by the Minister to the account in those 3 consecutive water years.	Compliant	No water has been drawn from the WALs over the reporting period.
MA2455-00012	Water must be used for the purpose of domestic consumption and stock watering.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2338-00001	The completed logbook must be retained for five (5) years from the last date recorded in the logbook.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2337-00001	The following information must be recorded in the logbook for each period of time that water is taken: A. date, volume of water, start and end time when water was taken as well as the pump capacity per unit of time, and B. the access licence number under which the water is taken, and C. the approval number under which the water is taken, and D. the volume of water taken for domestic consumption and/or stock watering.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2339-00001	A logbook must be kept, unless the work is metered and fitted with a data logger. The logbook must be produced for inspection when requested by the relevant licensor.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0051-00002	Once the licence holder becomes aware of a breach of any condition on this access licence, the licence holder must notify the Minister as soon as practicable. The Minister must be notified by: A. email: water.enquiries@dpi.nsw.gov.au, or B. telephone: 1800 353 104. Any notification by telephone must also be confirmed in writing within seven (7) business days of the telephone call.	Compliant	No water has been drawn from the WALs over the reporting period.

Bringelly Brickworks Extension Project

Water Licence WAL25987- Surface Water

Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments
	Unregulated River; Hawkesbury and Lower Nepean Rivers Water Source; Upper South Creek Management Zone; Share components 152.5		
MW0112-00001	The maximum water allocation that may be carried over in the account for this access licence from one water year to the next water year is: A. a volume equal to 100 % of the share component of the licence, or B. 1 ML/unit share of the share component of the licence.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0036-00002	The volume of water taken in any three (3) consecutive water years from 1 July 2012 must be recorded in the logbook at the end of those three water years. The maximum volume of water permitted to be taken in those years must also be recorded in the logbook.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0605-00001	Water must be taken in compliance with the conditions of the approval for the nominated work on this access licence through which water is to be taken. This restriction does not apply if water is to be taken: A. from an off-river pool, an in-river pool, a runoff harvesting dam or an in-river dam pool, or B. from the following Weirs: Maldon, Douglas Park, Menangle, Camden, Sharpes, Cobbity, Mount Hunter Rivulet, Brownlow Hill, Theresa Park and Wallacia.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0080-00012	From 1 July 2011, water must not be taken from the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source when flows are in the Very Low Flow Class, which means that the flow is 0.2 ML/day or less at South Creek at the Great Western Highway gauge [No. 212048]. This restriction does not apply if water is to be taken from a runoff harvesting dam or an in-river dam pool.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0670-00001	Water must only be taken if there is visible flow in the water source at the location where water is to be taken. This restriction does not apply if water is to be taken: A. from an off-river pool, an in-river pool, a runoff harvesting dam or an in-river dam pool, or B. from the following Weirs: Maldon, Douglas Park, Menangle, Camden, Sharpes, Cobbity, Mount Hunter Rivulet, Brownlow Hill, Theresa Park and Wallacia.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0078-00004	In the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source, if the flow is less than 0.2 ML/day at South Creek at the Great Western Highway gauge [No. 212048] for a period of 24 or more consecutive hours, then there must be a minimum flow of 0.2 ML/day at that gauge for at least 24 hours before water can be taken.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0004-00002	From 1 July 2012, the total volume of water taken in any three (3) consecutive water years under this access licence must not exceed a volume which is equal to the lesser of either: A. the sum of: i. water in the account from the available water determinations in those 3 consecutive water years, plus ii. water in the account carried over from the water year prior to those 3 consecutive water years, plus iii. any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus iv. any water re-credited by the Minister to the account in those 3 consecutive water years, or B. the sum of: i. the share component of this licence at the beginning of the first year in those 3 consecutive water years, plus ii. the share component of this licence at the beginning of the second year in those 3 consecutive water years, plus iii. the share component of this licence at the beginning of the third year in those 3 consecutive water years, plus iv. any net amount of water assigned to or from this account under a water allocation assignment in those 3 consecutive water years, plus v. any water re-credited by the Minister to the account in those 3 consecutive water years.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2338-00001	The completed logbook must be retained for five (5) years from the last date recorded in the logbook.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2337-00001	The following information must be recorded in the logbook for each period of time that water is taken: A. date, volume of water, start and end time when water was taken as well as the pump capacity per unit of time, and B. the access licence number under which the water is taken, and C. the approval number under which the water is taken, and D. the volume of water taken for domestic consumption and/or stock watering.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2339-00001	A logbook must be kept, unless the work is metered and fitted with a data logger. The logbook must be produced for inspection when requested by the relevant licensor.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0051-00002	Once the licence holder becomes aware of a breach of any condition on this access licence, the licence holder must notify the Minister as soon as practicable. The Minister must be notified by: A. email: water.enquiries@dpi.nsw.gov.au, or B. telephone: 1800 353 104. Any notification by telephone must also be confirmed in writing within seven (7) business days of the telephone call.	Compliant	No water has been drawn from the WALs over the reporting period.

Bringelly Brickworks Extension Project

Water Approval 10CA104657 for WAL26259

Compliant
Non Compliant
Not Triggered

Condition	Commitment	Details of compliance status	Comments
	Water supply works and water use, expiry 20/4/2026; Hawkesbury and Lower Nepean Rivers Water Source; Diversion works - pumps; 80mm centrifugal pump; irrigation purpose		
MW0655-00001	Any water supply work authorised by this approval must take water in compliance with the conditions of the access licence under which water is being taken.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0911-00001	Before water is taken through the water supply work authorised by this approval, visible flow in the water source at the location at which water is proposed to be taken must be confirmed. If a logbook is required to be kept: A. confirmation that water may be taken, and B. the method of confirmation, such as visual inspection, internet search must be recorded in the logbook.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2435-00001	Water must be taken through the approved metering equipment installed on the water supply work authorised by this approval.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0080-00012	From 1 July 2011, water must not be taken from the Upper South Creek Management Zone of the Hawkesbury and Lower Nepean Rivers Water Source when flows are in the Very Low Flow Class, which means that the flow is 0.2 ML/day or less at South Creek at the Great Western Highway gauge [No. 212048]. This restriction does not apply if water is to be taken from a runoff harvesting dam or an in-river dam pool.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2338-00001	The completed logbook must be retained for five (5) years from the last date recorded in the logbook.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2336-00001	The purpose or purposes for which water is taken, as well as details of the type of crop, area cropped, and dates of planting and harvesting, must be recorded in the logbook each time water is taken.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2337-00001	The following information must be recorded in the logbook for each period of time that water is taken: A. date, volume of water, start and end time when water was taken as well as the pump capacity per unit of time, and B. the access licence number under which the water is taken, and C. the approval number under which the water is taken, and D. the volume of water taken for domestic consumption and/or stock watering.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2339-00001	A logbook must be kept, unless the work is metered and fitted with a data logger. The logbook must be produced for inspection when requested by the relevant licensor.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0482-00001	Where a water meter is installed on a water supply work authorised by this approval, the meter reading must be recorded in the logbook before taking water. This reading must be recorded every time water is to be taken.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0051-00001	Once the approval holder becomes aware of a breach of any condition on this access licence, the licence holder must notify the Minister as soon as practicable. The Minister must be notified by: A. email: water.enquiries@dpi.nsw.gov.au, or B. telephone: 1800 353 104. Any notification by telephone must also be confirmed in writing within seven (7) business days of the telephone call.	Compliant	No water has been drawn from the WALs over the reporting period.
MW3860-00001	A. When a water supply work authorised by this approval is no longer to be used permanently, the approval holder must: i. notify the relevant licensor in writing of the intention to decommission the work at least 90 days before the start of decommissioning, and ii. decommission the work, unless the approval holder receives notice in writing from the Minister within 60 days of notifying DPI Water requiring that the work is not to be decommissioned or be decommissioned in accordance with specific requirements. B. Within 60 days of the work being decommissioned, the approval holder must notify the relevant licensor in writing that the work has been decommissioned.	Compliant	No water has been drawn from the WALs over the reporting period.
DK0888-00001	Any water supply work authorised by this approval used for the purpose of conveying, diverting or storing water must be constructed or installed to allow free passage of floodwaters flowing into or from a river or lake.	Compliant	No water has been drawn from the WALs over the reporting period.
DK0878-00001	A. The construction, installation or use of the water supply work authorised by this approval must not cause or increase erosion to the channel or bank of the watercourse. B. If erosion is observed, the area must be stabilised with grass cover, stone pitching or any other material that will prevent any further occurrence of erosion.	Compliant	No water has been drawn from the WALs over the reporting period.
DS2349-00001	The approval holder must make all reasonable efforts not to allow any used water to discharge, by any means including surface or subsurface drains or pipes, into or onto: - any adjoining public or crown road; - any other person's land; - any Crown land; - any river, creek or watercourse or aquifer.	Compliant	No water has been drawn from the WALs over the reporting period.

Bringelly Brickworks Extension Project

Water Approval 10CA104630 for WAL26257 & WAL25987

Compliant

Non Compliant

Not Triggered

Condition	Commitment	Details of compliance status	Comments
	Water supply works and water use, expiry 18/6/2025; Hawkesbury and Lower Nepean Rivers Water Source; Diversion works - pumps and Storages; 80mm centrifugal pump and Bywash Dam; irrigation		
MW0655-00001	Any water supply work authorised by this approval must take water in compliance with the conditions of the access licence under which water is being taken.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0911-00001	Before water is taken through the water supply work authorised by this approval, visible flow in the water source at the location at which water is proposed to be taken must be confirmed. If a logbook is required to be kept: A. confirmation that water may be taken, and B. the method of confirmation, such as visual inspection, internet search must be recorded in the logbook.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2338-00001	The completed logbook must be retained for five (5) years from the last date recorded in the logbook.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2336-00001	The purpose or purposes for which water is taken, as well as details of the type of crop, area cropped, and dates of planting and harvesting, must be recorded in the logbook each time water is taken.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2337-00001	The following information must be recorded in the logbook for each period of time that water is taken: A. date, volume of water, start and end time when water was taken as well as the pump capacity per unit of time, and B. the access licence number under which the water is taken, and C. the approval number under which the water is taken, and D. the volume of water taken for domestic consumption and/or stock watering.	Compliant	No water has been drawn from the WALs over the reporting period.
MW2339-00001	A logbook must be kept, unless the work is metered and fitted with a data logger. The logbook must be produced for inspection when requested by the relevant licensor.	Compliant	No water has been drawn from the WALs over the reporting period.
MW0482-00001	Where a water meter is installed on a water supply work authorised by this approval, the meter reading must be recorded in the logbook before taking water. This reading must be recorded every time water is to be taken.	Compliant	No water has been drawn from the WALs over the reporting period.

MW0051-00001	Once the approval holder becomes aware of a breach of any condition on this access licence, the licence holder must notify the Minister as soon as practicable. The Minister must be notified by: A. email: water.enquiries@dpi.nsw.gov.au, or B. telephone: 1800 353 104. Any notification by telephone must also be confirmed in writing within seven (7) business days of the telephone call.	Compliant	No water has been drawn from the WALs over the reporting period.
MW3860-00001	A. When a water supply work authorised by this approval is no longer to be used permanently, the approval holder must: i. notify the relevant licensor in writing of the intention to decommission the work at least 90 days before the start of decommissioning, and ii. decommission the work, unless the approval holder receives notice in writing from the Minister within 60 days of notifying DPI Water requiring that the work is not to be decommissioned or be decommissioned in accordance with specific requirements. B. Within 60 days of the work being decommissioned, the approval holder must notify the relevant licensor in writing that the work has been decommissioned.	Compliant	No water has been drawn from the WALs over the reporting period.
DK0888-00001	Any water supply work authorised by this approval used for the purpose of conveying, diverting or storing water must be constructed or installed to allow free passage of floodwaters flowing into or from a river or lake.	Compliant	No water has been drawn from the WALs over the reporting period.
DK0871-00001	The water supply work authorised by this approval must be constructed and maintained in a way that will: A. ensure the work's safe construction and operation, and B. prevent the possibility of damage being caused by the work, or resulting from the work, to any public or private interest.	Compliant	No water has been drawn from the WALs over the reporting period.
DK0878-00001	A. The construction, installation or use of the water supply work authorised by this approval must not cause or increase erosion to the channel or bank of the watercourse. B. If erosion is observed, the area must be stabilised with grass cover, stone pitching or any other material that will prevent any further occurrence of erosion.	Compliant	No water has been drawn from the WALs over the reporting period.
DK0233-00078	The level of the crest of the bywash of the dam must be fixed at not higher than 1.99 m below the level of a benchmark established on a box tree on the right bank of the watercourse near the work and particulars of which are retained in the office of the relevant licensor.	Compliant	
DK1217-00001	The location of the dam(s) as shown on a plan retained in the office of the relevant licensor shall not be altered.	Compliant	
DS2349-00001	The approval holder must make all reasonable efforts not to allow any used water to discharge, by any means including surface or subsurface drains or pipes, into or onto: - any adjoining public or crown road; - any other person's land; - any Crown land; - any river, creek or watercourse or aquifer.	Compliant	No water has been drawn from the WALs over the reporting period.

Appendix G

Stack Testing Report

Ektimo

PGH Bricks & Pavers Pty Ltd, Bringelly Plant

Annual Emission Testing Report

Report R015692

ektimo.com.au



*Accredited for compliance with ISO/IEC 17025 - Testing
NATA is a signatory to the ILAC Mutual Recognition
Arrangement for the mutual recognition of the
equivalence of testing, calibration, and inspection reports.*

Document Information

Client Name: PGH Bricks & Pavers Pty Ltd
Report Number: R015692
Date of Issue: 9 April 2024
Attention: Abhi Ghedia
Address: Lot 2 Greendale Rd
Bringelly NSW 2556
Testing Laboratory: Ektimo Pty Ltd, ABN 86 600 381 413

Report Authorisation

Rick Peralta
Air Monitoring Consultant



Steven Cooper
Ektimo Signatory

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Please note that only numerical results pertaining to measurements conducted directly by Ektimo are covered by Ektimo terms of NATA accreditation as described in the Test Methods table. This does not include calculations that use data supplied by third-parties, comments, conclusions, or recommendations based upon the results. Refer to Test Methods section for full details of testing covered by NATA accreditation.

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1 Executive Summary

1.1 Background

Ektimo was engaged by PGH Bricks & Pavers Pty Ltd to perform emission testing at their Bringelly plant. Testing was carried out in accordance with Environment Protection Licence 1808.

1.2 Project Objective & Overview

The objective of the project was to quantify emissions from one (1) discharge point to determine compliance with PGH Bricks & Pavers Pty Ltd Environmental Licence for their Bringelly plant.

Monitoring was performed as follows:

Location	Test Date	Test Parameters*
EPA 2 – Kiln Stack	05 March 2024	Total solid particles, particulate matter <10µm (PM ₁₀) Coarse particulates Sulfur dioxide (SO ₂), sulfur trioxide and sulfuric acid mist (as SO ₃) Total fluoride (as HF), hydrogen chloride (HCl) Nitrogen oxides (as NO ₂), carbon dioxide (CO ₂), oxygen (O ₂)

* Flow rate, velocity, temperature, and moisture were also determined.

All results are reported on a dry basis at STP

Plant operating conditions have been noted in this report.

1.3 Licence Comparison

The following licence comparison table shows that all analytes are within the licence limit set by the NSW EPA as per licence 1808 (last amended on 11 August 2020).

EPA No.	Location Description	Pollutant	Units	Licence Limit	Concentration (mg/m ³)	Mass Rate (g/min)
					Detected Values 5/03/2024	
2	Kiln Exhaust Stack	Total Solid Particles	mg/m ³	100	6.7	6.1
		Nitrogen Oxides (as NO ₂)	mg/m ³	2000	120	110
		Total Fluoride (as HF)	mg/m ³	50	9.4	8.5

Please note that the measurement uncertainty associated with the test results was not considered when determining whether the results were compliant or non-compliant.

2 Results

2.1 EPA 2 – Kiln Stack

Date	5/04/2024	Client	PGH Bricks and Pavers Pty. Ltd
Report	R015692	Stack ID	Kiln
Licence No.	1808	Location	Bringelly
Ektimo Staff	Rick Peralta, James Cullen	State	NSW
Process Conditions	Please refer to Plant Operating Conditions.		240226

Stack Parameters		
Moisture content, %v/v	4.2	
Gas molecular weight, g/g mole	28.8 (wet)	29.2 (dry)
Gas density at STP, kg/m ³	1.28 (wet)	1.30 (dry)
Gas density at discharge conditions, kg/m ³	0.82	
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	1302 & 1452	
Temperature, °C	153	
Temperature, K	426	
Velocity at sampling plane, m/s	15	
Volumetric flow rate, actual, m ³ /s	25	
Volumetric flow rate (wet STP), m ³ /s	16	
Volumetric flow rate (dry STP), m ³ /s	15	
Mass flow rate (wet basis), kg/h	73000	

Isokinetic Results	Sampling time	Results	
		1321-1423	1321-1423 (PM10)
		Concentration mg/m ³	Mass Rate g/min
Solid Particles		6.7	6.1
Fine particulates (PM10)		5.2	4.7
Coarse Particulates		1.6	1.4
D50 cut size, 10µm			10.8
Sulfur dioxide		72	65
Sulfur trioxide and/or Sulfuric acid (as SO3)		3.6	3.3
Isokinetic Sampling Parameters		Isokinetic	PM 10
Sampling time, min		60	60
Isokinetic rate, %		97	97
Gravimetric analysis date (total particulate)		15-03-2024	
Gravimetric analysis date (PM ₁₀)		15-03-2024	

Date	5/03/2024	Client	PGH Bricks and Pavers Pty. Ltd.
Report	R015692	Stack ID	Kiln
Licence No.	1808	Location	Bringelly
Ektimo Staff	Rick Peralta, James Cullens	State	NSW
Process Conditions	Please refer to Plant Operating Conditions.		

240207

Stack Parameters		
Moisture content, %v/v	4.2	
Gas molecular weight, g/g mole	28.8 (wet)	29.2 (dry)
Gas density at STP, kg/m ³	1.28 (wet)	1.30 (dry)
Gas density at discharge conditions, kg/m ³	0.82	
Gas Flow Parameters		
Flow measurement time(s) (hhmm)	1011 & 1302	
Temperature, °C	154	
Temperature, K	427	
Velocity at sampling plane, m/s	15	
Volumetric flow rate, actual, m ³ /s	25	
Volumetric flow rate (wet STP), m ³ /s	16	
Volumetric flow rate (dry STP), m ³ /s	15	
Mass flow rate (wet basis), kg/h	73000	

Gas Analyser Results	Average		Minimum		Maximum	
	1111 - 1249		1111 - 1249		1111 - 1249	
Sampling time	Concentration	Mass Rate	Concentration	Mass Rate	Concentration	Mass Rate
	mg/m ³	g/min	mg/m ³	g/min	mg/m ³	g/min
Combustion Gases						
Nitrogen oxides (as NO ₂)	120	110	60	54	130	120
	Concentration		Concentration		Concentration	
	% v/v		% v/v		% v/v	
Carbon dioxide	2.6		1.5		3	
Oxygen	17.6		16.9		19.1	

Non-isokinetics	Results	
	1135-1235	
Sampling time	Concentration	Mass Rate
	mg/m ³	g/min
Chloride (as HCl)	0.9	0.82

Isokinetic Results	Results	
	1105-1207	
Sampling time	Concentration	Mass Rate
	mg/m ³	g/min
Total fluoride (as HF)	9.4	8.5
Isokinetic Sampling Parameters		
Sampling time, min	60	
Isokinetic rate, %	97	

3 Sample Plane Compliance

Sampling Plane Details	
Source tested	Kiln
Pollution control equipment	Filter baghouse
Sampling plane dimensions	1440 mm
Sampling plane area	1.63 m ²
Sampling port size, number & depth	4" BSP (x2), 125 mm
Duct orientation & shape	Vertical Circular
Downstream disturbance	Exit 2.5 D
Upstream disturbance	Centrifugal fan 8 D
No. traverses & points sampled	2 12
Sample plane conformance to AS 4323.1	Ideal sampling plane

4 Plant Operating Conditions

See PGH Bricks & Pavers Pty Ltd records for complete process conditions.

The below plant operating conditions have been supplied by PGH Bricks & Pavers Pty Ltd personnel.

Sampling date	05 March 2024
Product	Volcanic products 6/4
Push rate	18 Cars/Day
Soak temperature	1,052°C

5 Calibration Records

Equipment Type	Equipment name	ID	Type	Last Calibration Date
Nozzles	SS (PM10) nozzle kit	776	12 Monthly Nozzle Calibrations	5/01/24
Nozzles	SS nozzle kit	1834	13 Monthly Nozzle Calibrations	5/02/24
Analysers	Testo 350 Gas Analyser	925	6 Monthly Analyser Linearity Checks	3/01/24
Gas Meters	TPM Kit	957	6 Monthly TPM Kit and M5 Console Calibration	2/01/24
Gas Meters	TPM Kit	958	6 Monthly TPM Kit and M5 Console Calibration	2/01/24
Manometers	Testo DP-440	1618	12 Monthly Manometer Calibrations	4/01/24
Barometer	Testo 511	130	6 Monthly Barometer Checks (BOM)	4/01/24
Pitot tube	Pitot tip (s-type)	1755	6 Monthly Pitot Tube Calibrations	3/01/24
Temp Device	Thermocouple	908	6 Monthly Temperature Device Checks	5/02/24

6 Test Methods

All sampling and analysis was performed by Ektimo unless otherwise specified. Specific details of the methods are available upon request.

Parameter	Sampling method	Analysis method	Uncertainty*	NATA accredited	
				Sampling	Analysis
Sampling points - Selection	NSW EPA TM-1 (AS 4323.1)	NA	NA	✓	NA
Flow rate, temperature & velocity	NSW EPA TM-2 (USEPA Method 2)	NSW EPA TM-2 (USEPA Method 2)	8%, 2%, 7%	NA	✓
Moisture content	NSW EPA TM-22 (USEPA Method 4)	NSW EPA TM-22 (USEPA Method 4)	8%	✓	✓
Molecular weight	NA	NSW EPA TM-23 (USEPA Method 3)	not specified	NA	✓
Dry gas density	NA	NSW EPA TM-23 (USEPA Method 3)	not specified	NA	✓
Carbon dioxide	NSW EPA TM-24 (USEPA Method 3A)	NSW EPA TM-24 (USEPA Method 3A)	13%	✓	✓
Nitrogen oxides	NSW EPA TM-11 (USEPA Method 7E)	NSW EPA TM-11 (USEPA Method 7E)	12%	✓	✓
Oxygen	NSW EPA TM-25 (USEPA Method 3A)	NSW EPA TM-25 (USEPA Method 3A)	13%	✓	✓
Sulfur dioxide	NSW EPA TM-4 (USEPA Method 8)	Ektimo 235	16%	✓	✓ ^{†k}
Particulate matter (PM ₁₀ & PM _{2.5})	NSW EPA OM-5 (USEPA Method 201A)	NSW EPA OM-5 (USEPA Method 201A)	6%	✓	✓ ^{††}
Coarse particulates	NSW EPA OM-9	NSW EPA OM-9	not specified	✓	✓ ^{††}
Solid particles (total)	NSW EPA TM-15 (AS 4323.2)	NSW EPA TM-15 (AS 4323.2)	3%	✓	✓ ^{††}
Fluorine & fluorine compounds ¹	NSW EPA TM-9 (USEPA Method 13B)	Ektimo 235	25%	✓	✓ [†]
Hydrogen chloride	NSW EPA TM-8 (USEPA Method 26)	Ektimo 235	14%	✓	✓ ^{†i}
Sulfuric acid mist and/or sulfur trioxide	NSW EPA TM-3 (USEPA Method 8)	Ektimo 235	16%	✓	✓ ^{†m}

010324

* Uncertainties cited in this table are estimated using typical values and are calculated at the 95% confidence level (coverage factor = 2).

[†] Analysis performed by Ektimo. Results were reported to Ektimo on:

- 19 March 2024 in report LV-005563.
- 19 March 2024 in report LV-005569.
- 25 March 2024 in report LV-005594.

^{††} Gravimetric analysis conducted at the Ektimo NSW laboratory.

¹ Sampling follows USEPA Method 13B and analysis follows Ektimo 235 (ion chromatography which uses the same principle as the NSW EPA approved alternative analysis method USEPA SW-846 Method 9056A).

ⁱ Includes analysis of chlorine/chloride by Ektimo 235 which uses the same principle as USEPA Method 26/26A.

^k Includes analysis of SO₂ by Ektimo 235 which uses the same principle as USEPA SW-846 Method 9056A which is an approved alternative to the analytical procedure of USEPA Method 6/8.

^m Includes analysis of SO₃/H₂SO₄ by Ektimo 235 which uses the same principle as USEPA SW-846 Method 9056A which is an approved alternative to the analytical procedure of USEPA Method 8.

6.1 Deviations to Test Methods

TM-9 FLUORINE

Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (NSW EPA) (2022) specifies TM-9 (USEPA 13B) for measurement of total fluoride emissions.

Ektimo conducts sampling according to USEPA Method 13B and analysis follows Ektimo 235 (ion chromatography which uses the same principle as the NSW EPA approved alternative analysis method USEPA SW-846 Method 9056A).

7 Quality Assurance/Quality Control Information

Ektimo is accredited by the National Association of Testing Authorities (NATA) for the sampling and analysis of air pollutants from industrial sources. Unless otherwise stated test methods used are accredited with the National Association of Testing Authorities. For full details, search for Ektimo at NATA's website www.nata.com.au.

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Unless specifically noted, all samples were collected and handled in accordance with Ektimo's QA/QC standards.

8 Definitions

The following symbols and abbreviations may be used in this test report:

% v/v	Volume to volume ratio, dry or wet basis
~	Approximately
<	Less than
>	Greater than
≥	Greater than or equal to
APHA	American Public Health Association, Standard Methods for the Examination of Water and Waste Water
AS	Australian Standard
BaP-TEQ	Benzo(a)pyrene toxic equivalents
BSP	British standard pipe
CEM/CEMS	Continuous emission monitoring/Continuous emission monitoring system
CTM	Conditional test method
D	Duct diameter or equivalent duct diameter for rectangular ducts
D ₅₀	'Cut size' of a cyclone is defined as the particle diameter at which the cyclone achieves a 50% collection efficiency i.e. half of the particles are retained by the cyclone and half pass through it. The D ₅₀ method simplifies the capture efficiency distribution by assuming that a given cyclone stage captures all of the particles with a diameter equal to or greater than the D ₅₀ of that cyclone and less than the D ₅₀ of the preceding cyclone.
DECC	Department of Environment & Climate Change (NSW)
Disturbance	A flow obstruction or instability in the direction of the flow which may impede accurate flow determination. This includes centrifugal fans, axial fans, partially closed or closed dampers, louvres, bends, connections, junctions, direction changes or changes in pipe diameter.
DWER	Department of Water and Environmental Regulation (WA)
DEHP	Department of Environment and Heritage Protection (QLD)
EPA	Environment Protection Authority
FTIR	Fourier transform infra-red
ISC	Intersociety Committee, Methods of Air Sampling and Analysis
ISO	International Organisation for Standardisation
ITE	Individual threshold estimate
I-TEQ	International toxic equivalents
Lower bound	When an analyte is not present above the detection limit, the result is assumed to be equal to zero.
Medium bound	When an analyte is not present above the detection limit, the result is assumed to be equal to half of the detection limit.
NA	Not applicable
NATA	National Association of Testing Authorities
NIOSH	National Institute of Occupational Safety and Health
NT	Not tested or results not required
OM	Other approved method
OU	Odour unit. One OU is that concentration of odorant(s) at standard conditions that elicits a physiological response from a panel equivalent to that elicited by one Reference Odour Mass (ROM), evaporated in one cubic metre of neutral gas at standard conditions.
PM ₁₀	Particulate matter having an equivalent aerodynamic diameter less than or equal to 10 microns (µm).
PM _{2.5}	Particulate matter having an equivalent aerodynamic diameter less than or equal to 2.5 microns (µm).
PSA	Particle size analysis. PSA provides a distribution of geometric diameters, for a given sample, determined using laser diffraction.
RATA	Relative accuracy test audit
Semi-quantified VOCs	Unknown VOCs (those for which an analytical standard is not available), are identified by matching the mass spectrum of the chromatographic peak to the NIST Standard Reference Database (version 14.0), with a match quality exceeding 70%. An estimated concentration is determined by matching the area of the peak with the nearest suitable compound in the analytical calibration standard mixture.
STP	Standard temperature and pressure. Gas volumes and concentrations are expressed on a dry basis at 0 °C, at discharge oxygen concentration and an absolute pressure of 101.325 kPa.
TM	Test method
TOC	Total organic carbon. This is the sum of all compounds of carbon which contain at least one carbon-to-carbon bond, plus methane and its derivatives.
USEPA	United States Environmental Protection Agency
VDI	Verein Deutscher Ingenieure (Association of German Engineers)
Velocity difference	The percentage difference between the average of initial flows and after flows.
Vic EPA	Victorian Environment Protection Authority
VOC	Volatile organic compound. A carbon-based chemical compound with a vapour pressure of at least 0.010 kPa at 25°C or having a corresponding volatility under the given conditions of use. VOCs may contain oxygen, nitrogen and other elements. VOCs do not include carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonate salts.
WHO05-TEQ	World Health Organisation toxic equivalents
XRD	X-ray diffractometry
Upper bound	When an analyte is not present above the detection limit, the result is assumed to be equal to the detection limit.
95% confidence interval	Range of values that contains the true result with 95% certainty. This means there is a 5% risk that the true result is outside this range.

9 Appendices

Appendix A: Site Photo



EPA 2 – Kiln Stack

Prepared for: PGH Bricks & Pavers Pty Ltd (Bringelly)
Report No.: R015692
Date: 9/04/2024

Ektimo

Appendix B: Chain(s) of Custody

Ektimo

Checked at Ektimo Dispatch by: AKH Sign/Date

Samples received in good order: _____ Sign/Date

Sample ID	Job No.	Analysis Required	Units Required	Analytical Lab	Purchase Order No.	Ektimo Contact	Notes	TAT Required (days)
N-18959	R015692	Fluoride	ug/sample	Ektimo		Rick Peralta	Fluoride Filter	
N-18960	R015692	Fluoride	ug/sample	Ektimo		Rick Peralta	Fluoride Filter (Blank)	
N-18961	R015692	Fluoride	ug/litre	Ektimo		Rick Peralta	Fluoride Solution	
N-18962	R015692	Fluoride	ug/litre	Ektimo		Rick Peralta	Fluoride Solution (Blank)	
N-18963	R015692	SO3	ug/litre	Ektimo		Rick Peralta	SO3 Solution	
N-18964	R015692	SO3	ug/litre	Ektimo		Rick Peralta	SO3 Solution (Blank)	
N-18965	R015692	SO2	ug/litre	Ektimo		Rick Peralta	SO2 Solution	
N-18966	R015692	SO2	ug/litre	Ektimo		Rick Peralta	SO2 Solution (Blank)	
N-18967	R015692	HCl	ug/litre	Ektimo		Rick Peralta	HCl Solution	
N-18968	R015692	HCl	ug/litre	Ektimo		Rick Peralta	HCl Solution (Blank)	
N-18969	R015692	Fluoride	ug/sample	Ektimo		Rick Peralta	Fluoride Filter	
N-18970	R015692	HCl	ug/litre	Ektimo		Rick Peralta	HCl Solution	
N-18971	R015692	SO2	ug/litre	Ektimo		Rick Peralta	SO2 Solution	
N-18972	R015692	SO3	ug/litre	Ektimo		Rick Peralta	SO3 Solution	
N-18973	R015692	Fluoride	ug/litre	Ektimo		Rick Peralta	Fluoride Solution	
N-18974	R015692	Fluoride	ug/sample	Ektimo		Rick Peralta	Fluoride Filter	
N-18975	R015692	Fluoride	ug/litre	Ektimo		Rick Peralta	Fluoride Solution	
N-18976	R015692	HCl	ug/litre	Ektimo		Rick Peralta	HCl Solution	
N-18977	R015692	SO2	ug/litre	Ektimo		Rick Peralta	SO2 Solution	
N-18978	R015692	SO3	ug/litre	Ektimo		Rick Peralta	SO3 Solution	

logged HCL 12/3/24

Appendix C: Laboratory Results

CERTIFICATE OF ANALYSIS

Testing Laboratory: Ektimo
26 Redland Drive
Mitcham, VIC 3132

Report Number: LV-005563

Job Number: R015692

Date of Issue: 19/03/2024

Attention: PGH Bricks & Pavers

Date samples received: 12/03/2024

Number of samples received: 4

Date samples analysed: 15/03/2024

No of samples analysed: 4

Test method(s) used: Ektimo 235

Comments

QC Acceptance Criteria:	Parameter	Criteria	Pass/Fail
	Standard Curve	$R^2 > 0.99$	Pass
	Range	All samples <110% of highest standard	Pass
	Repeat samples	Between 80% - 120%	Pass
	Method Blanks	All method blanks < PQL	Pass
	QC sample	2 standard deviations of theoretical	Pass
	Chemical Expiry	All chemicals within expiry date	Pass

This report supersedes any previous report(s) with this reference. Sample(s) have been analysed as received.

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A formal Quality Control program is in place at Ektimo to monitor analyses performed in the laboratory and sampling conducted in the field. The program is designed to check where appropriate; the sampling reproducibility, analytical method, accuracy, precision and the performance of the analyst. The Laboratory Manager is responsible for the administration and maintenance of this program.

REPORT AUTHORISATION

Version 231130



Cappi Tuffery
Laboratory Chemist



Daniel Balaam
Senior Laboratory Chemist



NATA Accredited Laboratory 14601

Accredited for compliance with ISO/IEC 17025. NATA is a signatory to the ILAC mutual recognition arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports

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Unanderra, NSW 2526

Brisbane, QLD
3/109 Riverside Place,
Morningside, QLD 4170

Report No. LV-005563

Job No. R015692

Client Name: PGH Bricks & Pavers

Parameter	Analyte	Units	N 18959 PGH Bricks & Pavers Kiln Fluoride Filter (HF)	N 18960 PGH Bricks & Pavers All locations Fluoride Filter Blank	N 18969 PGH Bricks & Pavers Dryer 2 Fluoride Filter	N 18974 PGH Bricks & Pavers Dryer 3 Fluoride Filter
Sample Volume		mL	20	20	40	20
Hydrogen fluoride (HF)	F ⁻	µg/sample	133.27	<2	9.14	32.17
PQL	<	µg/sample	2	2	4	2

CERTIFICATE OF ANALYSIS

Testing Laboratory: Ektimo
26 Redland Drive
Mitcham, VIC 3132

Report Number: LV-005569

Job Number: R015692

Date of Issue: 19/03/2024

Attention: PGH Bricks & Pavers

Date samples received: 12/03/2024

Number of samples received: 8

Date samples analysed: 15/03/2024

No of samples analysed: 8

Test method(s) used: Ektimo 235

Comments

QC Acceptance Criteria:	Parameter	Criteria	Pass/Fail
	Standard Curve	$R^2 > 0.99$	Pass
	Range	All samples <110% of highest standard	Pass
	Repeat samples	Between 80% - 120%	Pass
	Method Blanks	All method blanks < PQL	Pass
	QC sample	2 standard deviations of theoretical	Pass
	Chemical Expiry	All chemicals within expiry date	Pass

This report supersedes any previous report(s) with this reference. Sample(s) have been analysed as received.

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REPORT AUTHORISATION

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Morningside, QLD 4170

Report No. LV-005569

Job No. R015692

Client Name: PGH Bricks & Pavers

Parameter	Analyte	Units	N 18961 PGH Bricks & Pavers Kiln Fluoride Solution (HF)	N 18962 PGH Bricks & Pavers All locations Fluoride Solution Blank	N 18973 PGH Bricks & Pavers Dryer 2 Fluoride Solution	N 18975 PGH Bricks & Pavers Dryer 3 Fluoride Solution	N 18967 PGH Bricks & Pavers Kiln HCl Solution (HCl)	N 18968 PGH Bricks & Pavers All locations HCl Solution Blank	N 18970 PGH Bricks & Pavers Dryer 2 HCl Solution	N 18977 PGH Bricks & Pavers Dryer 3 HCl Solution
Sample Volume		mL	275	100	225	150	33	50	28	26
Hydrogen chloride (HCl)	Cl ⁻	mg/L					1.69	<0.1	0.14	0.11
Hydrogen fluoride (HF)	F ⁻	mg/L	30.03	<0.1	1.05	3.80				
PQL	<	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

CERTIFICATE OF ANALYSIS

Testing Laboratory: Ektimo
26 Redland Drive
Mitcham, VIC 3132

Report Number: LV-005594

Job Number: R015692

Date of Issue: 25/03/2024

Attention: PGH Bricks & Pavers

Date samples received: 12/03/2024

Number of samples received: 8

Date samples analysed: 21/03/2024

No of samples analysed: 8

Test method(s) used: Ektimo 235

Comments

QC Acceptance Criteria:	Parameter	Criteria	Pass/Fail
	Standard Curve	R ² > 0.99	Pass
	Range	All samples <110% of highest standard	Pass
	Repeat samples	Between 80% - 120%	Pass
	Method Blanks	All method blanks < PQL	Pass
	QC sample	2 standard deviations of theoretical	Pass
	Chemical Expiry	All chemicals within expiry date	Pass

This report supersedes any previous report(s) with this reference. Sample(s) have been analysed as received.

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REPORT AUTHORISATION

Version 231130



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Report No. LV-005594

Job No. R015692

Client Name: PGH Bricks & Pavers

Parameter	Analyte	Units	N 18963 PGH Bricks & Pavers Kiln SO3 Solution (SO3)	N 18964 PGH Bricks & Pavers All locations SO3 Solution Blank	N 18972 PGH Bricks & Pavers Dryer 2 SO3 Solution	N 18979 PGH Bricks & Pavers Dryer 3 SO3 Solution	N 18965 PGH Bricks & Pavers Kiln SO2 Solution (SO2)	N 18966 PGH Bricks & Pavers All locations SO2 Solution Blank	N 18971 PGH Bricks & Pavers Dryer 2 SO2 Solution	N 18978 PGH Bricks & Pavers Dryer 3 SO2 Solution
Sample Volume		mL	87	100	72	78	290	100	218	132
Sulfur dioxide (SO ₂)	SO ₄ ²⁻	mg/L					355.37	5.63	4.53	3.70
Sulfur trioxide (SO ₃)	SO ₄ ²⁻	mg/L	47.15	<0.2	0.84	1.16				
PQL	<	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2



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Appendix I: Noise Monitoring

Noise Monitoring Assessment

PGH Bringelly Brickworks

Bringelly, NSW

Quarter Ending September 2023

Document Information

Noise Monitoring Assessment

PGH Bringelly Brickworks

Bringelly, NSW

Quarter Ending September 2023

Prepared for: PGH Bricks & Pavers Pty Ltd

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Prepared by: Muller Acoustic Consulting Pty Ltd

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MAC190946-02RP11	29 September 2023	Nicholas Shipman		Oliver Muller	

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1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by PGH Bricks & Pavers Pty Ltd (PGH) to complete a Noise Monitoring Assessment (NMA) for the PGH Bringelly Brickworks (the site) at 60 Greendale Road, Bringelly, NSW.

This assessment has been undertaken for the quarterly period ending September 2023, and forms part of the annual noise monitoring program to address conditions outlined in the Development Consent and Environmental Protection Licence (EPL).

The NMA has quantified potential operational and sleep disturbance noise emissions from the operation and has been conducted in accordance with the following documents:

- NSW Environment Protection Authority (EPA), Noise Policy for Industry (NPI), 2017;
- NSW Environment Protection Authority (EPA's), Approved Methods for the measurement and analysis of environmental noise in NSW, 2022;
- Environment Protection Licence EPL 1808 (EPL);
- Bringelly Brickworks Noise Management Plan (NMP ref BRK-BRI-NMP Version 4 dated 12.02.19), 2019;
- Bringelly Brickworks Development Consent, 2015 (SSD_5684); and
- Standards Australia AS 1055:2018 - Acoustics - Description and measurement of environmental noise.

A glossary of terms, definitions and abbreviations used in this report is provided in **Appendix A**.

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2 Noise Criteria

Section L4 of the projects EPL (EPL #1808) outlines the applicable operational noise criteria for all privately owned receivers surrounding the project. The criteria outlined in the EPL is reproduced below in **Table 1** along with relevant noise conditions.

L4.1 Noise from the mobile plant must not exceed an LA10 (15 minute) noise emission criterion of 35 dB(A) at all times except as expressly provided by this licence.

L4.2 Noise from the premises must not exceed an LA10 (15 minute) noise emission criterion of 35 dB(A) at all times except as expressly provided by this licence.

L4.3 Noise from the premises is to be measured or computed at any point within 30 meters of the most affected residence to determine compliance with condition L4.1 and L4.2. 5dB(A) must be added if the noise is tonal or impulsive in character.

Table 1 EPL Noise Criteria¹

Receiver	Activity	All Operating Periods dB LA10(15min)
All receiver locations	Mobile Plant	35
	Total noise from premises	

Note 1: Noise criteria adopted from the EPL (EPL #1808).

The Bringelly Brickworks NMP outlines the applicable noise criteria for representative residential receivers surrounding the site and are presented in **Table 2**. The site includes the operation of a quarry and brickmaking plant, and as the quarry operates during the daytime, there are separate criteria relating to each period.

Table 2 Development Consent Noise Criteria¹

Activity	Receiver	Day/Evening/Shoulder ^{2,3}	Night ²	
		dB LAeq(15min)	dB LAeq(15min)	dB LA1(max) ³
Brickmaking and quarrying	R1, R2	47	N/A	
	R3, R4, R14	46		
	R15, R17	45		
	All other receivers	44		
Brickmaking	All Receivers	44	43	53

Note 1: Noise criteria adopted from the Development Consent.

Note 2: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 3: Periods and parameters as expressed in the Development Consent.

Figure 1 presents the identified receiver locations and representative measurement locations.

Section 4 of the Bringelly Brickworks Development Consent, 2015 (SSD_5684, see **Appendix B**) outlines requirements for Noise Bunds adjacent to the northern boundary of the extraction area and adjacent to Greendale Road. It is noted that the proposed new access road and associated noise bund adjacent to Greendale Road are not in place at the time of the monitoring. Further details on review of noise mitigation measures for the site are contained in a historic report (MAC190946LR1, 29 September 2019).



FIGURE 1
SITE LAYOUT
MAC190946-02
PGH Bringelly Brickworks

KEY

- Monitoring Locations
- Receivers



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3 Methodology

3.1 Locality

PGH Bringelly Brickworks is located at 60 Greendale Road, Bringelly, NSW. Receivers in the locality surrounding the site are primarily rural/residential and for consistency the naming conventions for each receiver have been retained from historic noise assessments. The monitoring locations with respect to PGH are presented in the locality plan shown in **Figure 1**.

3.2 Assessment Methodology

The attended noise measurements were conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, "Acoustics - Description and Measurement of Environmental Noise" and as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022). Measurements were conducted using a Svantek Type 1, 971 noise analyser. All acoustic instrumentation used carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022) and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed $\pm 0.5\text{dBA}$.

Noise measurements were of 15-minutes in duration and where possible, throughout each survey the operator quantified the contribution of each significant noise source. Measurements were conducted at five locations (N1, N3, N14, N20, N35) on Tuesday 26 September 2023 during the day, evening, and night periods to satisfy the requirements of the NMP.

Extraneous noise sources were excluded from the analysis to determine the $\text{LA}_{\text{eq}}(15\text{min})$ quarry noise contribution for comparison against the relevant criteria. In the event of site attributed noise being above criteria, prevailing meteorological conditions for the monitoring period are analysed in accordance with Fact Sheet D of the NPI to determine the stability category present at the time of each attended measurement.

Where the site is inaudible, the contribution is estimated to be at least 10dBA below the ambient noise level.

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4 Results

4.1 Meteorological Conditions

Weather data for the noise assessment period was sourced from Badgerys Creek AWS Site 67108 as well as operator measured conditions at each EPL nominated receiver location. The data was used to determine prevailing meteorological conditions at the time of the attended measurements. Meteorological data is presented in **Table 3** and generally are below levels where noise limits are applicable, furthermore, wind speed at the microphone height satisfy requirements of Fact Sheet A of the NPI.

Table 3 Prevailing Meteorological Conditions

Time & Date	Badgerys Creek AWS Site 67108 (10m AGL)		Operator Measured Weather Monitoring Location (1.8m AGL)	
	Wind Direction	Wind (m/s)	Wind Direction	Wind (m/s)
16:09 26/09/2023	N	3.5	ESE	0.1
16:26 26/09/2023	N	2.4	ESE	0.1
16:43 26/09/2023	N	1.9	E	0.6
17:01 26/09/2023	N	4.1	E	1.0
17:24 26/09/2023	N	4.1	E	0.1
18:00 26/09/2023	N	2.4	E	0.1
18:19 26/09/2023	N	2.4	E	0.1
18:36 26/09/2023	N	2.4	E	0.1
18:58 26/09/2023	N	2.9	E	0.1
19:31 26/09/2023	N	1.1	E	0.1
22:13 26/09/2023	N	1.1	E	0.1
22:32 26/09/2023	N	0.0	E	0.1
22:49 26/09/2023	N	0.0	E	0.1
23:08 26/09/2023	N	1.1	E	0.1
23:31 26/09/2023	N	0.5	E	0.1

4.2 Assessment Results - Location N1

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N1 for the NMA are presented in **Table 4**.

Table 4 Operator-Attended Noise Survey Results – Location N1

Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)					Meteorology	Description and SPL,
		L _A max	L _A 1	L _A eq	L _A 90	L _A 10		dBA
26/09/2023	17:01 (Day)	74	67	54	45	55	WD: E WS: 1.0m/s Rain: Nil	Residential noise 44-48
								Traffic 44-62
								Birds 44-52
								Dog bark 68-74
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<35
26/09/2023	18:58 (Evening)	75	64	51	39	48	WD: E WS: 0.1m/s Rain: Nil	Traffic 39-75
								Dog bark 56-58
								Aircraft 49-52
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<29
26/09/2023	23:08 (Night)	54	43	39	37	40	WD: E WS: 0.1m/s Rain: Nil	Insects 34-36
								Traffic 34-46
								Birds 38-54
								PGH site hum <34
PGH Site L _A eq(15min) Contribution								<34
PGH Site L _A 1(max) Contribution								<34

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.3 Assessment Results - Location N3

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N3 for the NMA are presented in **Table 5**.

Table 5 Operator-Attended Noise Survey Results – Location N3

Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)					Meteorology	Description and SPL, dBA
		L _{Amax}	L _{A1}	L _{Aeq}	L _{A90}	L _{A10}		
26/09/2023	16:43 (Day)	85	76	65	46	69	WD: E	Traffic 43-85
							WS: 0.6m/s	Birds 43-58
							Rain: Nil	Aircraft <43
								Wind in vegetation <43
								PGH site inaudible
PGH Site L _{Aeq} (15min) Contribution								<35
26/09/2023	18:36 (Evening)	81	76	63	41	67	WD: E	Aircraft 37-42
							WS: 0.1m/s	Birds 38-48
							Rain: Nil	Traffic 37-81
								Insects <37
								PGH site inaudible
PGH Site L _{Aeq} (15min) Contribution								<31
26/09/2023	22:49 (Night)	73	67	52	40	49	WD: E	Traffic 37-73
							WS: 0.1m/s	Insects 37-39
							Rain: Nil	Birds 40-46
								PGH site inaudible
PGH Site L _{Aeq} (15min) Contribution								<30
PGH Site L _{A1} (max) Contribution								<30

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.4 Assessment Results - Location N14

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N14 for the NMA are presented in **Table 6**.

Table 6 Operator-Attended Noise Survey Results – Location N14

Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)					Meteorology	Description and SPL,
		L _{Amax}	LA1	LAeq	LA90	LA10		dBA
26/09/2023	16:26 (Day)	89	82	70	50	73	WD: ESE	Birds 45-54
							WS: 0.1m/s	Traffic 45-89
							Rain: Nil	Aircraft <45
								PGH site inaudible
PGH Site LAeq(15min) Contribution								<35
26/09/2023	18:19 (Evening)	86	80	67	47	70	WD: E	Traffic 44-86
							WS: 0.1m/s	Birds 44-52
							Rain: Nil	Aircraft <44
								PGH site inaudible
PGH Site LAeq(15min) Contribution								<35
26/09/2023	22:32 (Night)	84	67	56	33	50	WD: E	Insects 31-34
							WS: 0.1m/s	Traffic 35-84
							Rain: Nil	Birds 36-46
								PGH site inaudible
PGH Site LAeq(15min) Contribution								<23
PGH Site LA1(max) Contribution								<23

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.5 Assessment Results - Location N20

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N20 for the NMA are presented in **Table 7**.

Table 7 Operator-Attended Noise Survey Results – Location N20

Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)					Meteorology	Description and SPL,
		L _{Amax}	L _{A1}	L _{Aeq}	L _{A90}	L _{A10}		dBA
26/09/2023	16:09 (Day)	93	84	71	45	73	WD: ESE	Traffic 39-93
							WS: 0.1m/s	Birds 40-52
							Rain: Nil	Dog bark <40
								Aircraft 40-46
								PGH site inaudible
PGH Site L _{Aeq} (15min) Contribution								<35
26/09/2023	18:00 (Evening)	85	80	67	40	69	WD: E	Traffic 42-85
							WS: 0.1m/s	Birds 42-50
							Rain: Nil	PGH site inaudible
PGH Site L _{Aeq} (15min) Contribution								<30
26/09/2023	22:13 (Night)	87	76	62	39	58	WD: E	Insects 38-40
							WS: 0.1m/s	Livestock 40-48
							Rain: Nil	Traffic 38-87
								PGH site inaudible
PGH Site L _{Aeq} (15min) Contribution								<29
PGH Site L _{A1} (max) Contribution								<29

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.6 Assessment Results - Location N35

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N35 for the NMA are presented in **Table 8**.

Table 8 Operator-Attended Noise Survey Results – Location N35

Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)					Meteorology	Description and SPL, dBA
		L _{Amax}	L _{A1}	L _{Aeq}	L _{A90}	L _{A10}		
26/09/2023	17:24 (Day)	60	49	43	40	45	WD: E	Birds 38-54
							WS: 0.1m/s	Aircraft 38-52
							Rain: Nil	Traffic 38-60
							PGH site inaudible	
PGH Site L _{Aeq} (15min) Contribution								<30
26/09/2023	19:31 (Evening)	57	51	41	36	43	WD: E	Traffic 34-57
							WS: 0.1m/s	Insects <34
							Rain: Nil	Aircraft 38-46
							PGH site inaudible	
PGH Site L _{Aeq} (15min) Contribution								<26
26/09/2023	23:31 (Night)	51	40	34	28	37	WD: E	Insects 26-30
							WS: 0.1m/s	Traffic 28-51
							Rain: Nil	PGH site inaudible
							PGH Site L _{Aeq} (15min) Contribution	
PGH Site L _{A1} (max) Contribution								<20

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

5 Discussion

5.1 Assessment Results - Location N1

Monitoring on Tuesday 26 September 2023 identified that PGH activities were audible during the night measurement periods at location N1. The estimated site contributions were measured below the relevant noise limits for each assessed period. Extraneous sources such as residential noise, traffic, birds, dogs barking, insects and aircraft were audible during the measurement period.

5.2 Assessment Results - Location N3

Monitoring on Tuesday 26 September 2023 identified that PGH activities remained inaudible during the measurement period at location N3. The estimated site contributions were measured below the relevant noise limits for each assessed period. Extraneous sources such as traffic, birds, aircraft, wind in vegetation and insects were audible during the measurement period.

5.3 Assessment Results - Location N14

Monitoring on Tuesday 26 September 2023 identified that PGH activities remained inaudible during the measurement period at location N14. The estimated site contributions were measured below the relevant noise limit for each assessed period. Extraneous sources such as birds, traffic, aircraft and insects were audible during the measurement period.

5.4 Assessment Results - Location N20

Monitoring on Tuesday 26 September 2023 identified that PGH activities remained inaudible during the measurement period at location N20. The estimated site contributions were measured below the relevant noise limit for each assessed period. Extraneous sources such as traffic, birds, dogs barking, aircraft, insects and livestock were audible during the measurement period.

5.5 Assessment Results - Location N35

Monitoring on Tuesday 26 September 2023 identified that PGH activities remained inaudible during the measurement period at location N35. The estimated site contributions were measured below the relevant noise limit for each assessed period. Extraneous sources such as birds, traffic, aircraft and insects were audible during the measurement period.

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6 Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise Monitoring Assessment (NMA) commissioned by PGH Bricks & Pavers Pty Ltd (PGH) for the PGH Bringelly Brickworks (the site) at 60 Greendale Road, Bringelly, NSW. The assessment was completed to assess the site's compliance with the relevant noise criteria during the quarter period ending September 2023.

Attended noise monitoring was undertaken on Tuesday 26 September 2023 at five representative receiver locations. The assessment has identified that noise emissions generated by Bringelly Brickworks remained below the relevant noise criteria throughout the survey period, satisfying the relevant consent conditions.

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Appendix A – Glossary of Terms

A number of technical terms have been used in this report and are explained in **Table A1**.

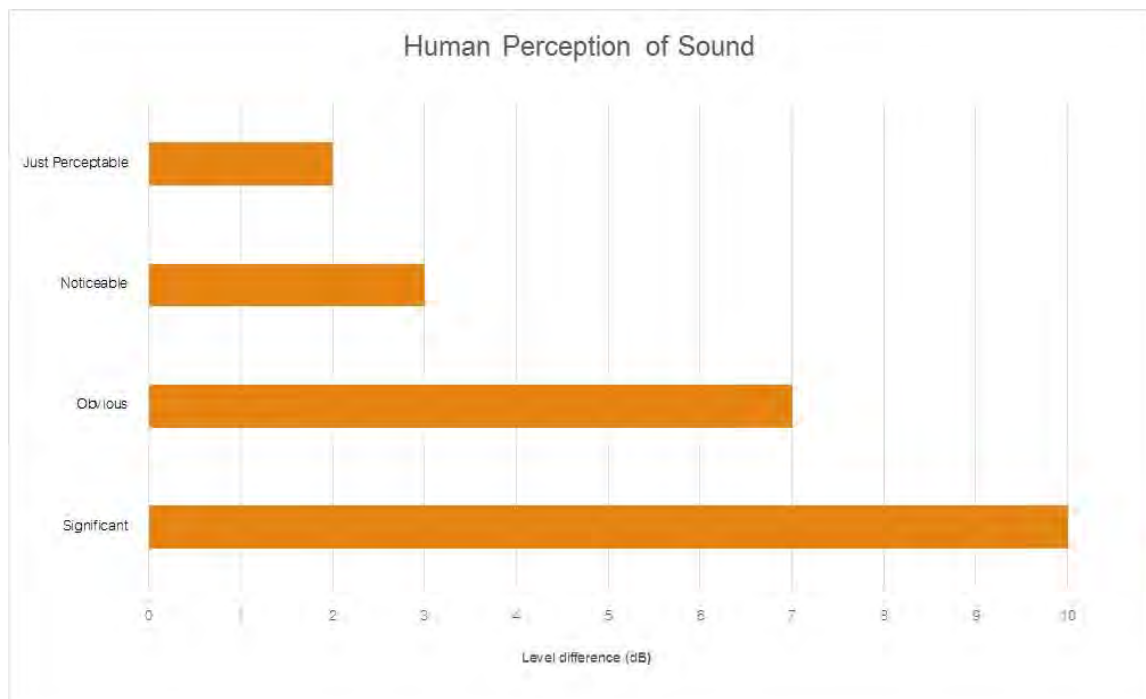
Table A1 Glossary of Acoustical Terms	
Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI as a single figure background level for each assessment period (day, evening and night). It is the tenth percentile of the measured L90 statistical noise levels.
Ambient Noise	The total noise associated with a given environment. Typically, a composite of sounds from all sources located both near and far where no particular sound is dominant.
A Weighting	A standard weighting of the audible frequencies designed to reflect the response of the human ear to sound.
Background Noise	The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is usually represented by the LA90 descriptor
dBA	Noise is measured in units called decibels (dB). There are several scales for describing noise, the most common being the 'A-weighted' scale. This attempts to closely approximate the frequency response of the human ear.
dB(Z), dB(L)	Decibels Z-weighted or decibels Linear (unweighted).
Extraneous Noise	Sound resulting from activities that are not typical of the area.
Hertz (Hz)	The measure of frequency of sound wave oscillations per second - 1 oscillation per second equals 1 hertz.
LA10	A sound level which is exceeded 10% of the time.
LA90	Commonly referred to as the background noise, this is the level exceeded 90% of the time.
LAeq	Represents the average noise energy or equivalent sound pressure level over a given period.
LAmx	The maximum sound pressure level received at the microphone during a measuring interval.
Masking	The phenomenon of one sound interfering with the perception of another sound. For example, the interference of traffic noise with use of a public telephone on a busy street.
RBL	The Rating Background Level (RBL) as defined in the NPI, is an overall single figure representing the background level for each assessment period over the whole monitoring period. The RBL, as defined is the median of ABL values over the whole monitoring period.
Sound power level (Lw or SWL)	This is a measure of the total power radiated by a source in the form of sound and is given by $10 \cdot \log_{10} (W/W_0)$. Where W is the sound power in watts to the reference level of 10^{-12} watts.
Sound pressure level (Lp or SPL)	the level of sound pressure; as measured at a distance by a standard sound level meter. This differs from Lw in that it is the sound level at a receiver position as opposed to the sound 'intensity' of the source.

Table A2 provides a list of common noise sources and their typical sound level.

Table A2 Common Noise Sources and Their Typical Sound Pressure Levels (SPL), dBA

Source	Typical Sound Pressure Level
Threshold of pain	140
Jet engine	130
Hydraulic hammer	120
Chainsaw	110
Industrial workshop	100
Lawn-mower (operator position)	90
Heavy traffic (footpath)	80
Elevated speech	70
Typical conversation	60
Ambient suburban environment	40
Ambient rural environment	30
Bedroom (night with windows closed)	20
Threshold of hearing	0

Figure A1 – Human Perception of Sound



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Appendix B – Development Consent

Development Consent

Section 89E of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, I approve the development application referred to in schedule 1, subject to the conditions in schedules 2 to 5.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.

David Kitto
Executive Director
Resource Assessments and Business Systems

Sydney

2015

SCHEDULE 1

Application Number:

SSD_5684

Applicant:

Boral Bricks Pty Ltd

Consent Authority:

Minister for Planning

Land:

[Lot 100 in DP 1203966](#)

Development:

Bringelly Brickworks Extension Project

Modification 1 (October 2016 shown in [blue](#) text)

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DEFINITIONS

AHD	Australian Height Datum
Annual Review	The review required by condition 4 of schedule 5
Applicant	Boral Bricks Pty Ltd, or any other person or persons who rely on this consent to carry out the development that is subject to this consent
BCA	Building Code of Australia
Biodiversity offset strategy	The conservation and enhancement strategy described in the EIS, and shown conceptually in Appendix 4
Brick making operations	Includes the receipt, handling, processing, storage and transportation of raw materials on site, brick making on site and transportation of finished bricks on site
CCC	Community Consultative Committee
Conditions of consent	Conditions contained in schedules 1 to 5 inclusive
Construction	The demolition of buildings or works, carrying out of works and erection of buildings covered by this consent
CPI	Australian Bureau of Statistics Consumer Price Index
Date of commencement	The date notified to the Department by the Applicant under condition 8 of Schedule 2
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Development	The development described in the documents of condition 2(a) of Schedule 2
Development area	All land to which the development application applies, as listed under "Land" in schedule 1 and shown in Appendix 1
DPI Water	Department of Primary Industries - Water
DRE	Division of Resources and Energy, within the NSW Department of Industry
EEC	Endangered Ecological Community, as defined under the <i>Threatened Species Conservation Act 1995</i>
EIS	Environmental Impact Statement titled <i>Bringelly Brickworks and Quarry Expansion</i> (2 volumes), dated September 2013, as modified by the Response to Submissions titled, <i>Bringelly Brickworks and Quarry Expansion, Response to Submissions</i> dated February 2014 and the letter entitled <i>Bringelly Brickworks – Biodiversity Offsets</i> , dated 2 June 2014
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6pm to 10pm
Extension area	The area outside of the existing quarry footprint (i.e. cells D, E, F, G, H and I, as shown conceptually in Appendix 2)
Feasible	Feasible relates to engineering considerations and what is practical to build
GDE	Groundwater Dependent Ecosystem
GPS	Global Positioning System
Growth Centres SEPP	<i>State Environmental Planning Policy (Sydney Regional Growth Centres) 2006</i>
Ha	Hectare
Incident	A set of circumstances that: - causes or threatens to cause material harm to the environment; and/or - breaches or exceeds the limits or performance measures/criteria in this consent
Land	As defined in the EP&A Act, except for where the term is used in the noise and air quality conditions in schedules 3 and 4 of this consent

	where it is defined to mean the whole of a lot, or contiguous lots, owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
m	Metres
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the development
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NP&W Act	<i>National Parks and Wildlife Act 1974</i>
OEH	NSW Office of Environment and Heritage
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or the Applicant (or its subsidiary)
Quarrying operations	Includes the removal of overburden and extraction, handling, storage and transportation of extractive materials on site
Raw materials	Raw materials imported for use in brick making including clay/shale and additives (such as manganese and iron oxides)
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the development to a good condition, ensuring that it is safe, stable and non-polluting and appropriately revegetated
RMS	Roads and Maritime Services
Secretary	Secretary of the Department, or nominee
SEE (Mod 1)	Statement of Environmental Effects titled ' <i>Section 96(1A) Modification Supporting Information</i> ' dated August 2016 and prepared by Element Environment, including the Response to Submissions document dated September 2016
Site	The land listed under "Land" in schedule 1
Shoulder	The period between 6am to 7am on Monday to Saturday
South West Growth Centre	An area of land identified under the Growth Centres SEPP

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance criteria established under this consent, the Applicant **must** implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.

TERMS OF CONSENT

2. The Applicant **must**:
 - (a) carry out the development generally in accordance with the EIS **and SEE (Mod 1)**; and
 - (b) the conditions of this consent.

Note: The general layout of the development is shown in Appendix 2.

3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.
4. The Applicant **must** comply with any reasonable requirement/s of the Secretary arising the Department's assessment of:
 - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent;
 - (b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; or
 - (c) the implementation of any actions or measures contained in these documents.

LIMITS ON CONSENT

Quarrying and Brick Making Operations

5. The Applicant may carry out quarrying **operations** and brick making operations from the date of commencement of development under this consent until 1 March 2045.

Note: Under this consent, the Applicant is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary. Consequently, this consent will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.

Production Limits

6. The Applicant **must** not:
 - (a) extract more than 200,000 tonnes of clay/shale from the site in any calendar year;
 - (b) produce more than 263,500 tonnes of bricks at the site in any calendar year;
 - (c) carry out quarrying operations beyond 46 m AHD; and
 - (d) receive more than **321,000** tonnes of raw materials required for brick making to the site in any calendar year.

Transportation Limits

7. The Applicant **must** not:
 - (a) transport more than 263,500 tonnes of bricks from the site in a calendar year;
 - (b) receive more than 90 trucks to the site per day or more than 18 trucks per hour; and
 - (c) dispatch more than 90 trucks from the site per day or more than 18 trucks per hour.

NOTIFICATION OF COMMENCEMENT

8. **Prior to commencing development under this consent, the Applicant must notify the Department in writing of the date on which it will commence development permitted under this consent.**

SURRENDER OF EXISTING DEVELOPMENT CONSENT

9. Within 4 months of commencing development under this consent, the Applicant must surrender the development consent (DA 91/1194) for existing operations on the site in accordance with Section 104A of the EP&A Act.

Following the commencement of development under this consent, the conditions of this consent (including any notes) shall prevail to the extent of any inconsistency with the conditions of the existing development consent (DA 91/1194).

STRUCTURAL ADEQUACY

10. The Applicant must ensure that any new buildings and structures, and any alterations, or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

DEMOLITION

11. The Applicant must ensure that all demolition work on site is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

PROTECTION OF PUBLIC INFRASTRUCTURE

12. The Applicant must:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
 - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

Note: This condition does not apply to any damage to roads caused as a result of general road usage.

OPERATION OF PLANT AND EQUIPMENT

13. The Applicant must ensure that all plant and equipment used on site or any monitoring equipment used off site for monitoring the performance of the development is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

UPDATING AND STAGING STRATEGIES, PLANS OR PROGRAMS

14. With the approval of the Secretary, the Applicant may submit any strategies, plans or programs required by this consent on a progressive basis.

To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval.

With the agreement of the Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all parties under the applicable condition of this consent.

Notes:

- While any strategy, plan or program may be submitted on a progressive basis, the Applicant must ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.
- If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

15. Until they are replaced by an equivalent strategy, plan or program approved under this consent, the Applicant **must** implement the existing strategies, plans or programs for the site that have been approved under DA 91/1194.

IDENTIFICATION OF APPROVED LIMITS OF EXTRACTION

16. Prior to undertaking quarrying operations in the extension area, the Applicant **must**:
- (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the development area; and
 - (b) submit a survey plan of these boundaries with applicable GPS coordinates to the Secretary.
17. While quarrying operations are being carried out, the Applicant **must** ensure that these boundaries are clearly marked at all times to allow operating staff and inspecting officers to clearly identify the approved limits of extraction.

PRODUCTION DATA

18. The Applicant **must**:
- (a) provide annual quarry production data to DRE using the standard form for that purpose; and
 - (b) include a copy of this data in the Annual Review (see condition 4 of schedule 5).

DEVELOPER CONTRIBUTIONS

19. The Applicant **must** pay Camden Council road maintenance contributions of \$0.0811 for every tonne of material transported to and from the site, indexed to CPI. Each payment must be:
- (a) paid to Council at the end of each calendar year; and
 - (b) based on weighbridge records of all supplementary brick making materials transported to the site and bricks and spoil transported from the site.

Note: If the parties are not able to agree on any aspect of the maintenance contributions, either party may refer the matter to the Secretary for resolution.

SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

HOURS OF OPERATION

- The Applicant **must** comply with the operating hours set out in Table 1.

Table 1: Operating Hours

Activity	Operating Hours
- Quarrying operations - Deliveries - Dispatch of finished bricks	6am to 6pm, Monday to Friday 6am to 1pm, Saturday No activities on Sundays or Public Holidays
Brick making operations (except dispatch of finished bricks)	24 hours a day, 7 days a week
Construction activities	7am to 6pm, Monday to Friday 8am to 1pm, Saturday No construction to be undertaken on Sundays or Public Holidays

NOISE

Noise Criteria

- The Applicant **must** ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence on privately-owned land.

Table 2: Noise criteria dB(A)

Activity	Receiver	Day/Evening/Shoulder	Night	
		<i>L_{Aeq}(15 min)</i>	<i>L_{Aeq}(15 min)</i>	<i>L_{A1}(max)</i>
Brick making and quarrying	R1, R2	47	Not Applicable	
	R3, R4, R14	46		
	R15, R17	45		
	All other receivers	44		
Brick making	All receivers	44	43	53

Notes:

- To locate the receivers referred to in Table 2 refer to Appendix 3.
- After the first review on any EPL granted for this development under Section 78 of the POEO Act, nothing in this consent prevents the EPA from imposing stricter noise limits on the quarrying operations on site under the EPL.

Appendix 5 sets out the metrological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, these criteria do not apply if the Applicant has a written agreement with the relevant landowner/s to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.

Construction Noise

- The Applicant **must** manage noise generated during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road, in accordance with the guidelines specified in Table 2 of the *Interim Construction Noise Guideline*.

Note: Management guidelines are applicable to receivers 3 and 4, shown in Appendix 3.

Noise Bunds

4. The Applicant must ensure that the noise bund adjacent to the northern boundary of the extraction area is constructed prior to the commencement of quarrying operations in the extension area.
- 4A. The Applicant must ensure that the noise bund adjacent to Greendale Road is constructed prior to the commencement of brick making operations.

Operating Conditions

5. The Applicant **must**:
 - (a) implement all reasonable and feasible mitigation measures to minimise construction, operational and road noise of the development;
 - (b) implement periods of respite during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road;
 - (c) regularly assess noise monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the noise criteria in this consent;
 - (d) maintain the effectiveness of noise suppression equipment on plant and equipment on site;
 - (e) minimise the noise impacts of the development during meteorological conditions under which the noise criteria in this consent do not apply (see Appendix 5); and
 - (f) carry out regular noise monitoring to determine whether the development is complying with the relevant conditions of this consent, to the satisfaction of the Secretary.

Noise Management Plan

6. The Applicant **must** prepare a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (a) be prepared in consultation with the EPA;
 - (b) be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (c) describe the reasonable and feasible mitigation measures that would be implemented to ensure:
 - construction noise is minimise;
 - compliance with the relevant noise criteria and operating conditions in this consent;
 - best management practice is being employed; and
 - the noise impacts of the development are minimised during meteorological conditions under which the noise criteria in this consent do not apply;
 - (d) describe the proposed noise management system on site; and
 - (e) include a quarterly (or as otherwise agreed with the Secretary) noise monitoring program that:
 - uses attended monitoring to evaluate the compliance of the development against the noise criteria in this consent;
 - evaluates and reports on the effectiveness of the noise management system and the best practice noise management measures; and
 - defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

AIR QUALITY

Air Quality Criteria

7. The Applicant **must** implement all reasonable and feasible avoidance and mitigation measures so that particulate matter emissions generated by the development do not exceed the criteria in Tables 3 to 6 at any residence on privately-owned land.

Table 3: Long-Term Criteria for Particulate Matter

Pollutant	Averaging period	^a Criterion
Total suspended particulates (TSP)	Annual	^a 90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³

Table 4: Short-Term Criteria for Particulate Matter

Pollutant	Averaging period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³

Table 5: Long-Term Criteria for Deposited Dust

Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Table 6: Long and Short-Term Stack Emissions

Pollutant	Averaging period	^d Criterion
Sulphur Dioxide	10-minute	712 µg/m ³
	1-Hour	570 µg/m ³
	24-Hour	228 µg/m ³
	Annual	60 µg/m ³
Nitrogen Dioxide	1-Hour	246 µg/m ³
	Annual	62 µg/m ³
Hydrogen Chloride	1 hour	0.14 mg/m ³

Notes to Tables 3-6:

- ^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).
- ^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).
- ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.
- ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Secretary in consultation with EPA.

Operating Conditions

8. The Applicant **must**:
 - (a) implement all reasonable and feasible measures to minimise the stack and dust emissions of the development;
 - (b) minimise surface disturbance and maximise progressive rehabilitation;
 - (c) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see note (d) to Tables 3-6 above); and
 - (d) monitor and report on compliance with the relevant air quality conditions in this consent; to the satisfaction of the Secretary.

Air Quality Management Plan

9. The Applicant **must** prepare an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (a) be prepared in consultation with the EPA;
 - (b) be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (c) describe the measures that would be implemented to ensure:
 - compliance with the air quality criteria and operating conditions under this consent;
 - best practice management is being employed; and
 - the air quality impacts of the development are minimised during adverse meteorological conditions;
 - (d) describe the air quality management system; and
 - (e) include an air quality monitoring program that:
 - evaluates and reports on:
 - o the effectiveness of the air quality management system; and
 - o compliance with the air quality criteria and operating conditions; and
 - defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

METEOROLOGICAL MONITORING

10. For the life of the development, the Applicant **must** ensure that there is a suitable meteorological station operating in the vicinity of the site that:
- (a) complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline; and
 - (b) is capable of continuous measurement of stability class, in accordance with the *NSW Industrial Noise Policy*, or as otherwise approved by EPA.

TRANSPORT

Monitoring of Product Transport

11. The Applicant **must** keep accurate records of the:
- (a) **tonnage** of bricks transported from the site (monthly and annually);
 - (b) amount of raw material imported to the site (monthly and annually); and
 - (c) **tonnage of each type of raw materials imported to the site (monthly and annually);** and provide the Secretary with a summary of this information upon request.

Parking

12. The Applicant **must** provide sufficient parking on-site for all development-related traffic, in accordance with Camden Council's parking codes, to the satisfaction of the Secretary.

Operating Conditions

13. The Applicant **must** ensure that:
- (a) all development-related heavy vehicles enter and exit the site in a forward direction;
 - (b) all laden vehicles entering or exiting the site have their loads covered (with the exception of vehicles carrying bricks);
 - (c) all laden vehicles that have accessed the extraction and/or stockpile areas are cleaned of sand and other material that may fall on the road, before leaving the site;
 - (d) all heavy vehicles exiting the site travel east of the site along Greendale Road to The Northern Road and/or Bringelly Road;
 - (e) the dispatch of laden trucks is avoided during the peak drop-off and pick-up times at the Bringelly Public School to the greatest extent practicable, particularly prior to the upgrade of the Greendale Road/Bringelly Road intersection by RMS; and
 - (f) no trucks queue at the entrance to the site before 6am.

Access Road Intersection Construction

14. Within 12 months of commencing development under this consent, unless otherwise agreed with the Secretary, the Applicant must design and construct the new site access road intersection with Greendale Road in accordance with applicable AUSTROADS standards, to the satisfaction of Camden Council. The Applicant must notify the Secretary in writing within 30 days of obtaining Council approval.

Within 7 days of completing construction and the new site access road being operational, the existing site access road must be permanently closed.

Transport Management Plan

15. The Applicant **must** prepare a Transport Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with RMS, Camden Council, Liverpool City Council and Bringelly Public School, and be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (b) describe the measures that would be implemented to ensure compliance with the transport operating conditions under this consent, including specific measures to avoid **the arrival and**

- dispatch of laden trucks from the site during the peak drop-off and pick-up times at the Bringelly Public School;
- (c) include a Code of Conduct for heavy vehicle drivers that addresses:
- travelling speeds;
 - procedures to minimise noise including a regular Truck Noise Auditing Program;
 - procedures to minimise diesel exhaust emissions;
 - instructions to avoid grouping or convoying of trucks;
 - procedures to ensure that drivers adhere to the designated haulage routes and the haulage hours permitted under this consent;
 - instructions to drivers not to overtake each other on the haulage route, as far as practicable, and to maintain appropriate distances between vehicles; and
 - instruction to drivers to be properly safety conscious and to strictly obey all traffic regulations, particularly in relation to school zones along Greendale Road; and
- (d) describe the measures that would be put in place to ensure compliance with the drivers' Code of Conduct and include a program to monitor the effectiveness of the implementation of these measures.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

SOIL AND WATER

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development, including in respect of the extraction and/or interception of groundwater.

Water Supply

16. The Applicant **must** ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of operations under the consent to match its available water supply to the satisfaction of the Secretary.

Water Discharges

17. The Applicant **must** comply with the discharge limits in any EPL or with Section 120 of the POEO Act.

Water Management Plan

18. The Applicant **must** prepare a Water Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared by suitably qualified person/s approved by the Secretary;
 - (b) be prepared in consultation with the EPA and **DPI Water**;
 - (c) be submitted to the Secretary for approval **prior to the commencement of development under this consent**, unless the Secretary agrees otherwise;
 - (d) include a Site Water Balance that:
 - includes details of:
 - o quantity of water required to support operations;
 - o sources and security of water supply;
 - o water use and management on site;
 - o reporting procedures; and
 - o measures to be implemented to minimise potable water use on site;
 - (e) include a Surface Water Management Plan, that includes:
 - baseline data on surface water flows and quality in the watercourses that could be affected by the development;
 - a description of the surface water management system on site, including:
 - o clean water diversions;
 - o erosion and sediment controls;
 - o the dirty water management system; and
 - o water storages (addressing maximum harvestable rights if applicable);
 - performance criteria, including trigger levels for investigating any potentially adverse surface water quality impacts;
 - a program to monitor and report on:
 - o any surface water discharges;

- o the effectiveness of the water management system; and
 - o surface water flows and quality in local watercourses;
 - a plan to respond to any exceedances of the performance criteria.
- (f) a Groundwater Management Plan, which includes:
- baseline data on groundwater levels, yield and quality in surrounding aquifers;
 - groundwater assessment and performance criteria, including trigger levels for investigating potentially adverse groundwater impacts;
 - a program to monitor:
 - o groundwater inflows to the quarry pit; and
 - o impacts of the development on surrounding aquifers;
 - an analysis of the monitoring results to determine long-term water levels within the quarry void; and
 - a plan to respond to any exceedances of the performance criteria.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

BIODIVERSITY

Biodiversity Offset Strategy

19. The Applicant **must** implement the Biodiversity Offset Strategy described in the EIS, as summarised in Table 7 and shown conceptually in Appendix 4, to the satisfaction of the Secretary.

Table 7: Summary of the Biodiversity Offsets

Area	Offset Criteria	Size (Ha)
On-site offset	Existing vegetation to be enhanced to establish an area of native woodland comprising species associated with Cumberland Plain Woodland.	1.93

Security of Offsets

20. Within 2 years of **notifying the Department of commencement of development (see condition 8 of Schedule 2)**, unless otherwise agreed with the Secretary, the Applicant **must** make suitable arrangements to provide appropriate long-term security for the offset area, to the satisfaction of the Secretary.

Note: Mechanisms to provide appropriate long term security to the land within the Biodiversity Offset Strategy include a Biobanking Agreement, Voluntary Conservation Agreement or an alternative mechanism that provides for a similar conservation outcome. Any mechanism must remain in force in perpetuity.

Biodiversity Management Plan

21. The Applicant **must** prepare a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with the OEH and Camden Council;
 - (b) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - (c) describe how the implementation of the biodiversity offset strategy would be integrated with the overall rehabilitation of the site;
 - (d) describe the short, medium, and long term measures that would be implemented to:
 - manage the remnant vegetation and habitat on the site and in the offset area and;
 - implement the biodiversity offset strategy, including detailed performance and completion criteria;
 - (e) include performance and completion criteria for evaluating the performance of the biodiversity offset strategy, and triggering remedial action (if necessary);
 - (f) include a description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for:
 - maximising the salvage of resources within the approved disturbance area - including vegetative, soil and cultural heritage resources – for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area;

- minimising the impacts on fauna on site, including pre-clearance surveys and minimising the potential exposure to tailings;
 - controlling weeds and feral pests;
 - controlling erosion;
 - controlling access; and
 - bushfire management;
- (g) identify the potential risks to the successful implementation of the biodiversity offset strategy, and include a description of the contingency measures that would be implemented to mitigate against these risks; and
- (h) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

Conservation Bond

22. Within 6 months of the approval of the Biodiversity Management Plan, the Applicant **must** lodge a conservation bond with the Department to ensure that the biodiversity offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan.

The sum of the bond **must** be determined by:

- a. calculating the full cost of implementing the biodiversity offset strategy (other than land acquisition costs); and
- b. employing a suitably qualified quantity surveyor to verify the calculated costs,
- c. to the satisfaction of the Secretary.

The calculation of the conservation bond must be submitted to the Department for approval at least 1 month prior to lodgement of the final bond.

If the offset strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the Secretary, the Secretary will release the bond.

If the offset strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Secretary will call in all, or part of, the conservation bond, and arrange for the satisfactory completion of the relevant works.

Notes:

- *Alternative funding arrangements for long term management of the biodiversity offset strategy, such as provision of capital and management funding as agreed by OEH as part of a Biobanking Agreement or transfer to conservation reserve estate (or any other mechanism agreed with OEH) can be used to reduce the liability of the conservation bond.*
- *The sum of the bond may be reviewed in conjunction with any revision to the biodiversity offset strategy or the completion of major milestones within the approved plan.*

REHABILITATION

Rehabilitation Objectives

23. The Applicant **must** rehabilitate the site to the satisfaction of the Secretary. Rehabilitation must:
- a. comply with the objectives in Table 8; and
 - b. be generally consistent with the proposed rehabilitation strategy in the EIS, and the final land form shown conceptually in Appendix 4 (unless modified by the Final Land Use Options Plan, prepared in accordance with condition 25 of this consent).

Table 8: Rehabilitation Objectives

Feature	Objective
Site (as a whole)	• Safe, stable and non-polluting • Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of local native species and habitat

Surface infrastructure	To be decommissioned and removed (unless the Secretary agrees otherwise)
Final void	- Minimise the size, depth and slope of the batters of the final void - Minimise the drainage catchment of the final void
Quarry pit floor	Landscaped and revegetated using native flora species, above the anticipated final void water level
Community	Ensure public safety

Progressive Rehabilitation

24. The Applicant **must** rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.

Final Land Use Options Plan

25. The Applicant **must** prepare a Final Land Use Options Plan for the site to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with DRE and Camden Council;
 - be submitted to the Secretary for approval within 2 years of the date of [notifying the Department of commencement of development \(see condition 8 of Schedule 2\)](#), unless the Secretary agrees otherwise;
 - provide details of the conceptual final landform and associated final land uses for the site;
 - ensure that the conceptual final land form is compatible with surrounding land uses, and is consistent with the rehabilitation objectives in Table 8 and the objectives of the Growth Centres SEPP for the South West Growth Centre;
 - inform the Rehabilitation Management Plan (prepared in accordance with condition 26 of this consent); and
 - be reviewed every 7 years to account for applicable land use priorities, and if necessary updated.

Rehabilitation Management Plan

26. The Applicant **must** prepare a Rehabilitation Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH, DRE, [DPI Water](#) and Camden Council;
 - be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - provide details of the conceptual final landform and associated land uses for the site (which must be consistent with the Final Land Use Options Plan under condition 25 of this consent);
 - describe the short, medium and long term measures that would be implemented to:
 - manage remnant vegetation and habitat on site; and
 - ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this consent;
 - include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, including triggers for any necessary remedial action;
 - include a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria; and
 - include details of who would be responsible for monitoring, reviewing, and implementing the plan.

[The Applicant must implement the approved management plan as approved from time to time by the Secretary.](#)

Note: The Rehabilitation Management Plan must be reviewed, and if necessary updated, following any update of the Final Land Use Options Plan.

HERITAGE

Heritage Management Plan

27. The Applicant **must** prepare a Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH;
 - (a) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - b. describe the measures that would be implemented to:
 - manage identified heritage objects, previously unidentified heritage objects or the discovery of any human remains on site;
 - ensure ongoing consultation with Aboriginal stakeholders in the conservation and management of any Aboriginal cultural heritage values on site; and
 - protect sites identified adjacent to the development.

The Applicant **must** implement the approved management plan as approved from time to time by the Secretary.

VISUAL

28. The Applicant **must** establish a vegetation screen on both noise bunds, as soon as practicable after construction of the bunds, to minimise visibility of site infrastructure from outside the development area. Following establishment, the Applicant **must** maintain the vegetation screen, to the satisfaction of the Secretary.
29. The Applicant **must**:
- implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development; and
 - b) ensure that all external lighting associated with the development complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*, or its latest version.

BUSHFIRE MANAGEMENT

30. The Applicant **must**:
- ensure that the development is suitably equipped to respond to any fires on site; and
 - b) assist the Rural Fire Service, emergency services and National Parks and Wildlife Service as much as practicable if there is a fire in the surrounding area.

WASTE

31. Prior to importing onto the site any material that may be classified as a waste under the EPA *Waste Classification Guidelines 2009* (or its latest version), the Applicant must obtain a 'resource recovery exemption' under the POEO Act and provide evidence of this exemption to the Department.

Note: This condition does not apply to routine deliveries to the site.

32. The Applicant **must**:
- manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Camden Council; and
 - b) pump all sewage generated and stored on-site to a sewage treatment facility, unless otherwise agreed with the Secretary.
33. The Applicant **must**:
- minimise the waste generated by the development;
 - b) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and
 - c) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. As soon as practicable after obtaining monitoring results showing an exceedance of any relevant criteria in schedule 3, the Applicant **must** notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the development is again complying with the relevant criteria.

INDEPENDENT REVIEW

2. If an owner of privately-owned land considers the development to be exceeding the relevant criteria in schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Applicant **must**:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
 - consult with the landowner to determine his/her concerns;
 - conduct monitoring to determine whether the development is complying with the relevant criteria in schedule 3;
 - if the development is not complying with these criteria then identify the measures that could be implemented to ensure compliance with the relevant criteria; and
- (b) give the Secretary and landowner a copy of the independent review.

SCHEDULE 5
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. If the Secretary requires, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
 - (a) be submitted to the Secretary for approval within 6 months of the Secretary requiring preparation of the strategy by notice to the Applicant;
 - (b) provide the strategic framework for environmental management of the development;
 - (c) identify the statutory approvals that apply to the development;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance;
 - respond to emergencies; and
 - (f) include:
 - copies of any strategies, plans and programs approved under the conditions of this consent; and
 - a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.

The Applicant must implement any Environmental Management Strategy as approved from time to time by the Secretary.

Adaptive Management

2. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity:

- (a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Secretary; to the satisfaction of the Secretary.

Management Plan Requirements

3. The Applicant must ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria; and
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:

- impacts and environmental performance of the development; and
- effectiveness of any management measures (see (c) above);
- (e) a contingency plan to manage any unpredicted impacts and their consequences;
- (f) a program to investigate and implement ways to improve the environmental performance of the development over time;
- (g) a protocol for managing and reporting any:
 - incidents;
 - complaints;
 - non-compliances with statutory requirements; and
 - exceedances of the impact assessment criteria and/or performance criteria; and
- (h) a protocol for periodic review of the plan.

Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

Annual Review

4. By the end of September each year, the Applicant [must submit a report to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary](#). This review must:
 - (a) describe the development (including rehabilitation) that was carried out in the previous [financial](#) year, and the development that is proposed to be carried out over the current [financial](#) year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous [financial](#) year, which includes a comparison of these results against:
 - the relevant statutory requirements, limits or performance measures/criteria;
 - the monitoring results of previous years; and
 - the relevant predictions in the [documents in condition 2\(a\) of Schedule 2](#);
 - (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the development;
 - (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measures will be implemented over the current [financial](#) year to improve the environmental performance of the development.

Revision of Strategies, Plans and Programs

5. [Within 3 months of the submission of an:](#)
 - (a) [Annual Review under condition 4 above;](#)
 - (b) [incident report under condition 7 below;](#)
 - (c) [audit report under condition 9 below; and](#)
 - (d) [any modifications to this consent,](#)
 the Applicant must review the strategies, plans and programs required under this consent, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Secretary.

Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the development.

Community Consultative Committee

6. The Applicant [must](#) establish and operate a Community Consultative Committee (CCC) for the development to the satisfaction of the Secretary. This CCC must be operated in general accordance with the [Guidelines for Establishing and Operating Community Consultative Committees for Mining Developments](#) (Department of Planning, 2007, or its latest version), and be operating [prior to the commencement of development under this consent](#).

Notes:

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.*

- In accordance with the guideline, the Committee should comprise an independent chair and appropriate representation from the Applicant, Camden Council and the local community.

REPORTING

Incident Reporting

7. The Applicant **must** immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Applicant **must** provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Regular Reporting

8. The Applicant **must** provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

INDEPENDENT ENVIRONMENTAL AUDIT

9. Within a year of **commencing development under this consent**, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant **must** commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
 - (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL and/or Water Licence (including any assessment, plan or program required under these approvals);
 - (d) review the adequacy of any approved strategy, plan or program required under these approvals;
 - (e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals; **and be conducted and reported to the satisfaction of the Secretary.**

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.

10. Within **12 weeks of commencing** this audit, unless the Secretary agrees otherwise, the Applicant **must** submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report, including a timetable for the implementation of any measures proposed to address the recommendations in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.

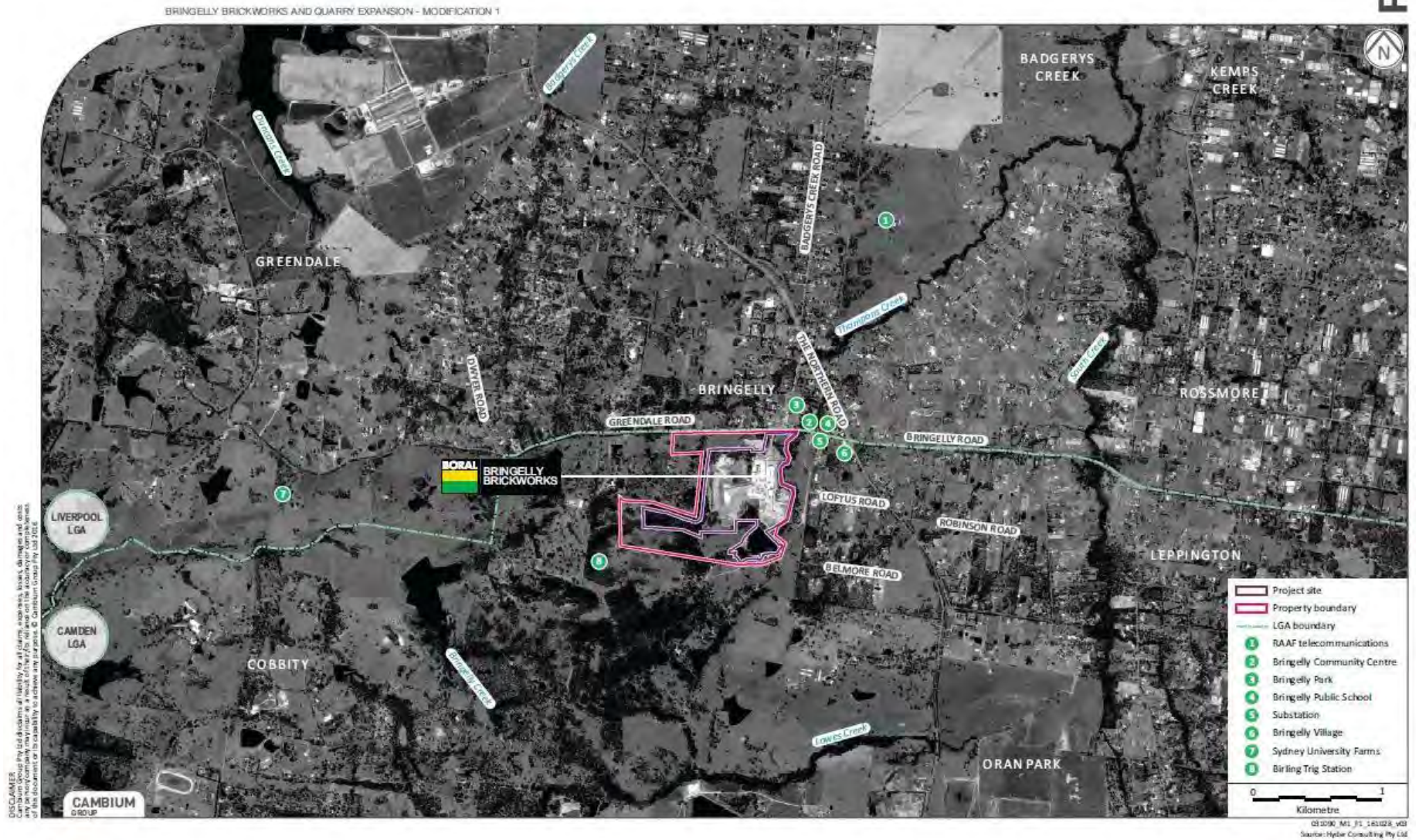
Within 7 days of commencing the audit, the Applicant must notify the Department in writing of the commencement of the audit.

ACCESS TO INFORMATION

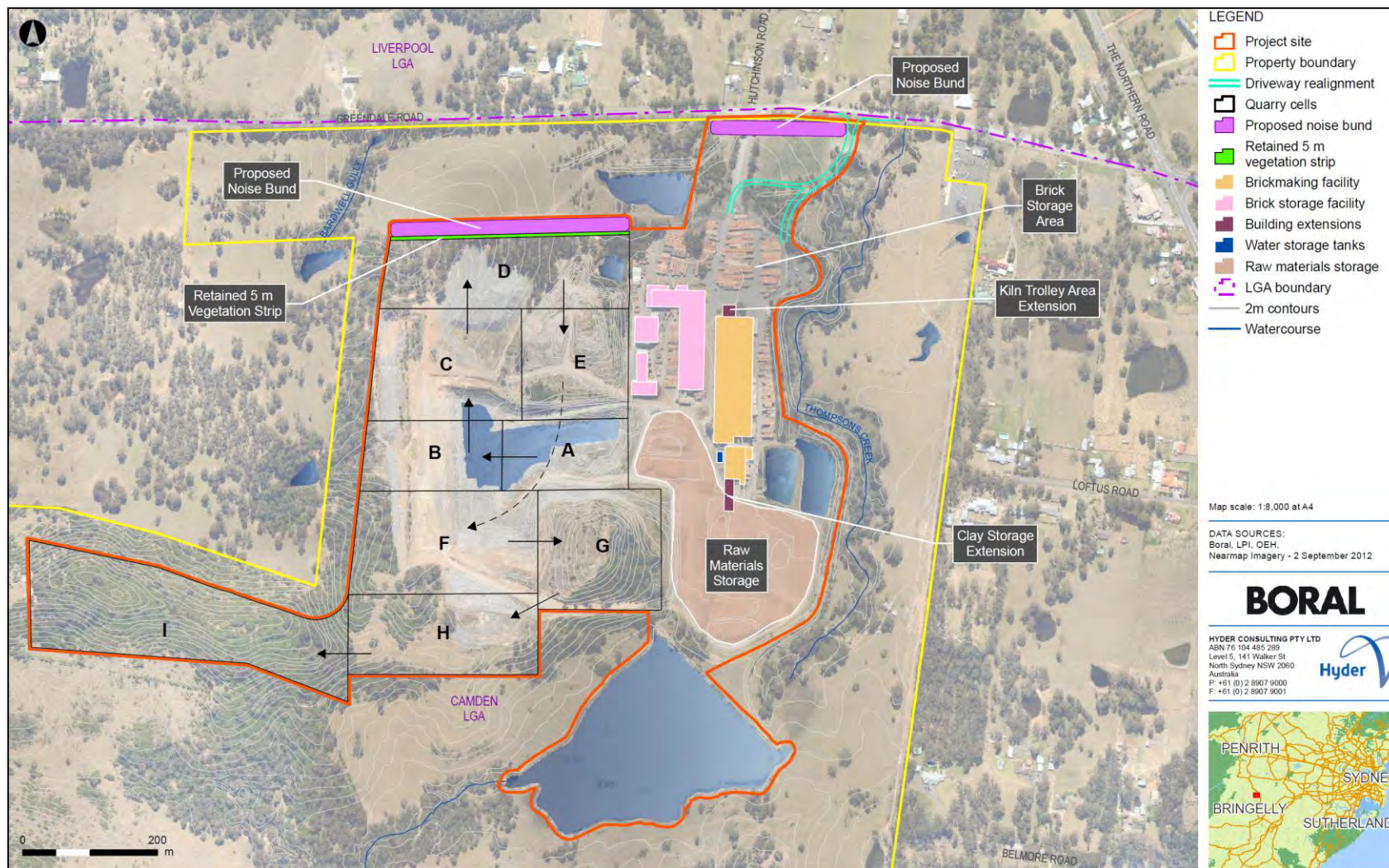
11. Within 6 months of **commencing development under this consent**, the Applicant **must**:
 - (a) make copies of the following publicly available on its website:
 - the documents in **condition 2(a) of Schedule 2**;
 - current statutory approvals for the development;
 - approved strategies, plans and programs required under the conditions of this consent;
 - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - a complaints register, which is to be updated monthly;
 - minutes of CCC meetings;
 - the annual reviews of the development (for the last 5 years);
 - any independent environmental audit of the development, and the Applicant's response to the recommendations in any audit;
 - any other matter required by the Secretary; and

(b) keep this information up-to-date,
to the satisfaction of the Secretary.

APPENDIX 1 DEVELOPMENT AREA



APPENDIX 2 DEVELOPMENT LAYOUT



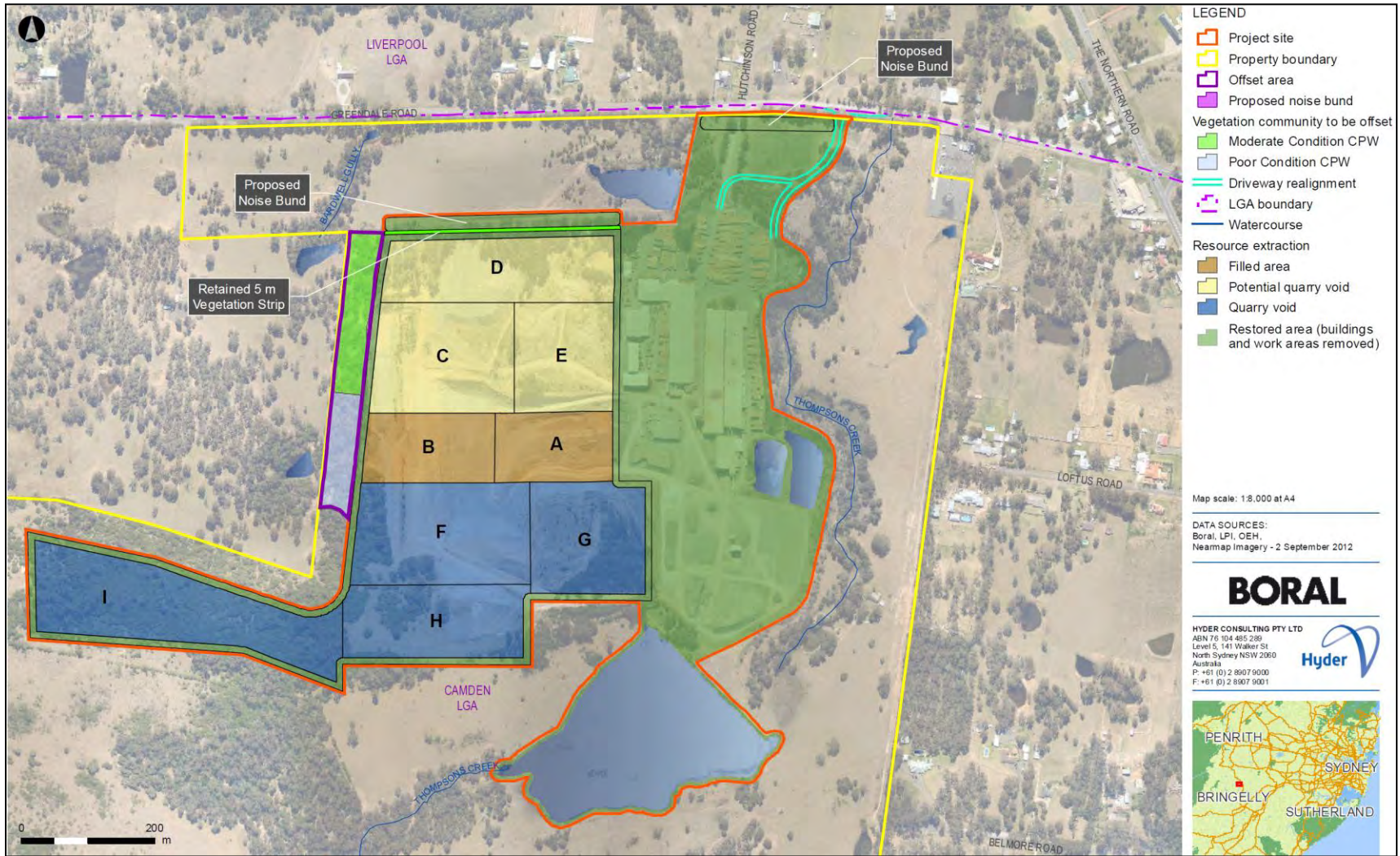
APPENDIX 3 RECEIVER LOCATIONS



Receiver number	Receiver address
1	55 Loftus Road
2	54 Loftus Road
3	20 Greendale Road
4	9 Greendale Road
5	5 Greendale Road (Bringelly Community Centre)
6	46 Loftus Road
7	36 Loftus Road
8	47 Loftus Road
9	37 Loftus Road
10	27 Loftus Road
11	26 Loftus Road
12	15 Loftus Road
13	5 Loftus Road
14	23 Greendale Road
15	27 Greendale Road
16	29 Greendale Road
17	25 Greendale Road
18	31 Greendale Road
19	35 Greendale Road
20	170 Tyson Road
21	196 Greendale Road
22	46 Belmore Road
23	55 Belmore Road
24	63 Belmore Road
25	67 Belmore Road
26	73 Belmore Road
27	83-85 Belmore Road
28	76 Belmore Road
29	86 Belmore Road
30	87 Belmore Road
31	93 Belmore Road
32	95-97 Belmore Road
33	107 Belmore Road
34	96 Belmore Road
35	108 Belmore Road
36	1037 Northern Road
37	10 Greendale Road
38	Bringelly Public School

APPENDIX 4

CONCEPTUAL FINAL LANDFORM AND BIODIVERSITY OFFSET STRATEGY



APPENDIX 5 NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 2 of the conditions are to apply under all meteorological conditions except the following:
 - (a) wind speeds greater than 3 m/s at 10 m above ground level; or
 - (b) temperature inversion conditions between 1.5 °C and 3°C/100 m and wind speeds greater than 2 m/s at 10 m above ground level; or
 - (c) temperature inversion conditions greater than 3°C/100 m.

Determination of Meteorological Conditions

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions **must** be that recorded by the meteorological station on or in the vicinity of the site.

Compliance Monitoring

3. Unless directed otherwise by the Secretary, quarterly attended monitoring is to be used to evaluate compliance with the relevant conditions of consent.

Note: The Secretary may direct that the frequency of attended monitoring increase or decrease at any time during the life of the development.

4. Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
 - (a) monitoring locations for the collection of representative noise data;
 - (b) meteorological conditions during which collection of noise data is not appropriate;
 - (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
 - (d) modifications to noise data collected including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.

Muller Acoustic Consulting Pty Ltd

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Noise Monitoring Assessment

PGH Bringelly Brickworks
Bringelly, NSW
Quarter Ending November 2023



Document Information

Noise Monitoring Assessment

PGH Bringelly Brickworks

Bringelly, NSW

Quarter Ending November 2023

Prepared for: PGH Bricks & Pavers Pty Ltd

60 Greendale Road

Bringelly NSW 2256

Prepared by: Muller Acoustic Consulting Pty Ltd

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Document ID	Date	Prepared By	Signed	Reviewed By	Signed
MAC190946-02RP12	24 November 2023	Nicholas Shipman		Oliver Muller	

DISCLAIMER

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1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by PGH Bricks & Pavers Pty Ltd (PGH) to complete a Noise Monitoring Assessment (NMA) for the PGH Bringelly Brickworks (the site) at 60 Greendale Road, Bringelly, NSW.

This assessment has been undertaken for the quarterly period ending November 2023, and forms part of the annual noise monitoring program to address conditions outlined in the Development Consent and Environmental Protection Licence (EPL).

The NMA has quantified potential operational and sleep disturbance noise emissions from the operation and has been conducted in accordance with the following documents:

- NSW Environment Protection Authority (EPA), Noise Policy for Industry (NPI), 2017;
- NSW Environment Protection Authority (EPA's), Approved Methods for the measurement and analysis of environmental noise in NSW, 2022;
- Environment Protection Licence EPL 1808 (EPL);
- Bringelly Brickworks Noise Management Plan (NMP ref BRK-BRI-NMP Version 4 dated 12.02.19), 2019;
- Bringelly Brickworks Development Consent, 2015 (SSD_5684); and
- Standards Australia AS 1055:2018 - Acoustics - Description and measurement of environmental noise.

A glossary of terms, definitions and abbreviations used in this report is provided in **Appendix A**.

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2 Noise Criteria

Section L4 of the projects EPL (EPL #1808) outlines the applicable operational noise criteria for all privately owned receivers surrounding the project. The criteria outlined in the EPL is reproduced below in **Table 1** along with relevant noise conditions.

L4.1 Noise from the mobile plant must not exceed an LA10 (15 minute) noise emission criterion of 35 dB(A) at all times except as expressly provided by this licence.

L4.2 Noise from the premises must not exceed an LA10 (15 minute) noise emission criterion of 35dB(A) at all times except as expressly provided by this licence.

L4.3 Noise from the premises is to be measured or computed at any point within 30 meters of the most affected residence to determine compliance with condition L4.1 and L4.2. 5dB(A) must be added if the noise is tonal or impulsive in character.

Table 1 EPL Noise Criteria¹

Receiver	Activity	All Operating Periods dB LA10(15min)
All receiver locations	Mobile Plant	35
	Total noise from premises	

Note 1: Noise criteria adopted from the EPL (EPL #1808).

The Bringelly Brickworks NMP outlines the applicable noise criteria for representative residential receivers surrounding the site and are presented in **Table 2**. The site includes the operation of a quarry and brickmaking plant, and as the quarry operates during the daytime, there are separate criteria relating to each period.

Table 2 Development Consent Noise Criteria¹

Activity	Receiver	Day/Evening/Shoulder ^{2,3}	Night ²	
		dB LAeq(15min)	dB LAeq(15min)	dB LA1(max) ³
Brickmaking and quarrying	R1, R2	47	N/A	
	R3, R4, R14	46		
	R15, R17	45		
	All other receivers	44		
Brickmaking	All Receivers	44	43	53

Note 1: Noise criteria adopted from the Development Consent.

Note 2: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 3: Periods and parameters as expressed in the Development Consent.

Figure 1 presents the identified receiver locations and representative measurement locations.

Section 4 of the Bringelly Brickworks Development Consent, 2015 (SSD_5684, see **Appendix B**) outlines requirements for Noise Bunds adjacent to the northern boundary of the extraction area and adjacent to Greendale Road. It is noted that the proposed new access road and associated noise bund adjacent to Greendale Road are not in place at the time of the monitoring. Further details on review of noise mitigation measures for the site are contained in a historic report (Reference: Muller Acoustic Consulting Pty Ltd, MAC190946LR1, 27 September 2019).



FIGURE 1
SITE LAYOUT
MAC190946-02
PGH Bringelly Brickworks

KEY

- Monitoring Locations
- Receivers



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3 Methodology

3.1 Locality

PGH Bringelly Brickworks is located at 60 Greendale Road, Bringelly, NSW. Receivers in the locality surrounding the site are primarily rural/residential and for consistency the naming conventions for each receiver have been retained from historic noise assessments. The monitoring locations with respect to PGH are presented in the locality plan shown in **Figure 1**.

3.2 Assessment Methodology

The attended noise measurements were conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, "Acoustics - Description and Measurement of Environmental Noise" and as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022). Measurements were conducted using a Svantek Type 1, 971 noise analyser. All acoustic instrumentation used carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022) and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed $\pm 0.5\text{dBA}$.

Noise measurements were of 15-minutes in duration and where possible, throughout each survey the operator quantified the contribution of each significant noise source. Measurements were conducted at five locations (N1, N3, N14, N20, N35) on Thursday 2 November 2023 during the day, evening, and night periods to satisfy the requirements of the NMP.

Extraneous noise sources were excluded from the analysis to determine the $\text{LA}_{\text{eq}}(15\text{min})$ quarry noise contribution for comparison against the relevant criteria. In the event of site attributed noise being above criteria, prevailing meteorological conditions for the monitoring period are analysed in accordance with Fact Sheet D of the NPI to determine the stability category present at the time of each attended measurement.

Where the site is inaudible, the contribution is estimated to be at least 10dBA below the ambient noise level.

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4 Results

4.1 Meteorological Conditions

Weather data for the noise assessment period was sourced from Badgerys Creek AWS Site 67108 as well as operator measured conditions at each EPL nominated receiver location. The data was used to determine prevailing meteorological conditions at the time of the attended measurements. Meteorological data is presented in **Table 3** and generally are below levels where noise limits are applicable, furthermore, wind speed at the microphone height satisfy requirements of Fact Sheet A of the NPI.

Table 3 Prevailing Meteorological Conditions

Date & Time	Badgerys Creek AWS Site 67108 (10m AGL)		Operator Measured Weather Monitoring Location (1.8m AGL)	
	Wind Direction	Wind (m/s)	Wind Direction	Wind (m/s)
02/11/2023 15:20	ENE	5.1	N	1.2
02/11/2023 15:40	ESE	4.1	N	1.0
02/11/2023 16:00	ENE	3.5	N	1.2
02/11/2023 16:20	E	4.1	N	1.8
02/11/2023 16:40	E	5.9	N	1.6
02/11/2023 20:20	ESE	1.6	N	0.1
02/11/2023 20:40	ESE	0.5	N	0.1
02/11/2023 21:00	N	0.5	N	0.1
02/11/2023 21:20	ESE	1.1	N	0.1
02/11/2023 21:40	ESE	1.1	N	0.1
02/11/2023 22:00	ESE	1.6	N	0.1
02/11/2023 22:20	ESE	1.6	N	0.1
02/11/2023 22:40	ESE	1.1	N	0.1
02/11/2023 23:00	ESE	1.1	N	0.1
02/11/2023 23:30	N	0.1	N	0.1

4.2 Assessment Results - Location N1

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N1 for the NMA are presented in **Table 4**.

Table 4 Operator-Attended Noise Survey Results – Location N1

Date	Time (hrs) ¹	Descriptor (dBA re 20 μPa)					Meteorology	Description and SPL,
		L _A max	L _A 1	L _A eq	L _A 90	L _A 10		dBA
02/11/2023	15:35 (Day)	75	67	53	43	51	WD: N	Traffic 40-75
							WS: 1.0m/s	Birds 44-56
							Rain: Nil	Wind in vegetation 40-46
								Aircraft 40-56
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<33
02/11/2023	20:38 (Evening)	47	43	39	37	40	WD: N	Insects 36-40
							WS: 0.1m/s	Aircraft <36
							Rain: Nil	Traffic 36-47
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<27
02/11/2023	23:03 (Night)	50	47	39	36	41	WD: N	Traffic 36-50
							WS: 0.1m/s	Insects 34-38
							Rain: Nil	Birds 38-46
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<26
PGH Site L _A 1(max) Contribution								<26

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.3 Assessment Results - Location N3

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N3 for the NMA are presented in **Table 5**.

Table 5 Operator-Attended Noise Survey Results – Location N3

Date	Time (hrs) ¹	Descriptor (dBA re 20 μPa)					Meteorology	Description and SPL, dBA
		L _A max	L _A 1	L _A eq	L _A 90	L _A 10		
02/11/2023	15:55 (Day)	94	79	69	49	70	WD: N	Birds 45-56
							WS: 1.2m/s	Wind in vegetation 45-52
							Rain: Nil	Traffic 45-94
								Aircraft 45-54
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<35
02/11/2023	20:57 (Evening)	77	72	60	41	64	WD: N	Insects 37-40
							WS: 0.1m/s	Traffic 39-77
							Rain: Nil	Aircraft 38-44
								Offsite alarm 50-54
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<31
02/11/2023	22:43 (Night)	77	69	56	40	54	WD: N	Traffic 34-77
							WS: 0.1m/s	Insects 34-38
							Rain: Nil	Birds 40-48
								Dog bark 36-40
								Aircraft 42-50
PGH Site L _A eq(15min) Contribution								<30
PGH Site L _A 1(max) Contribution								<30

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.4 Assessment Results - Location N14

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N14 for the NMA are presented in **Table 6**.

Table 6 Operator-Attended Noise Survey Results – Location N14

Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)					Meteorology	Description and SPL,
		L _A max	L _A 1	L _A eq	L _A 90	L _A 10		dBA
02/11/2023	16:15 (Day)	89	81	69	50	71	WD: N	Traffic 46-89
							WS: 1.8m/s	Birds 50-56
							Rain: Nil	Aircraft 48-56
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<35
02/11/2023	21:16 (Evening)	92	80	68	40	67	WD: N	Dog bark <36
							WS: 0.1m/s	Traffic 36-92
							Rain: Nil	Insects 36-40
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<30
02/11/2023	22:20 (Night)	85	73	60	39	58	WD: N	Traffic 40-85
							WS: 0.1m/s	Insects 38-44
							Rain: Nil	Birds 38-48
								Dog bark 40-48
PGH Site L _A eq(15min) Contribution								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<29
PGH Site L _A 1(max) Contribution								<29

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.5 Assessment Results - Location N20

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N20 for the NMA are presented in **Table 7**.

Table 7 Operator-Attended Noise Survey Results – Location N20

Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)					Meteorology	Description and SPL, dBA
		LAmax	LA1	LAeq	LA90	LA10		
02/11/2023	16:33 (Day)	93	82	69	44	69	WD: N	Traffic 42-93
							WS: 1.6m/s	Birds 44-56
							Rain: Nil	Wind in vegetation <44
								PGH site inaudible
PGH Site LAeq(15min) Contribution								<34
02/11/2023	21:34 (Evening)	93	78	65	38	55	WD: N	Traffic 33-93
							WS: 0.1m/s	Insects 33-36
							Rain: Nil	PGH site inaudible
PGH Site LAeq(15min) Contribution								<28
02/11/2023	22:00 (Night)	91	78	66	38	59	WD: N	Traffic 38-91
							WS: 0.1m/s	Insects 36-40
							Rain: Nil	PGH site inaudible
PGH Site LAeq(15min) Contribution								<28
PGH Site LA1(max) Contribution								<28

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.6 Assessment Results - Location N35

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N35 for the NMA are presented in **Table 8**.

Table 8 Operator-Attended Noise Survey Results – Location N35

Date	Time (hrs) ¹	Descriptor (dBA re 20 µPa)					Meteorology	Description and SPL, dBA								
		L _A max	L _A 1	L _A eq	L _A 90	L _A 10										
02/11/2023	15:13 (Day)	62	55	45	38	47	WD: N WS: 1.2m/s Rain: Nil	Aircraft 40-48								
								Insects 36-40								
								Birds 38-62								
								Traffic 38-44								
								Wind in vegetation 36-46								
								PGH site inaudible								
PGH Site L _A eq(15min) Contribution								<28								
02/11/2023	20:16 (Evening)	60	44	38	34	40	WD: N WS: 0.1m/s Rain: Nil	Traffic 32-46								
								Insects 31-35								
								Aircraft 40-44								
								Birds 36-60								
								PGH site inaudible								
								PGH Site L _A eq(15min) Contribution								<24
02/11/2023	23:28 (Night)	90	66	65	29	41	WD: N WS: 0.1m/s Rain: Nil	Traffic 26-90								
								Insects 26-30								
								Birds 26-44								
								PGH site inaudible								
								PGH Site L _A eq(15min) Contribution								<20
								PGH Site L _A 1(max) Contribution								<20

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

5 Discussion

5.1 Assessment Results - Location N1

Monitoring on Thursday 2 November 2023 identified that PGH activities remained inaudible during the measurement period at location N1. Therefore, the estimated site contributions were measured below the relevant noise limits for each assessed period. Extraneous sources such as traffic, birds, wind in vegetation, aircraft and insects were audible during the measurement period.

5.2 Assessment Results - Location N3

Monitoring on Thursday 2 November 2023 identified that PGH activities remained inaudible during the measurement period at location N3. Therefore, the estimated site contributions were measured below the relevant noise limits for each assessed period. Extraneous sources such as birds, wind in vegetation, traffic, aircraft, insects, offsite alarm and dogs barking were audible during the measurement period.

5.3 Assessment Results - Location N14

Monitoring on Thursday 2 November 2023 identified that PGH activities remained inaudible during the measurement period at location N14. Therefore, the estimated site contributions were measured below the relevant noise limit for each assessed period. Extraneous sources such as traffic, birds, aircraft, dogs barking, and insects were audible during the measurement period.

5.4 Assessment Results - Location N20

Monitoring on Thursday 2 November 2023 identified that PGH activities remained inaudible during the measurement period at location N20. Therefore, the estimated site contributions were measured below the relevant noise limit for each assessed period. Extraneous sources such as traffic, birds, wind in vegetation and insects were audible during the measurement period.

5.5 Assessment Results - Location N35

Monitoring on Thursday 2 November 2023 identified that PGH activities remained inaudible during the measurement period at location N35. Therefore, the estimated site contributions were measured below the relevant noise limit for each assessed period. Extraneous sources such as aircraft, insects, birds, traffic, and wind in vegetation were audible during the measurement period.

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6 Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise Monitoring Assessment (NMA) commissioned by PGH Bricks & Pavers Pty Ltd (PGH) for the PGH Bringelly Brickworks (the site) at 60 Greendale Road, Bringelly, NSW. The assessment was completed to assess the site's compliance with the relevant noise criteria during the quarter period ending November 2023.

Attended noise monitoring was undertaken on Thursday 2 November 2023 at five representative receiver locations. The assessment has identified that noise emissions generated by Bringelly Brickworks remained below the relevant noise criteria throughout the survey period, satisfying the relevant consent conditions.

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Appendix A – Glossary of Terms

A number of technical terms have been used in this report and are explained in **Table A1**.

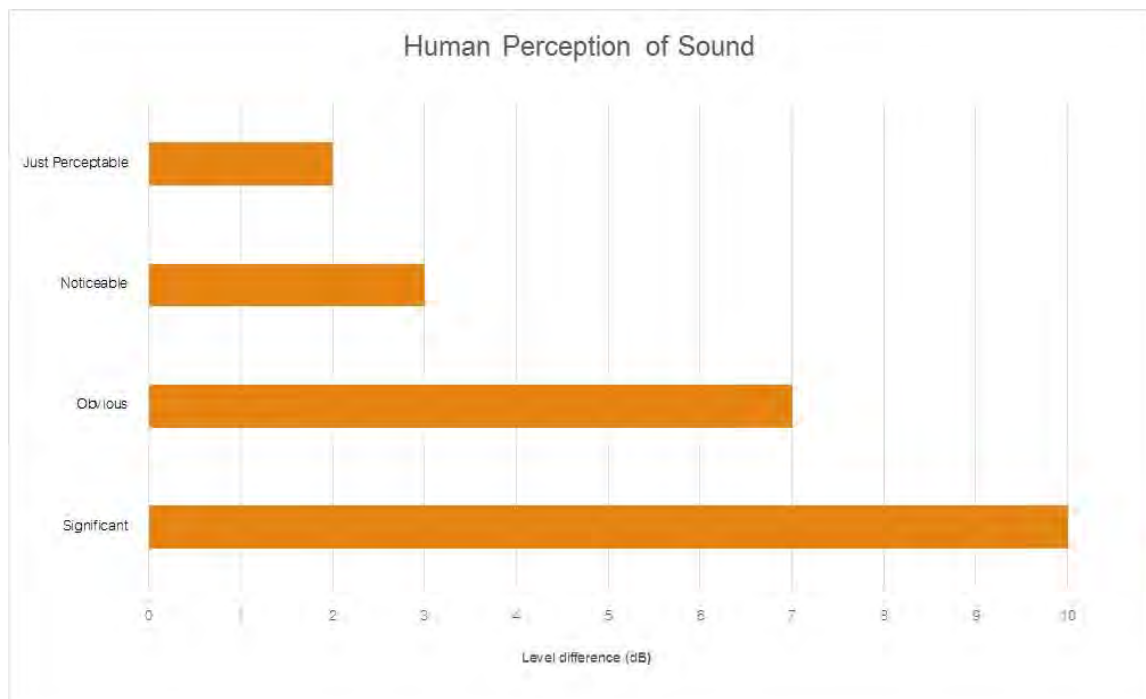
Table A1 Glossary of Acoustical Terms	
Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI as a single figure background level for each assessment period (day, evening and night). It is the tenth percentile of the measured L90 statistical noise levels.
Ambient Noise	The total noise associated with a given environment. Typically, a composite of sounds from all sources located both near and far where no particular sound is dominant.
A Weighting	A standard weighting of the audible frequencies designed to reflect the response of the human ear to sound.
Background Noise	The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is usually represented by the LA90 descriptor
dBA	Noise is measured in units called decibels (dB). There are several scales for describing noise, the most common being the 'A-weighted' scale. This attempts to closely approximate the frequency response of the human ear.
dB(Z), dB(L)	Decibels Z-weighted or decibels Linear (unweighted).
Extraneous Noise	Sound resulting from activities that are not typical of the area.
Hertz (Hz)	The measure of frequency of sound wave oscillations per second - 1 oscillation per second equals 1 hertz.
LA10	A sound level which is exceeded 10% of the time.
LA90	Commonly referred to as the background noise, this is the level exceeded 90% of the time.
LAeq	Represents the average noise energy or equivalent sound pressure level over a given period.
LAmx	The maximum sound pressure level received at the microphone during a measuring interval.
Masking	The phenomenon of one sound interfering with the perception of another sound. For example, the interference of traffic noise with use of a public telephone on a busy street.
RBL	The Rating Background Level (RBL) as defined in the NPI, is an overall single figure representing the background level for each assessment period over the whole monitoring period. The RBL, as defined is the median of ABL values over the whole monitoring period.
Sound power level (Lw or SWL)	This is a measure of the total power radiated by a source in the form of sound and is given by $10 \cdot \log_{10} (W/W_0)$. Where W is the sound power in watts to the reference level of 10^{-12} watts.
Sound pressure level (Lp or SPL)	the level of sound pressure; as measured at a distance by a standard sound level meter. This differs from Lw in that it is the sound level at a receiver position as opposed to the sound 'intensity' of the source.

Table A2 provides a list of common noise sources and their typical sound level.

Table A2 Common Noise Sources and Their Typical Sound Pressure Levels (SPL), dBA

Source	Typical Sound Pressure Level
Threshold of pain	140
Jet engine	130
Hydraulic hammer	120
Chainsaw	110
Industrial workshop	100
Lawn-mower (operator position)	90
Heavy traffic (footpath)	80
Elevated speech	70
Typical conversation	60
Ambient suburban environment	40
Ambient rural environment	30
Bedroom (night with windows closed)	20
Threshold of hearing	0

Figure A1 – Human Perception of Sound



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Appendix B – Development Consent

Development Consent

Section 89E of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, I approve the development application referred to in schedule 1, subject to the conditions in schedules 2 to 5.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.

David Kitto
Executive Director
Resource Assessments and Business Systems

Sydney

2015

SCHEDULE 1

Application Number:

SSD_5684

Applicant:

Boral Bricks Pty Ltd

Consent Authority:

Minister for Planning

Land:

[Lot 100 in DP 1203966](#)

Development:

Bringelly Brickworks Extension Project

Modification 1 (October 2016 shown in [blue](#) text)

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DEFINITIONS

AHD	Australian Height Datum
Annual Review	The review required by condition 4 of schedule 5
Applicant	Boral Bricks Pty Ltd, or any other person or persons who rely on this consent to carry out the development that is subject to this consent
BCA	Building Code of Australia
Biodiversity offset strategy	The conservation and enhancement strategy described in the EIS, and shown conceptually in Appendix 4
Brick making operations	Includes the receipt, handling, processing, storage and transportation of raw materials on site, brick making on site and transportation of finished bricks on site
CCC	Community Consultative Committee
Conditions of consent	Conditions contained in schedules 1 to 5 inclusive
Construction	The demolition of buildings or works, carrying out of works and erection of buildings covered by this consent
CPI	Australian Bureau of Statistics Consumer Price Index
Date of commencement	The date notified to the Department by the Applicant under condition 8 of Schedule 2
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Development	The development described in the documents of condition 2(a) of Schedule 2
Development area	All land to which the development application applies, as listed under "Land" in schedule 1 and shown in Appendix 1
DPI Water	Department of Primary Industries - Water
DRE	Division of Resources and Energy, within the NSW Department of Industry
EEC	Endangered Ecological Community, as defined under the <i>Threatened Species Conservation Act 1995</i>
EIS	Environmental Impact Statement titled <i>Bringelly Brickworks and Quarry Expansion</i> (2 volumes), dated September 2013, as modified by the Response to Submissions titled, <i>Bringelly Brickworks and Quarry Expansion, Response to Submissions</i> dated February 2014 and the letter entitled <i>Bringelly Brickworks – Biodiversity Offsets</i> , dated 2 June 2014
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6pm to 10pm
Extension area	The area outside of the existing quarry footprint (i.e. cells D, E, F, G, H and I, as shown conceptually in Appendix 2)
Feasible	Feasible relates to engineering considerations and what is practical to build
GDE	Groundwater Dependent Ecosystem
GPS	Global Positioning System
Growth Centres SEPP	<i>State Environmental Planning Policy (Sydney Regional Growth Centres) 2006</i>
Ha	Hectare
Incident	A set of circumstances that: - causes or threatens to cause material harm to the environment; and/or - breaches or exceeds the limits or performance measures/criteria in this consent
Land	As defined in the EP&A Act, except for where the term is used in the noise and air quality conditions in schedules 3 and 4 of this consent

	where it is defined to mean the whole of a lot, or contiguous lots, owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
m	Metres
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the development
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NP&W Act	<i>National Parks and Wildlife Act 1974</i>
OEH	NSW Office of Environment and Heritage
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or the Applicant (or its subsidiary)
Quarrying operations	Includes the removal of overburden and extraction, handling, storage and transportation of extractive materials on site
Raw materials	Raw materials imported for use in brick making including clay/shale and additives (such as manganese and iron oxides)
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the development to a good condition, ensuring that it is safe, stable and non-polluting and appropriately revegetated
RMS	Roads and Maritime Services
Secretary	Secretary of the Department, or nominee
SEE (Mod 1)	Statement of Environmental Effects titled ' <i>Section 96(1A) Modification Supporting Information</i> ' dated August 2016 and prepared by Element Environment, including the Response to Submissions document dated September 2016
Site	The land listed under "Land" in schedule 1
Shoulder	The period between 6am to 7am on Monday to Saturday
South West Growth Centre	An area of land identified under the Growth Centres SEPP

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance criteria established under this consent, the Applicant **must** implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.

TERMS OF CONSENT

2. The Applicant **must**:
 - (a) carry out the development generally in accordance with the EIS **and SEE (Mod 1)**; and
 - (b) the conditions of this consent.

Note: The general layout of the development is shown in Appendix 2.

3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.
4. The Applicant **must** comply with any reasonable requirement/s of the Secretary arising the Department's assessment of:
 - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent;
 - (b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; or
 - (c) the implementation of any actions or measures contained in these documents.

LIMITS ON CONSENT

Quarrying and Brick Making Operations

5. The Applicant may carry out quarrying **operations** and brick making operations from the date of commencement of development under this consent until 1 March 2045.

Note: Under this consent, the Applicant is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary. Consequently, this consent will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.

Production Limits

6. The Applicant **must** not:
 - (a) extract more than 200,000 tonnes of clay/shale from the site in any calendar year;
 - (b) produce more than 263,500 tonnes of bricks at the site in any calendar year;
 - (c) carry out quarrying operations beyond 46 m AHD; and
 - (d) receive more than **321,000** tonnes of raw materials required for brick making to the site in any calendar year.

Transportation Limits

7. The Applicant **must** not:
 - (a) transport more than 263,500 tonnes of bricks from the site in a calendar year;
 - (b) receive more than 90 trucks to the site per day or more than 18 trucks per hour; and
 - (c) dispatch more than 90 trucks from the site per day or more than 18 trucks per hour.

NOTIFICATION OF COMMENCEMENT

8. **Prior to commencing development under this consent, the Applicant must notify the Department in writing of the date on which it will commence development permitted under this consent.**

SURRENDER OF EXISTING DEVELOPMENT CONSENT

9. Within 4 months of commencing development under this consent, the Applicant must surrender the development consent (DA 91/1194) for existing operations on the site in accordance with Section 104A of the EP&A Act.

Following the commencement of development under this consent, the conditions of this consent (including any notes) shall prevail to the extent of any inconsistency with the conditions of the existing development consent (DA 91/1194).

STRUCTURAL ADEQUACY

10. The Applicant must ensure that any new buildings and structures, and any alterations, or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

DEMOLITION

11. The Applicant must ensure that all demolition work on site is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

PROTECTION OF PUBLIC INFRASTRUCTURE

12. The Applicant must:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
 - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

Note: This condition does not apply to any damage to roads caused as a result of general road usage.

OPERATION OF PLANT AND EQUIPMENT

13. The Applicant must ensure that all plant and equipment used on site or any monitoring equipment used off site for monitoring the performance of the development is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

UPDATING AND STAGING STRATEGIES, PLANS OR PROGRAMS

14. With the approval of the Secretary, the Applicant may submit any strategies, plans or programs required by this consent on a progressive basis.

To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval.

With the agreement of the Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all parties under the applicable condition of this consent.

Notes:

- While any strategy, plan or program may be submitted on a progressive basis, the Applicant must ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.
- If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

15. Until they are replaced by an equivalent strategy, plan or program approved under this consent, the Applicant **must** implement the existing strategies, plans or programs for the site that have been approved under DA 91/1194.

IDENTIFICATION OF APPROVED LIMITS OF EXTRACTION

16. Prior to undertaking quarrying operations in the extension area, the Applicant **must**:
- (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the development area; and
 - (b) submit a survey plan of these boundaries with applicable GPS coordinates to the Secretary.
17. While quarrying operations are being carried out, the Applicant **must** ensure that these boundaries are clearly marked at all times to allow operating staff and inspecting officers to clearly identify the approved limits of extraction.

PRODUCTION DATA

18. The Applicant **must**:
- (a) provide annual quarry production data to DRE using the standard form for that purpose; and
 - (b) include a copy of this data in the Annual Review (see condition 4 of schedule 5).

DEVELOPER CONTRIBUTIONS

19. The Applicant **must** pay Camden Council road maintenance contributions of \$0.0811 for every tonne of material transported to and from the site, indexed to CPI. Each payment must be:
- (a) paid to Council at the end of each calendar year; and
 - (b) based on weighbridge records of all supplementary brick making materials transported to the site and bricks and spoil transported from the site.

Note: If the parties are not able to agree on any aspect of the maintenance contributions, either party may refer the matter to the Secretary for resolution.

SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

HOURS OF OPERATION

- The Applicant **must** comply with the operating hours set out in Table 1.

Table 1: Operating Hours

Activity	Operating Hours
- Quarrying operations - Deliveries - Dispatch of finished bricks	6am to 6pm, Monday to Friday 6am to 1pm, Saturday No activities on Sundays or Public Holidays
Brick making operations (except dispatch of finished bricks)	24 hours a day, 7 days a week
Construction activities	7am to 6pm, Monday to Friday 8am to 1pm, Saturday No construction to be undertaken on Sundays or Public Holidays

NOISE

Noise Criteria

- The Applicant **must** ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence on privately-owned land.

Table 2: Noise criteria dB(A)

Activity	Receiver	Day/Evening/Shoulder	Night	
		<i>L_{Aeq}(15 min)</i>	<i>L_{Aeq}(15 min)</i>	<i>L_{A1}(max)</i>
Brick making and quarrying	R1, R2	47	Not Applicable	
	R3, R4, R14	46		
	R15, R17	45		
	All other receivers	44		
Brick making	All receivers	44	43	53

Notes:

- To locate the receivers referred to in Table 2 refer to Appendix 3.
- After the first review on any EPL granted for this development under Section 78 of the POEO Act, nothing in this consent prevents the EPA from imposing stricter noise limits on the quarrying operations on site under the EPL.

Appendix 5 sets out the metrological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, these criteria do not apply if the Applicant has a written agreement with the relevant landowner/s to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.

Construction Noise

- The Applicant **must** manage noise generated during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road, in accordance with the guidelines specified in Table 2 of the *Interim Construction Noise Guideline*.

Note: Management guidelines are applicable to receivers 3 and 4, shown in Appendix 3.

Noise Bunds

4. The Applicant must ensure that the noise bund adjacent to the northern boundary of the extraction area is constructed prior to the commencement of quarrying operations in the extension area.
- 4A. The Applicant must ensure that the noise bund adjacent to Greendale Road is constructed prior to the commencement of brick making operations.

Operating Conditions

5. The Applicant **must**:
 - (a) implement all reasonable and feasible mitigation measures to minimise construction, operational and road noise of the development;
 - (b) implement periods of respite during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road;
 - (c) regularly assess noise monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the noise criteria in this consent;
 - (d) maintain the effectiveness of noise suppression equipment on plant and equipment on site;
 - (e) minimise the noise impacts of the development during meteorological conditions under which the noise criteria in this consent do not apply (see Appendix 5); and
 - (f) carry out regular noise monitoring to determine whether the development is complying with the relevant conditions of this consent, to the satisfaction of the Secretary.

Noise Management Plan

6. The Applicant **must** prepare a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (a) be prepared in consultation with the EPA;
 - (b) be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (c) describe the reasonable and feasible mitigation measures that would be implemented to ensure:
 - construction noise is minimise;
 - compliance with the relevant noise criteria and operating conditions in this consent;
 - best management practice is being employed; and
 - the noise impacts of the development are minimised during meteorological conditions under which the noise criteria in this consent do not apply;
 - (d) describe the proposed noise management system on site; and
 - (e) include a quarterly (or as otherwise agreed with the Secretary) noise monitoring program that:
 - uses attended monitoring to evaluate the compliance of the development against the noise criteria in this consent;
 - evaluates and reports on the effectiveness of the noise management system and the best practice noise management measures; and
 - defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

AIR QUALITY

Air Quality Criteria

7. The Applicant **must** implement all reasonable and feasible avoidance and mitigation measures so that particulate matter emissions generated by the development do not exceed the criteria in Tables 3 to 6 at any residence on privately-owned land.

Table 3: Long-Term Criteria for Particulate Matter

Pollutant	Averaging period	^a Criterion
Total suspended particulates (TSP)	Annual	^a 90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³

Table 4: Short-Term Criteria for Particulate Matter

Pollutant	Averaging period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³

Table 5: Long-Term Criteria for Deposited Dust

Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Table 6: Long and Short-Term Stack Emissions

Pollutant	Averaging period	^d Criterion
Sulphur Dioxide	10-minute	712 µg/m ³
	1-Hour	570 µg/m ³
	24-Hour	228 µg/m ³
	Annual	60 µg/m ³
Nitrogen Dioxide	1-Hour	246 µg/m ³
	Annual	62 µg/m ³
Hydrogen Chloride	1 hour	0.14 mg/m ³

Notes to Tables 3-6:

- ^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).
- ^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).
- ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.
- ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Secretary in consultation with EPA.

Operating Conditions

8. The Applicant **must**:
 - (a) implement all reasonable and feasible measures to minimise the stack and dust emissions of the development;
 - (b) minimise surface disturbance and maximise progressive rehabilitation;
 - (c) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see note (d) to Tables 3-6 above); and
 - (d) monitor and report on compliance with the relevant air quality conditions in this consent; to the satisfaction of the Secretary.

Air Quality Management Plan

9. The Applicant **must** prepare an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (a) be prepared in consultation with the EPA;
 - (b) be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (c) describe the measures that would be implemented to ensure:
 - compliance with the air quality criteria and operating conditions under this consent;
 - best practice management is being employed; and
 - the air quality impacts of the development are minimised during adverse meteorological conditions;
 - (d) describe the air quality management system; and
 - (e) include an air quality monitoring program that:
 - evaluates and reports on:
 - o the effectiveness of the air quality management system; and
 - o compliance with the air quality criteria and operating conditions; and
 - defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

METEOROLOGICAL MONITORING

10. For the life of the development, the Applicant **must** ensure that there is a suitable meteorological station operating in the vicinity of the site that:
- (a) complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline; and
 - (b) is capable of continuous measurement of stability class, in accordance with the *NSW Industrial Noise Policy*, or as otherwise approved by EPA.

TRANSPORT

Monitoring of Product Transport

11. The Applicant **must** keep accurate records of the:
- (a) **tonnage** of bricks transported from the site (monthly and annually);
 - (b) amount of raw material imported to the site (monthly and annually); and
 - (c) **tonnage of each type of raw materials imported to the site (monthly and annually);** and provide the Secretary with a summary of this information upon request.

Parking

12. The Applicant **must** provide sufficient parking on-site for all development-related traffic, in accordance with Camden Council's parking codes, to the satisfaction of the Secretary.

Operating Conditions

13. The Applicant **must** ensure that:
- (a) all development-related heavy vehicles enter and exit the site in a forward direction;
 - (b) all laden vehicles entering or exiting the site have their loads covered (with the exception of vehicles carrying bricks);
 - (c) all laden vehicles that have accessed the extraction and/or stockpile areas are cleaned of sand and other material that may fall on the road, before leaving the site;
 - (d) all heavy vehicles exiting the site travel east of the site along Greendale Road to The Northern Road and/or Bringelly Road;
 - (e) the dispatch of laden trucks is avoided during the peak drop-off and pick-up times at the Bringelly Public School to the greatest extent practicable, particularly prior to the upgrade of the Greendale Road/Bringelly Road intersection by RMS; and
 - (f) no trucks queue at the entrance to the site before 6am.

Access Road Intersection Construction

14. Within 12 months of commencing development under this consent, unless otherwise agreed with the Secretary, the Applicant must design and construct the new site access road intersection with Greendale Road in accordance with applicable AUSTROADS standards, to the satisfaction of Camden Council. The Applicant must notify the Secretary in writing within 30 days of obtaining Council approval.

Within 7 days of completing construction and the new site access road being operational, the existing site access road must be permanently closed.

Transport Management Plan

15. The Applicant **must** prepare a Transport Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with RMS, Camden Council, Liverpool City Council and Bringelly Public School, and be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (b) describe the measures that would be implemented to ensure compliance with the transport operating conditions under this consent, including specific measures to avoid **the arrival and**

- dispatch of laden trucks from the site during the peak drop-off and pick-up times at the Bringelly Public School;
- (c) include a Code of Conduct for heavy vehicle drivers that addresses:
- travelling speeds;
 - procedures to minimise noise including a regular Truck Noise Auditing Program;
 - procedures to minimise diesel exhaust emissions;
 - instructions to avoid grouping or convoying of trucks;
 - procedures to ensure that drivers adhere to the designated haulage routes and the haulage hours permitted under this consent;
 - instructions to drivers not to overtake each other on the haulage route, as far as practicable, and to maintain appropriate distances between vehicles; and
 - instruction to drivers to be properly safety conscious and to strictly obey all traffic regulations, particularly in relation to school zones along Greendale Road; and
- (d) describe the measures that would be put in place to ensure compliance with the drivers' Code of Conduct and include a program to monitor the effectiveness of the implementation of these measures.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

SOIL AND WATER

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development, including in respect of the extraction and/or interception of groundwater.

Water Supply

16. The Applicant **must** ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of operations under the consent to match its available water supply to the satisfaction of the Secretary.

Water Discharges

17. The Applicant **must** comply with the discharge limits in any EPL or with Section 120 of the POEO Act.

Water Management Plan

18. The Applicant **must** prepare a Water Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared by suitably qualified person/s approved by the Secretary;
 - (b) be prepared in consultation with the EPA and **DPI Water**;
 - (c) be submitted to the Secretary for approval **prior to the commencement of development under this consent**, unless the Secretary agrees otherwise;
 - (d) include a Site Water Balance that:
 - includes details of:
 - o quantity of water required to support operations;
 - o sources and security of water supply;
 - o water use and management on site;
 - o reporting procedures; and
 - o measures to be implemented to minimise potable water use on site;
 - (e) include a Surface Water Management Plan, that includes:
 - baseline data on surface water flows and quality in the watercourses that could be affected by the development;
 - a description of the surface water management system on site, including:
 - o clean water diversions;
 - o erosion and sediment controls;
 - o the dirty water management system; and
 - o water storages (addressing maximum harvestable rights if applicable);
 - performance criteria, including trigger levels for investigating any potentially adverse surface water quality impacts;
 - a program to monitor and report on:
 - o any surface water discharges;

- o the effectiveness of the water management system; and
 - o surface water flows and quality in local watercourses;
 - a plan to respond to any exceedances of the performance criteria.
- (f) a Groundwater Management Plan, which includes:
- baseline data on groundwater levels, yield and quality in surrounding aquifers;
 - groundwater assessment and performance criteria, including trigger levels for investigating potentially adverse groundwater impacts;
 - a program to monitor:
 - o groundwater inflows to the quarry pit; and
 - o impacts of the development on surrounding aquifers;
 - an analysis of the monitoring results to determine long-term water levels within the quarry void; and
 - a plan to respond to any exceedances of the performance criteria.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

BIODIVERSITY

Biodiversity Offset Strategy

19. The Applicant **must** implement the Biodiversity Offset Strategy described in the EIS, as summarised in Table 7 and shown conceptually in Appendix 4, to the satisfaction of the Secretary.

Table 7: Summary of the Biodiversity Offsets

Area	Offset Criteria	Size (Ha)
On-site offset	Existing vegetation to be enhanced to establish an area of native woodland comprising species associated with Cumberland Plain Woodland.	1.93

Security of Offsets

20. Within 2 years of **notifying the Department of commencement of development (see condition 8 of Schedule 2)**, unless otherwise agreed with the Secretary, the Applicant **must** make suitable arrangements to provide appropriate long-term security for the offset area, to the satisfaction of the Secretary.

Note: Mechanisms to provide appropriate long term security to the land within the Biodiversity Offset Strategy include a Biobanking Agreement, Voluntary Conservation Agreement or an alternative mechanism that provides for a similar conservation outcome. Any mechanism must remain in force in perpetuity.

Biodiversity Management Plan

21. The Applicant **must** prepare a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with the OEH and Camden Council;
 - (b) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - (c) describe how the implementation of the biodiversity offset strategy would be integrated with the overall rehabilitation of the site;
 - (d) describe the short, medium, and long term measures that would be implemented to:
 - manage the remnant vegetation and habitat on the site and in the offset area and;
 - implement the biodiversity offset strategy, including detailed performance and completion criteria;
 - (e) include performance and completion criteria for evaluating the performance of the biodiversity offset strategy, and triggering remedial action (if necessary);
 - (f) include a description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for:
 - maximising the salvage of resources within the approved disturbance area - including vegetative, soil and cultural heritage resources – for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area;

- minimising the impacts on fauna on site, including pre-clearance surveys and minimising the potential exposure to tailings;
 - controlling weeds and feral pests;
 - controlling erosion;
 - controlling access; and
 - bushfire management;
- (g) identify the potential risks to the successful implementation of the biodiversity offset strategy, and include a description of the contingency measures that would be implemented to mitigate against these risks; and
- (h) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

Conservation Bond

22. Within 6 months of the approval of the Biodiversity Management Plan, the Applicant **must** lodge a conservation bond with the Department to ensure that the biodiversity offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan.

The sum of the bond **must** be determined by:

- a. calculating the full cost of implementing the biodiversity offset strategy (other than land acquisition costs); and
- b. employing a suitably qualified quantity surveyor to verify the calculated costs,
- c. to the satisfaction of the Secretary.

The calculation of the conservation bond must be submitted to the Department for approval at least 1 month prior to lodgement of the final bond.

If the offset strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the Secretary, the Secretary will release the bond.

If the offset strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Secretary will call in all, or part of, the conservation bond, and arrange for the satisfactory completion of the relevant works.

Notes:

- *Alternative funding arrangements for long term management of the biodiversity offset strategy, such as provision of capital and management funding as agreed by OEH as part of a Biobanking Agreement or transfer to conservation reserve estate (or any other mechanism agreed with OEH) can be used to reduce the liability of the conservation bond.*
- *The sum of the bond may be reviewed in conjunction with any revision to the biodiversity offset strategy or the completion of major milestones within the approved plan.*

REHABILITATION

Rehabilitation Objectives

23. The Applicant **must** rehabilitate the site to the satisfaction of the Secretary. Rehabilitation must:
- a. comply with the objectives in Table 8; and
 - b. be generally consistent with the proposed rehabilitation strategy in the EIS, and the final land form shown conceptually in Appendix 4 (unless modified by the Final Land Use Options Plan, prepared in accordance with condition 25 of this consent).

Table 8: Rehabilitation Objectives

Feature	Objective
Site (as a whole)	• Safe, stable and non-polluting • Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of local native species and habitat

Surface infrastructure	• To be decommissioned and removed (unless the Secretary agrees otherwise)
Final void	• Minimise the size, depth and slope of the batters of the final void • Minimise the drainage catchment of the final void
Quarry pit floor	• Landscaped and revegetated using native flora species, above the anticipated final void water level
Community	• Ensure public safety

Progressive Rehabilitation

24. The Applicant **must** rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.

Final Land Use Options Plan

25. The Applicant **must** prepare a Final Land Use Options Plan for the site to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with DRE and Camden Council;
 - be submitted to the Secretary for approval within 2 years of the date of [notifying the Department of commencement of development \(see condition 8 of Schedule 2\)](#), unless the Secretary agrees otherwise;
 - provide details of the conceptual final landform and associated final land uses for the site;
 - ensure that the conceptual final land form is compatible with surrounding land uses, and is consistent with the rehabilitation objectives in Table 8 and the objectives of the Growth Centres SEPP for the South West Growth Centre;
 - inform the Rehabilitation Management Plan (prepared in accordance with condition 26 of this consent); and
 - be reviewed every 7 years to account for applicable land use priorities, and if necessary updated.

Rehabilitation Management Plan

26. The Applicant **must** prepare a Rehabilitation Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH, DRE, [DPI Water](#) and Camden Council;
 - be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - provide details of the conceptual final landform and associated land uses for the site (which must be consistent with the Final Land Use Options Plan under condition 25 of this consent);
 - describe the short, medium and long term measures that would be implemented to:
 - manage remnant vegetation and habitat on site; and
 - ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this consent;
 - include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, including triggers for any necessary remedial action;
 - include a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria; and
 - include details of who would be responsible for monitoring, reviewing, and implementing the plan.

[The Applicant must implement the approved management plan as approved from time to time by the Secretary.](#)

Note: The Rehabilitation Management Plan must be reviewed, and if necessary updated, following any update of the Final Land Use Options Plan.

HERITAGE

Heritage Management Plan

27. The Applicant **must** prepare a Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH;
 - (a) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - b. describe the measures that would be implemented to:
 - manage identified heritage objects, previously unidentified heritage objects or the discovery of any human remains on site;
 - ensure ongoing consultation with Aboriginal stakeholders in the conservation and management of any Aboriginal cultural heritage values on site; and
 - protect sites identified adjacent to the development.

The Applicant **must** implement the approved management plan as approved from time to time by the Secretary.

VISUAL

28. The Applicant **must** establish a vegetation screen on both noise bunds, as soon as practicable after construction of the bunds, to minimise visibility of site infrastructure from outside the development area. Following establishment, the Applicant **must** maintain the vegetation screen, to the satisfaction of the Secretary.
29. The Applicant **must**:
- implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development; and
 - b) ensure that all external lighting associated with the development complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*, or its latest version.

BUSHFIRE MANAGEMENT

30. The Applicant **must**:
- ensure that the development is suitably equipped to respond to any fires on site; and
 - b) assist the Rural Fire Service, emergency services and National Parks and Wildlife Service as much as practicable if there is a fire in the surrounding area.

WASTE

31. Prior to importing onto the site any material that may be classified as a waste under the EPA *Waste Classification Guidelines 2009* (or its latest version), the Applicant must obtain a 'resource recovery exemption' under the POEO Act and provide evidence of this exemption to the Department.

Note: This condition does not apply to routine deliveries to the site.

32. The Applicant **must**:
- manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Camden Council; and
 - b) pump all sewage generated and stored on-site to a sewage treatment facility, unless otherwise agreed with the Secretary.
33. The Applicant **must**:
- minimise the waste generated by the development;
 - b) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and
 - c) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. As soon as practicable after obtaining monitoring results showing an exceedance of any relevant criteria in schedule 3, the Applicant **must** notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the development is again complying with the relevant criteria.

INDEPENDENT REVIEW

2. If an owner of privately-owned land considers the development to be exceeding the relevant criteria in schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Applicant **must**:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
 - consult with the landowner to determine his/her concerns;
 - conduct monitoring to determine whether the development is complying with the relevant criteria in schedule 3;
 - if the development is not complying with these criteria then identify the measures that could be implemented to ensure compliance with the relevant criteria; and
- (b) give the Secretary and landowner a copy of the independent review.

SCHEDULE 5
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. If the Secretary requires, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
 - (a) be submitted to the Secretary for approval within 6 months of the Secretary requiring preparation of the strategy by notice to the Applicant;
 - (b) provide the strategic framework for environmental management of the development;
 - (c) identify the statutory approvals that apply to the development;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance;
 - respond to emergencies; and
 - (f) include:
 - copies of any strategies, plans and programs approved under the conditions of this consent; and
 - a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.

The Applicant must implement any Environmental Management Strategy as approved from time to time by the Secretary.

Adaptive Management

2. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity:

- (a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Secretary; to the satisfaction of the Secretary.

Management Plan Requirements

3. The Applicant must ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria; and
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:

- impacts and environmental performance of the development; and
- effectiveness of any management measures (see (c) above);
- (e) a contingency plan to manage any unpredicted impacts and their consequences;
- (f) a program to investigate and implement ways to improve the environmental performance of the development over time;
- (g) a protocol for managing and reporting any:
 - incidents;
 - complaints;
 - non-compliances with statutory requirements; and
 - exceedances of the impact assessment criteria and/or performance criteria; and
- (h) a protocol for periodic review of the plan.

Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

Annual Review

4. By the end of September each year, the Applicant [must submit a report to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary](#). This review must:
 - (a) describe the development (including rehabilitation) that was carried out in the previous [financial](#) year, and the development that is proposed to be carried out over the current [financial](#) year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous [financial](#) year, which includes a comparison of these results against:
 - the relevant statutory requirements, limits or performance measures/criteria;
 - the monitoring results of previous years; and
 - the relevant predictions in the [documents in condition 2\(a\) of Schedule 2](#);
 - (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the development;
 - (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measures will be implemented over the current [financial](#) year to improve the environmental performance of the development.

Revision of Strategies, Plans and Programs

5. [Within 3 months of the submission of an:](#)
 - (a) [Annual Review under condition 4 above;](#)
 - (b) [incident report under condition 7 below;](#)
 - (c) [audit report under condition 9 below; and](#)
 - (d) [any modifications to this consent,](#)
 the Applicant must review the strategies, plans and programs required under this consent, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Secretary.

Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the development.

Community Consultative Committee

6. The Applicant [must](#) establish and operate a Community Consultative Committee (CCC) for the development to the satisfaction of the Secretary. This CCC must be operated in general accordance with the [Guidelines for Establishing and Operating Community Consultative Committees for Mining Developments](#) (Department of Planning, 2007, or its latest version), and be operating [prior to the commencement of development under this consent](#).

Notes:

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.*

- In accordance with the guideline, the Committee should comprise an independent chair and appropriate representation from the Applicant, Camden Council and the local community.

REPORTING

Incident Reporting

7. The Applicant **must** immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Applicant **must** provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Regular Reporting

8. The Applicant **must** provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

INDEPENDENT ENVIRONMENTAL AUDIT

9. Within a year of **commencing development under this consent**, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant **must** commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
 - (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL and/or Water Licence (including any assessment, plan or program required under these approvals);
 - (d) review the adequacy of any approved strategy, plan or program required under these approvals;
 - (e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals; **and be conducted and reported to the satisfaction of the Secretary.**

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.

10. Within **12 weeks of commencing** this audit, unless the Secretary agrees otherwise, the Applicant **must** submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report, including a timetable for the implementation of any measures proposed to address the recommendations in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.

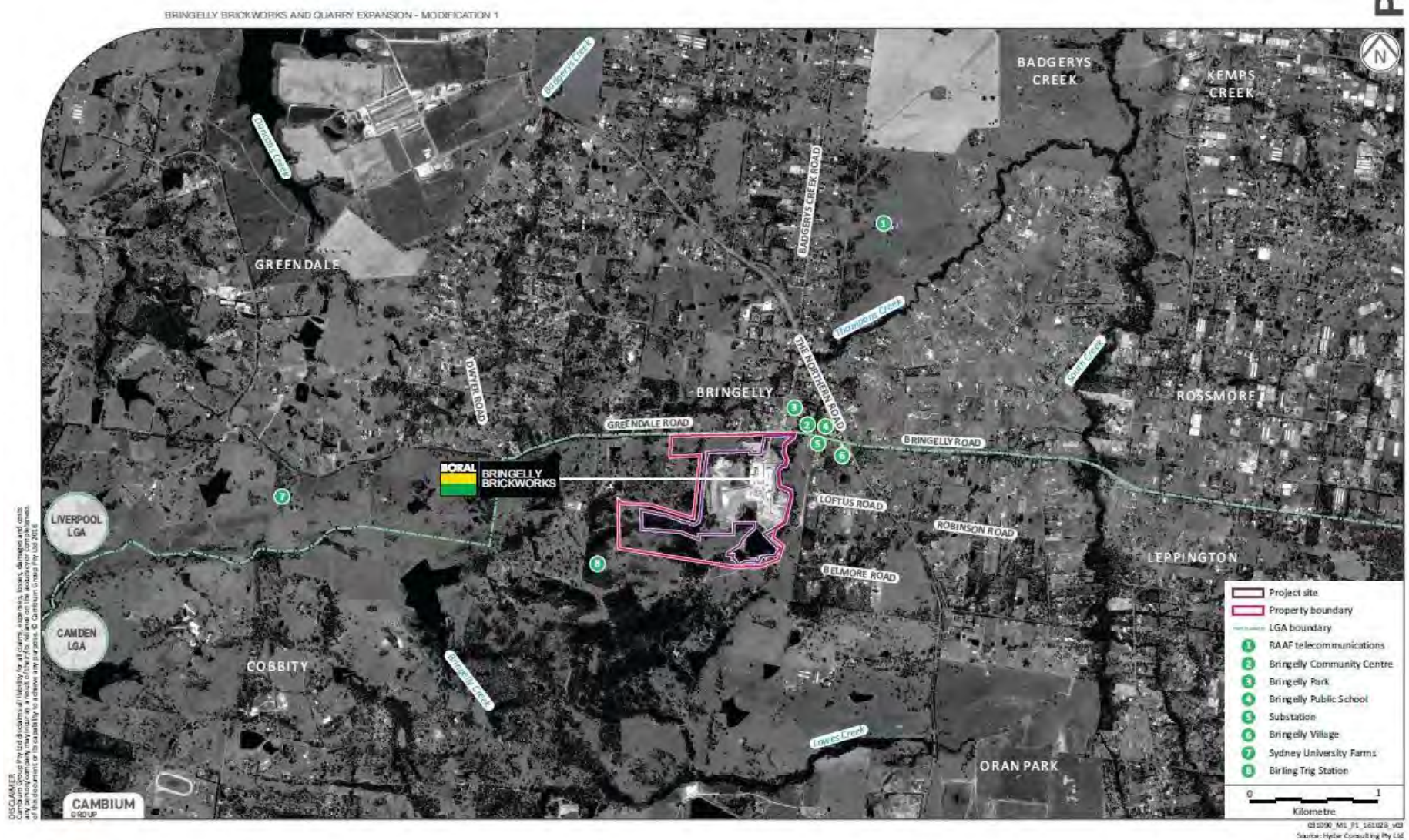
Within 7 days of commencing the audit, the Applicant must notify the Department in writing of the commencement of the audit.

ACCESS TO INFORMATION

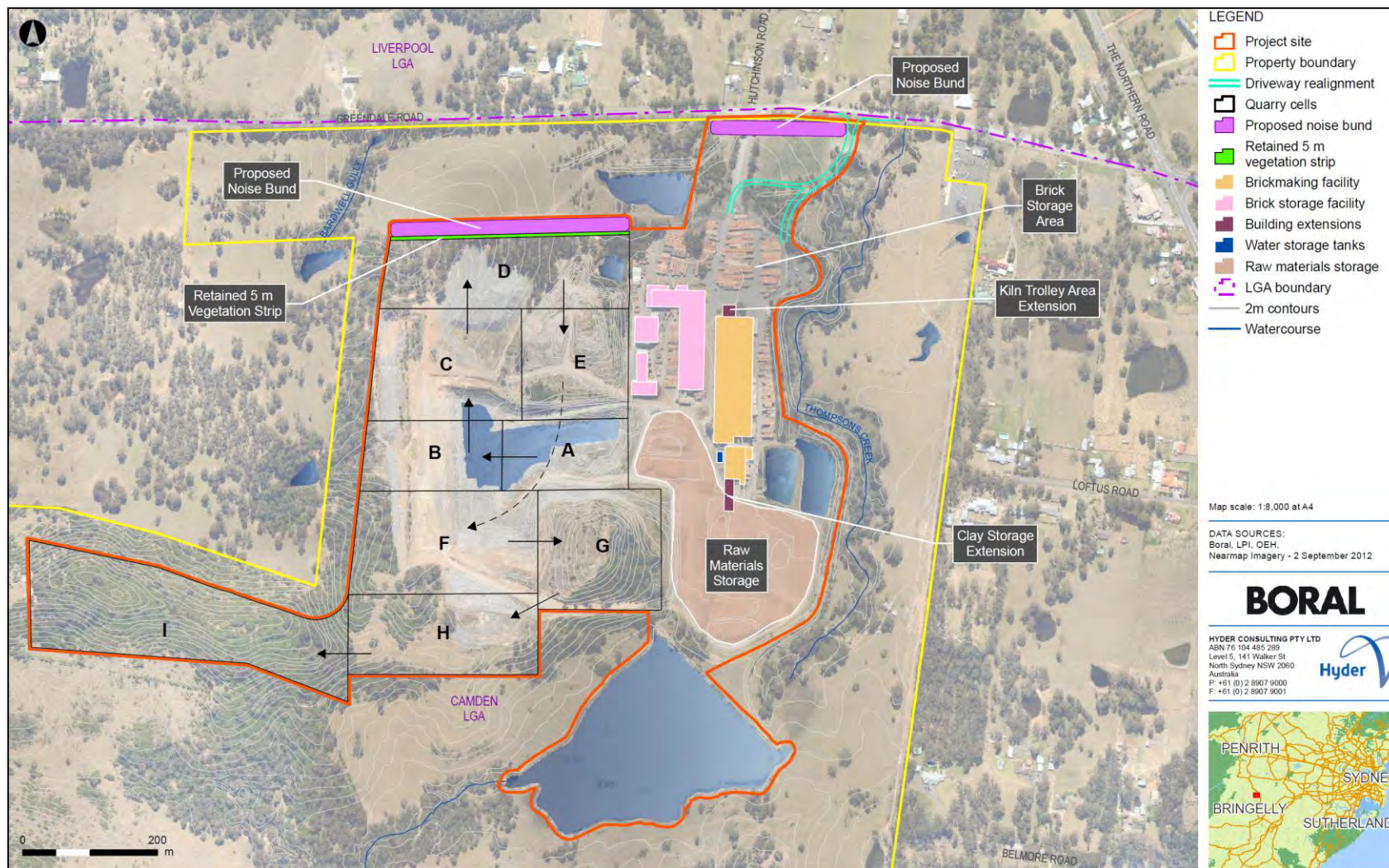
11. Within 6 months of **commencing development under this consent**, the Applicant **must**:
 - (a) make copies of the following publicly available on its website:
 - the documents in **condition 2(a) of Schedule 2**;
 - current statutory approvals for the development;
 - approved strategies, plans and programs required under the conditions of this consent;
 - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - a complaints register, which is to be updated monthly;
 - minutes of CCC meetings;
 - the annual reviews of the development (for the last 5 years);
 - any independent environmental audit of the development, and the Applicant's response to the recommendations in any audit;
 - any other matter required by the Secretary; and

(b) keep this information up-to-date,
to the satisfaction of the Secretary.

APPENDIX 1 DEVELOPMENT AREA



APPENDIX 2 DEVELOPMENT LAYOUT



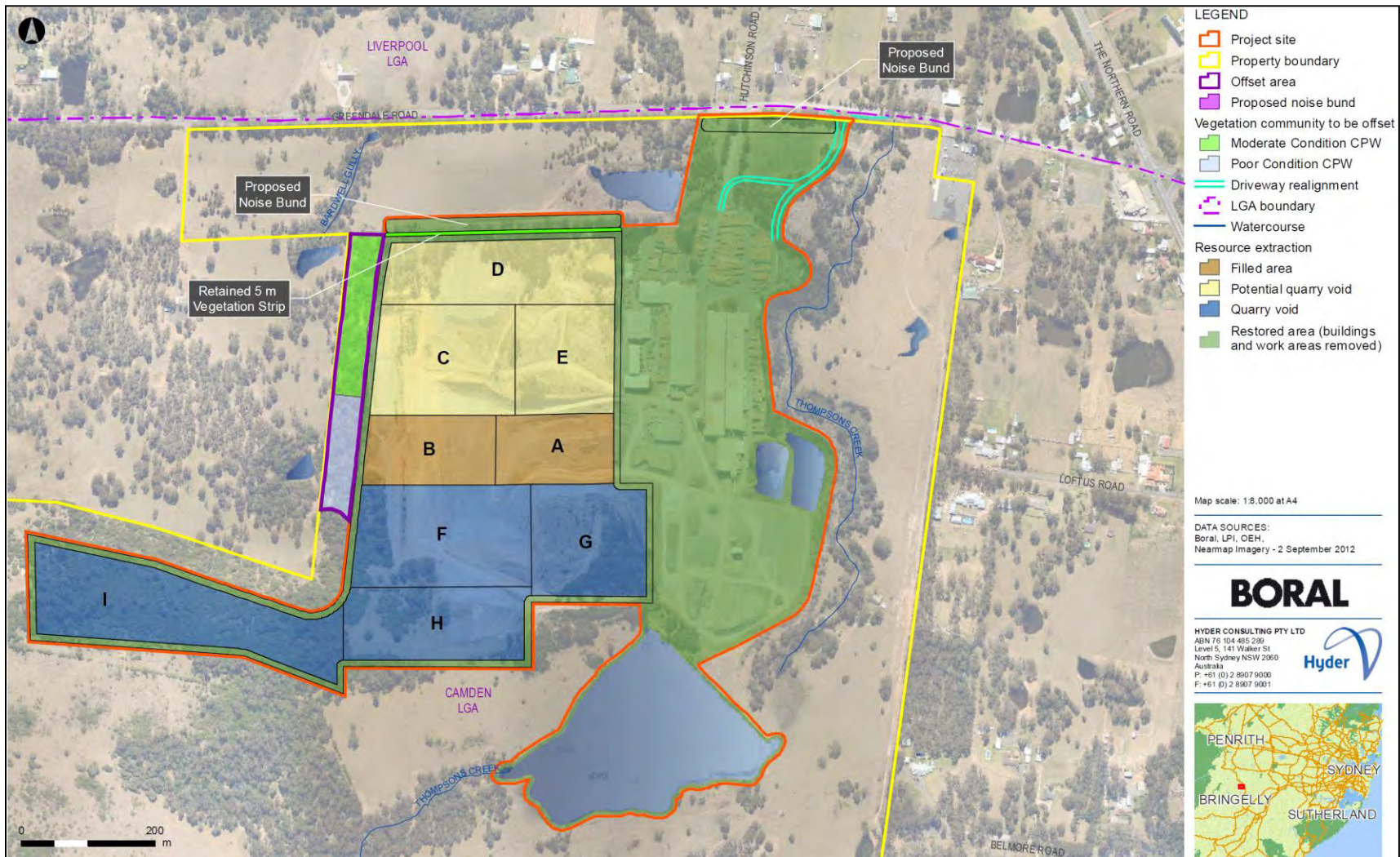
APPENDIX 3 RECEIVER LOCATIONS



Receiver number	Receiver address
1	55 Loftus Road
2	54 Loftus Road
3	20 Greendale Road
4	9 Greendale Road
5	5 Greendale Road (Bringelly Community Centre)
6	46 Loftus Road
7	36 Loftus Road
8	47 Loftus Road
9	37 Loftus Road
10	27 Loftus Road
11	26 Loftus Road
12	15 Loftus Road
13	5 Loftus Road
14	23 Greendale Road
15	27 Greendale Road
16	29 Greendale Road
17	25 Greendale Road
18	31 Greendale Road
19	35 Greendale Road
20	170 Tyson Road
21	196 Greendale Road
22	46 Belmore Road
23	55 Belmore Road
24	63 Belmore Road
25	67 Belmore Road
26	73 Belmore Road
27	83-85 Belmore Road
28	76 Belmore Road
29	86 Belmore Road
30	87 Belmore Road
31	93 Belmore Road
32	95-97 Belmore Road
33	107 Belmore Road
34	96 Belmore Road
35	108 Belmore Road
36	1037 Northern Road
37	10 Greendale Road
38	Bringelly Public School

APPENDIX 4

CONCEPTUAL FINAL LANDFORM AND BIODIVERSITY OFFSET STRATEGY



APPENDIX 5 NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 2 of the conditions are to apply under all meteorological conditions except the following:
 - (a) wind speeds greater than 3 m/s at 10 m above ground level; or
 - (b) temperature inversion conditions between 1.5 °C and 3°C/100 m and wind speeds greater than 2 m/s at 10 m above ground level; or
 - (c) temperature inversion conditions greater than 3°C/100 m.

Determination of Meteorological Conditions

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions **must** be that recorded by the meteorological station on or in the vicinity of the site.

Compliance Monitoring

3. Unless directed otherwise by the Secretary, quarterly attended monitoring is to be used to evaluate compliance with the relevant conditions of consent.

Note: The Secretary may direct that the frequency of attended monitoring increase or decrease at any time during the life of the development.

4. Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
 - (a) monitoring locations for the collection of representative noise data;
 - (b) meteorological conditions during which collection of noise data is not appropriate;
 - (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
 - (d) modifications to noise data collected including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.

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Noise Monitoring Assessment

PGH Bringelly Brickworks

Bringelly, NSW

Quarter Ending February 2024

Document Information

Noise Monitoring Assessment

PGH Bringelly Brickworks

Bringelly, NSW

Quarter Ending February 2024

Prepared for: PGH Bricks & Pavers Pty Ltd

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Document ID	Date	Prepared By	Signed	Reviewed By	Signed
MAC190946-02RP13	31 January 2024	Nicholas Shipman		Oliver Muller	

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APPENDIX A – GLOSSARY OF TERMS

APPENDIX B – DEVELOPMENT CONSENT

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1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by PGH Bricks & Pavers Pty Ltd (PGH) to complete a Noise Monitoring Assessment (NMA) for the PGH Bringelly Brickworks (the site) at 60 Greendale Road, Bringelly, NSW.

This assessment has been undertaken for the quarterly period ending February 2024, and forms part of the annual noise monitoring program to address conditions outlined in the Development Consent and Environmental Protection Licence (EPL).

The NMA has quantified potential operational and sleep disturbance noise emissions from the operation and has been conducted in accordance with the following documents:

- NSW Environment Protection Authority (EPA), Noise Policy for Industry (NPI), 2017;
- NSW Environment Protection Authority (EPA's), Approved Methods for the measurement and analysis of environmental noise in NSW, 2022;
- Environment Protection Licence EPL #1808 (EPL);
- Bringelly Brickworks Noise Management Plan (NMP Reference: BRK-BRI-NMP Version 4, dated 12 December 2019), 2019;
- Bringelly Brickworks Development Consent, 2015 (SSD_5684); and
- Standards Australia AS 1055:2018 - Acoustics - Description and measurement of environmental noise.

A glossary of terms, definitions and abbreviations used in this report is provided in **Appendix A**.

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2 Noise Criteria

Section L4 of the projects EPL (EPL #1808) outlines the applicable operational noise criteria for all privately owned receivers surrounding the project. The criteria outlined in the EPL is reproduced below in **Table 1** along with relevant noise conditions:

L4.1 Noise from the mobile plant must not exceed an LA10 (15 minute) noise emission criterion of 35 dB(A) at all times except as expressly provided by this licence.

L4.2 Noise from the premises must not exceed an LA10 (15 minute) noise emission criterion of 35dB(A) at all times except as expressly provided by this licence.

L4.3 Noise from the premises is to be measured or computed at any point within 30 meters of the most affected residence to determine compliance with condition L4.1 and L4.2. 5dB(A) must be added if the noise is tonal or impulsive in character.

Table 1 EPL Noise Criteria¹

Receiver	Activity	All Operating Periods dB LA10(15min)
All receiver locations	Mobile Plant	35
	Total Noise From Premises	

Note 1: Noise criteria adopted from the EPL (EPL #1808).

The Bringelly Brickworks NMP outlines the applicable noise criteria for representative residential receivers surrounding the site and are presented in **Table 2**. The site includes the operation of a quarry and brickmaking plant, and as the quarry operates during the daytime, there are separate criteria relating to each period.

Table 2 Development Consent Noise Criteria¹

Activity	Receiver	Day/Evening/Shoulder ^{2,3}	Night ²	
		dB LAeq(15min)	dB LAeq(15min)	dB LA1(max) ³
Brickmaking and Quarrying	R1, R2	47	N/A	
	R3, R4, R14	46		
	R15, R17	45		
	All Other Receivers	44		
Brickmaking	All Receivers	44	43	53

Note 1: Noise criteria adopted from the Development Consent.

Note 2: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 3: Periods and parameters as expressed in the Development Consent.

Figure 1 presents the identified receiver locations and representative measurement locations.

Section 4 of the Bringelly Brickworks Development Consent, 2015 (SSD_5684, see **Appendix B**) outlines requirements for Noise Bunds adjacent to the northern boundary of the extraction area and adjacent to Greendale Road. It is noted that the proposed new access road and associated noise bund adjacent to Greendale Road are not in place at the time of the monitoring. Further details on review of noise mitigation measures for the site are contained in a historic report (Reference: Muller Acoustic Consulting Pty Ltd, MAC190946LR1, 27 September 2019).



FIGURE 1
SITE LAYOUT
MAC190946-02
PGH Bringelly Brickworks

KEY

- Monitoring Locations
- Receivers



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3 Methodology

3.1 Locality

PGH Bringelly Brickworks is located at 60 Greendale Road, Bringelly, NSW. Receivers in the locality surrounding the site are primarily rural/residential and for consistency the naming conventions for each receiver have been retained from historic noise assessments. The monitoring locations with respect to PGH are presented in the locality plan shown in **Figure 1**.

3.2 Assessment Methodology

The attended noise measurements were conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, "Acoustics - Description and Measurement of Environmental Noise" and as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022). Measurements were conducted using a Svantek Type 1, 971 noise analyser. All acoustic instrumentation used carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022) and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed $\pm 0.5\text{dBA}$.

Noise measurements were of 15-minutes in duration and where possible, throughout each survey the operator quantified the contribution of each significant noise source. Measurements were conducted at five locations (N1, N3, N14, N20, N35) on Tuesday 16 January 2024 during the day, evening, and night periods to satisfy the requirements of the NMP.

Extraneous noise sources were excluded from the analysis to determine the $\text{LA}_{\text{eq}}(15\text{min})$ quarry noise contribution for comparison against the relevant criteria. In the event of site attributed noise being above criteria, prevailing meteorological conditions for the monitoring period are analysed in accordance with Fact Sheet D of the NPI to determine the stability category present at the time of each attended measurement.

Where the site is inaudible, the contribution is estimated to be at least 10dBA below the ambient noise level.

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4 Results

4.1 Meteorological Conditions

Weather data for the noise assessment period was sourced from Badgerys Creek AWS Site 67108 as well as operator measured conditions at each EPL nominated receiver location. The data was used to determine prevailing meteorological conditions at the time of the attended measurements. Meteorological data is presented in **Table 3** and are generally below levels where noise limits are applicable. Furthermore, wind speed at the microphone height satisfies requirements of Fact Sheet A of the NPI.

Table 3 Prevailing Meteorological Conditions

Date & Time	Badgerys Creek AWS Site 67108 (10m AGL)		Operator Measured Weather Monitoring Location (1.8m AGL)	
	Wind Direction	Wind (m/s)	Wind Direction	Wind (m/s)
16/01/2024 15:16	ENE	2.4	E	1.8
16/01/2024 15:38	NE	1.9	E	0.8
16/01/2024 15:58	ENE	2.4	E	0.6
16/01/2024 16:16	E	1.6	E	0.8
16/01/2024 16:34	ESE	1.9	E	0.6
16/01/2024 20:00	ENE	1.6	E	0.1
16/01/2024 20:23	ENE	0.5	E	0.1
16/01/2024 20:45	N	0.0	E	0.1
16/01/2024 21:03	ENE	0.5	E	0.1
16/01/2024 21:21	ENE	1.6	E	0.1
16/01/2024 22:00	ENE	0.5	E	0.1
16/01/2024 22:21	N	0.0	E	0.1
16/01/2024 22:38	N	0.0	E	0.1
16/01/2024 23:03	ENE	1.1	E	0.1
16/01/2024 23:25	N	0.0	E	0.1

4.2 Assessment Results - Location N1

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N1 for the NMA are presented in **Table 4**.

Table 4 Operator-Attended Noise Survey Results – Location N1

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL,
		L _{Amax}	LA1	LAeq	LA90	LA10		dBA
16/01/2024	15:38 (Day)	74	61	50	40	46	WD: E	Birds 38-46
							WS: 0.8m/s	Insects 38-44
							Rain: Nil	Traffic 38-74
								PGH site inaudible
PGH Site LAeq(15min) Contribution								<35
16/01/2024	20:23 (Evening)	63	51	46	43	47	WD: E	Traffic 41-48
								Insects 41-46
							WS: 0.1m/s	Dog bark 41-44
							Rain: Nil	Aircraft 41-58
								Birds 41-63
								PGH site inaudible
PGH Site LAeq(15min) Contribution								<35
16/01/2024	23:03 (Night)	51	46	42	41	43	WD: E	Insects 40-51
							WS: 0.1m/s	Traffic 40-46
							Rain: Nil	PGH site inaudible
PGH Site LAeq(15min) Contribution								<35
PGH Site LA1(max) Contribution								<45

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.3 Assessment Results - Location N3

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N3 for the NMA are presented in **Table 5**.

Table 5 Operator-Attended Noise Survey Results – Location N3

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL, dBA
		L _{Amax}	L _{A1}	L _{Aeq}	L _{A90}	L _{A10}		
16/01/2024	15:58 (Day)	97	81	71	46	70	WD: E	Insects 44-48
							WS: 0.6m/s	Traffic 44-97
							Rain: Nil	Birds 40-50
								PGH site inaudible
PGH Site L _{Aeq} (15min) Contribution								<35
16/01/2024	20:45 (Evening)	91	73	63	48	59	WD: E	Traffic 47-91
							WS: 0.1m/s	Insects 47-50
							Rain: Nil	Pedestrians 48-54
								PGH site inaudible
PGH Site L _{Aeq} (15min) Contribution								<35
16/01/2024	22:38 (Night)	74	63	52	47	51	WD: E	Traffic 45-74
							WS: 0.1m/s	Insects 45-48
							Rain: Nil	Pedestrians 45-52
								PGH site inaudible
PGH Site L _{Aeq} (15min) Contribution								<35
PGH Site L _{A1} (max) Contribution								<45

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.4 Assessment Results - Location N14

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N14 for the NMA are presented in **Table 6**.

Table 6 Operator-Attended Noise Survey Results – Location N14

Date	Time (hrs) ¹	Descriptor (dBA re 20µPa)					Meteorology	Description and SPL, dBA
		L _A max	LA1	LAeq	LA90	LA10		
16/01/2024	16:16 (Day)	90	79	68	47	70	WD: E	Insects 40-44
							WS: 0.8m/s	Traffic 40-90
							Rain: Nil	Wind in vegetation 40-46
								PGH site inaudible
PGH Site LAeq(15min) Contribution								<35
16/01/2024	21:03 (Evening)	89	78	65	44	63	WD: E	Traffic 43-89
							WS: 0.1m/s	Insects 43-45
							Rain: Nil	PGH site inaudible
PGH Site LAeq(15min) Contribution								<35
16/01/2024	22:21 (Night)	92	77	66	44	64	WD: E	Traffic 42-92
							WS: 0.1m/s	Insects 42-46
							Rain: Nil	PGH site inaudible
PGH Site LAeq(15min) Contribution								<35
PGH Site LA1(max) Contribution								<45

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.5 Assessment Results - Location N20

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N20 for the NMA are presented in **Table 7**.

Table 7 Operator-Attended Noise Survey Results – Location N20

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL,
		L _A max	L _A 1	L _A eq	L _A 90	L _A 10		dBA
16/01/2024	16:34 (Day)	90	83	70	41	71	WD: E	Birds 36-54
							WS: 0.6m/s	Insects 35-38
							Rain: Nil	Traffic 35-90
								Aircraft 36-56
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<35
16/01/2024	21:21 (Evening)	109	83	78	48	61	WD: E	Traffic 47-109
							WS: 0.1m/s	Insects 47-50
							Rain: Nil	PGH site inaudible
							PGH Site L _A eq(15min) Contribution	
16/01/2024	22:00 (Night)	101	85	74	49	70	WD: E	Traffic 46-101
							WS: 0.1m/s	Insects 46-48
							Rain: Nil	PGH site inaudible
							PGH Site L _A eq(15min) Contribution	
PGH Site L _A 1(max) Contribution								<45

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.6 Assessment Results - Location N35

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N35 for the NMA are presented in **Table 8**.

Table 8 Operator-Attended Noise Survey Results – Location N35

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL, dBA								
		L _A max	L _A 1	L _A eq	L _A 90	L _A 10										
16/01/2024	15:16 (Day)	60	55	44	38	47	WD: E WS: 1.8m/s Rain: Nil	Insects <42								
								Birds 42-52								
								Traffic 46-54								
								Wind in vegetation <44								
								Aircraft 44-60								
								Local residential noise 46-52								
								PGH site inaudible								
PGH Site L _A eq(15min) Contribution								<35								
16/01/2024	20:00 (Evening)	67	66	56	36	62	WD: E WS: 0.1m/s Rain: Nil	Birds 34-67								
								Insects 34-46								
								Traffic 34-44								
								PGH site inaudible								
								PGH Site L _A eq(15min) Contribution								<35
								16/01/2024	23:25 (Night)	53	52	49	47	50	WD: E WS: 0.1m/s Rain: Nil	Insects 44-48
																Traffic 44-46
Birds 46-53																
PGH site inaudible																
PGH Site L _A eq(15min) Contribution																<35
PGH Site L _A 1(max) Contribution																<45

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

5 Discussion

5.1 Assessment Results - Location N1

Monitoring on Tuesday 16 January 2024 identified that PGH activities were inaudible during the measurement period at location N1. Therefore, the estimated site contributions were estimated to be below the relevant noise limits for each assessed period. Extraneous sources such as birds, insects, traffic, aircraft and dogs barking were audible during the measurement period.

5.2 Assessment Results - Location N3

Monitoring on Tuesday 16 January 2024 identified that PGH activities were inaudible during the measurement period at location N3. Therefore, the estimated site contributions were estimated to be below the relevant noise limits for each assessed period. Extraneous sources such as insects, traffic, birds and pedestrians were audible during the measurement period.

5.3 Assessment Results - Location N14

Monitoring on Tuesday 16 January 2024 identified that PGH activities were inaudible during the measurement period at location N14. Therefore, the estimated site contributions estimated to be measured below the relevant noise limit for each assessed period. Extraneous sources such as insects, traffic and wind in vegetation were audible during the measurement period.

5.4 Assessment Results - Location N20

Monitoring on Tuesday 16 January 2024 identified that PGH activities were inaudible during the measurement period at location N20. Therefore, the estimated site contributions estimated to be measured below the relevant noise limit for each assessed period. Extraneous sources such as birds, insects, traffic and aircraft were audible during the measurement period.

5.5 Assessment Results - Location N35

Monitoring on Tuesday 16 January 2024 identified that PGH activities were inaudible during the measurement period at location N35. Therefore, the estimated site contributions estimated to be measured below the relevant noise limit for each assessed period. Extraneous sources such as insects, birds, traffic, wind in vegetation, aircraft and local residential noise were audible during the measurement period.

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6 Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise Monitoring Assessment (NMA) commissioned by PGH Bricks & Pavers Pty Ltd (PGH) for the PGH Bringelly Brickworks (the site) at 60 Greendale Road, Bringelly, NSW. The assessment was completed to assess the site's compliance with the relevant noise criteria during the quarter period ending February 2024.

Attended noise monitoring was undertaken on Tuesday 16 January 2024 at five representative receiver locations. The assessment has identified that noise emissions generated by Bringelly Brickworks were measured to be below the relevant noise criteria throughout the survey period, satisfying the relevant consent conditions.

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Appendix A – Glossary of Terms

A number of technical terms have been used in this report and are explained in **Table A1**.

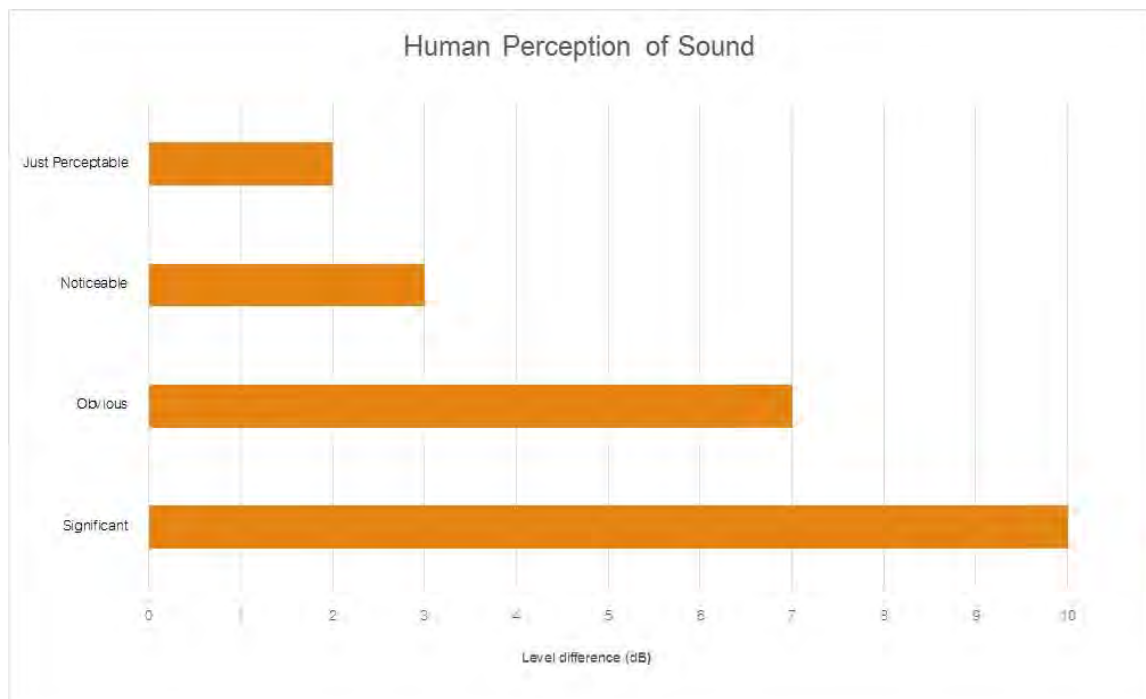
Table A1 Glossary of Acoustical Terms	
Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI as a single figure background level for each assessment period (day, evening and night). It is the tenth percentile of the measured L90 statistical noise levels.
Ambient Noise	The total noise associated with a given environment. Typically, a composite of sounds from all sources located both near and far where no particular sound is dominant.
A Weighting	A standard weighting of the audible frequencies designed to reflect the response of the human ear to sound.
Background Noise	The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is usually represented by the LA90 descriptor
dBA	Noise is measured in units called decibels (dB). There are several scales for describing noise, the most common being the 'A-weighted' scale. This attempts to closely approximate the frequency response of the human ear.
dB(Z), dB(L)	Decibels Z-weighted or decibels Linear (unweighted).
Extraneous Noise	Sound resulting from activities that are not typical of the area.
Hertz (Hz)	The measure of frequency of sound wave oscillations per second - 1 oscillation per second equals 1 hertz.
LA10	A sound level which is exceeded 10% of the time.
LA90	Commonly referred to as the background noise, this is the level exceeded 90% of the time.
LAeq	Represents the average noise energy or equivalent sound pressure level over a given period.
LAmx	The maximum sound pressure level received at the microphone during a measuring interval.
Masking	The phenomenon of one sound interfering with the perception of another sound. For example, the interference of traffic noise with use of a public telephone on a busy street.
RBL	The Rating Background Level (RBL) as defined in the NPI, is an overall single figure representing the background level for each assessment period over the whole monitoring period. The RBL, as defined is the median of ABL values over the whole monitoring period.
Sound power level (Lw or SWL)	This is a measure of the total power radiated by a source in the form of sound and is given by $10 \cdot \log_{10} (W/W_0)$. Where W is the sound power in watts to the reference level of 10^{-12} watts.
Sound pressure level (Lp or SPL)	the level of sound pressure; as measured at a distance by a standard sound level meter. This differs from Lw in that it is the sound level at a receiver position as opposed to the sound 'intensity' of the source.

Table A2 provides a list of common noise sources and their typical sound level.

Table A2 Common Noise Sources and Their Typical Sound Pressure Levels (SPL), dBA

Source	Typical Sound Pressure Level
Threshold of pain	140
Jet engine	130
Hydraulic hammer	120
Chainsaw	110
Industrial workshop	100
Lawn-mower (operator position)	90
Heavy traffic (footpath)	80
Elevated speech	70
Typical conversation	60
Ambient suburban environment	40
Ambient rural environment	30
Bedroom (night with windows closed)	20
Threshold of hearing	0

Figure A1 – Human Perception of Sound



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Appendix B – Development Consent

Development Consent

Section 89E of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, I approve the development application referred to in schedule 1, subject to the conditions in schedules 2 to 5.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.

David Kitto
Executive Director
Resource Assessments and Business Systems

Sydney

2015

SCHEDULE 1

Application Number:

SSD_5684

Applicant:

Boral Bricks Pty Ltd

Consent Authority:

Minister for Planning

Land:

[Lot 100 in DP 1203966](#)

Development:

Bringelly Brickworks Extension Project

Modification 1 (October 2016 shown in [blue](#) text)

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DEFINITIONS

AHD	Australian Height Datum
Annual Review	The review required by condition 4 of schedule 5
Applicant	Boral Bricks Pty Ltd, or any other person or persons who rely on this consent to carry out the development that is subject to this consent
BCA	Building Code of Australia
Biodiversity offset strategy	The conservation and enhancement strategy described in the EIS, and shown conceptually in Appendix 4
Brick making operations	Includes the receipt, handling, processing, storage and transportation of raw materials on site, brick making on site and transportation of finished bricks on site
CCC	Community Consultative Committee
Conditions of consent	Conditions contained in schedules 1 to 5 inclusive
Construction	The demolition of buildings or works, carrying out of works and erection of buildings covered by this consent
CPI	Australian Bureau of Statistics Consumer Price Index
Date of commencement	The date notified to the Department by the Applicant under condition 8 of Schedule 2
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Development	The development described in the documents of condition 2(a) of Schedule 2
Development area	All land to which the development application applies, as listed under "Land" in schedule 1 and shown in Appendix 1
DPI Water	Department of Primary Industries - Water
DRE	Division of Resources and Energy, within the NSW Department of Industry
EEC	Endangered Ecological Community, as defined under the <i>Threatened Species Conservation Act 1995</i>
EIS	Environmental Impact Statement titled <i>Bringelly Brickworks and Quarry Expansion</i> (2 volumes), dated September 2013, as modified by the Response to Submissions titled, <i>Bringelly Brickworks and Quarry Expansion, Response to Submissions</i> dated February 2014 and the letter entitled <i>Bringelly Brickworks – Biodiversity Offsets</i> , dated 2 June 2014
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6pm to 10pm
Extension area	The area outside of the existing quarry footprint (i.e. cells D, E, F, G, H and I, as shown conceptually in Appendix 2)
Feasible	Feasible relates to engineering considerations and what is practical to build
GDE	Groundwater Dependent Ecosystem
GPS	Global Positioning System
Growth Centres SEPP	<i>State Environmental Planning Policy (Sydney Regional Growth Centres) 2006</i>
Ha	Hectare
Incident	A set of circumstances that: - causes or threatens to cause material harm to the environment; and/or - breaches or exceeds the limits or performance measures/criteria in this consent
Land	As defined in the EP&A Act, except for where the term is used in the noise and air quality conditions in schedules 3 and 4 of this consent

	where it is defined to mean the whole of a lot, or contiguous lots, owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
m	Metres
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the development
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NP&W Act	<i>National Parks and Wildlife Act 1974</i>
OEH	NSW Office of Environment and Heritage
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or the Applicant (or its subsidiary)
Quarrying operations	Includes the removal of overburden and extraction, handling, storage and transportation of extractive materials on site
Raw materials	Raw materials imported for use in brick making including clay/shale and additives (such as manganese and iron oxides)
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the development to a good condition, ensuring that it is safe, stable and non-polluting and appropriately revegetated
RMS	Roads and Maritime Services
Secretary	Secretary of the Department, or nominee
SEE (Mod 1)	Statement of Environmental Effects titled ' <i>Section 96(1A) Modification Supporting Information</i> ' dated August 2016 and prepared by Element Environment, including the Response to Submissions document dated September 2016
Site	The land listed under "Land" in schedule 1
Shoulder	The period between 6am to 7am on Monday to Saturday
South West Growth Centre	An area of land identified under the Growth Centres SEPP

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance criteria established under this consent, the Applicant **must** implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.

TERMS OF CONSENT

2. The Applicant **must**:
 - (a) carry out the development generally in accordance with the EIS **and SEE (Mod 1)**; and
 - (b) the conditions of this consent.

Note: The general layout of the development is shown in Appendix 2.

3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.
4. The Applicant **must** comply with any reasonable requirement/s of the Secretary arising the Department's assessment of:
 - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent;
 - (b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; or
 - (c) the implementation of any actions or measures contained in these documents.

LIMITS ON CONSENT

Quarrying and Brick Making Operations

5. The Applicant may carry out quarrying **operations** and brick making operations from the date of commencement of development under this consent until 1 March 2045.

Note: Under this consent, the Applicant is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary. Consequently, this consent will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.

Production Limits

6. The Applicant **must** not:
 - (a) extract more than 200,000 tonnes of clay/shale from the site in any calendar year;
 - (b) produce more than 263,500 tonnes of bricks at the site in any calendar year;
 - (c) carry out quarrying operations beyond 46 m AHD; and
 - (d) receive more than **321,000** tonnes of raw materials required for brick making to the site in any calendar year.

Transportation Limits

7. The Applicant **must** not:
 - (a) transport more than 263,500 tonnes of bricks from the site in a calendar year;
 - (b) receive more than 90 trucks to the site per day or more than 18 trucks per hour; and
 - (c) dispatch more than 90 trucks from the site per day or more than 18 trucks per hour.

NOTIFICATION OF COMMENCEMENT

8. **Prior to commencing development under this consent, the Applicant must notify the Department in writing of the date on which it will commence development permitted under this consent.**

SURRENDER OF EXISTING DEVELOPMENT CONSENT

9. Within 4 months of commencing development under this consent, the Applicant must surrender the development consent (DA 91/1194) for existing operations on the site in accordance with Section 104A of the EP&A Act.

Following the commencement of development under this consent, the conditions of this consent (including any notes) shall prevail to the extent of any inconsistency with the conditions of the existing development consent (DA 91/1194).

STRUCTURAL ADEQUACY

10. The Applicant must ensure that any new buildings and structures, and any alterations, or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

DEMOLITION

11. The Applicant must ensure that all demolition work on site is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

PROTECTION OF PUBLIC INFRASTRUCTURE

12. The Applicant must:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
 - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

Note: This condition does not apply to any damage to roads caused as a result of general road usage.

OPERATION OF PLANT AND EQUIPMENT

13. The Applicant must ensure that all plant and equipment used on site or any monitoring equipment used off site for monitoring the performance of the development is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

UPDATING AND STAGING STRATEGIES, PLANS OR PROGRAMS

14. With the approval of the Secretary, the Applicant may submit any strategies, plans or programs required by this consent on a progressive basis.

To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval.

With the agreement of the Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all parties under the applicable condition of this consent.

Notes:

- While any strategy, plan or program may be submitted on a progressive basis, the Applicant must ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.
- If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

15. Until they are replaced by an equivalent strategy, plan or program approved under this consent, the Applicant **must** implement the existing strategies, plans or programs for the site that have been approved under DA 91/1194.

IDENTIFICATION OF APPROVED LIMITS OF EXTRACTION

16. Prior to undertaking quarrying operations in the extension area, the Applicant **must**:
- (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the development area; and
 - (b) submit a survey plan of these boundaries with applicable GPS coordinates to the Secretary.
17. While quarrying operations are being carried out, the Applicant **must** ensure that these boundaries are clearly marked at all times to allow operating staff and inspecting officers to clearly identify the approved limits of extraction.

PRODUCTION DATA

18. The Applicant **must**:
- (a) provide annual quarry production data to DRE using the standard form for that purpose; and
 - (b) include a copy of this data in the Annual Review (see condition 4 of schedule 5).

DEVELOPER CONTRIBUTIONS

19. The Applicant **must** pay Camden Council road maintenance contributions of \$0.0811 for every tonne of material transported to and from the site, indexed to CPI. Each payment must be:
- (a) paid to Council at the end of each calendar year; and
 - (b) based on weighbridge records of all supplementary brick making materials transported to the site and bricks and spoil transported from the site.

Note: If the parties are not able to agree on any aspect of the maintenance contributions, either party may refer the matter to the Secretary for resolution.

SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

HOURS OF OPERATION

- The Applicant **must** comply with the operating hours set out in Table 1.

Table 1: Operating Hours

Activity	Operating Hours
- Quarrying operations - Deliveries - Dispatch of finished bricks	6am to 6pm, Monday to Friday 6am to 1pm, Saturday No activities on Sundays or Public Holidays
Brick making operations (except dispatch of finished bricks)	24 hours a day, 7 days a week
Construction activities	7am to 6pm, Monday to Friday 8am to 1pm, Saturday No construction to be undertaken on Sundays or Public Holidays

NOISE

Noise Criteria

- The Applicant **must** ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence on privately-owned land.

Table 2: Noise criteria dB(A)

Activity	Receiver	Day/Evening/Shoulder	Night	
		<i>L_{Aeq}(15 min)</i>	<i>L_{Aeq}(15 min)</i>	<i>L_{A1}(max)</i>
Brick making and quarrying	R1, R2	47	Not Applicable	
	R3, R4, R14	46		
	R15, R17	45		
	All other receivers	44		
Brick making	All receivers	44	43	53

Notes:

- To locate the receivers referred to in Table 2 refer to Appendix 3.
- After the first review on any EPL granted for this development under Section 78 of the POEO Act, nothing in this consent prevents the EPA from imposing stricter noise limits on the quarrying operations on site under the EPL.

Appendix 5 sets out the metrological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, these criteria do not apply if the Applicant has a written agreement with the relevant landowner/s to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.

Construction Noise

- The Applicant **must** manage noise generated during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road, in accordance with the guidelines specified in Table 2 of the *Interim Construction Noise Guideline*.

Note: Management guidelines are applicable to receivers 3 and 4, shown in Appendix 3.

Noise Bunds

4. The Applicant must ensure that the noise bund adjacent to the northern boundary of the extraction area is constructed prior to the commencement of quarrying operations in the extension area.
- 4A. The Applicant must ensure that the noise bund adjacent to Greendale Road is constructed prior to the commencement of brick making operations.

Operating Conditions

5. The Applicant **must**:
 - (a) implement all reasonable and feasible mitigation measures to minimise construction, operational and road noise of the development;
 - (b) implement periods of respite during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road;
 - (c) regularly assess noise monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the noise criteria in this consent;
 - (d) maintain the effectiveness of noise suppression equipment on plant and equipment on site;
 - (e) minimise the noise impacts of the development during meteorological conditions under which the noise criteria in this consent do not apply (see Appendix 5); and
 - (f) carry out regular noise monitoring to determine whether the development is complying with the relevant conditions of this consent, to the satisfaction of the Secretary.

Noise Management Plan

6. The Applicant **must** prepare a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (a) be prepared in consultation with the EPA;
 - (b) be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (c) describe the reasonable and feasible mitigation measures that would be implemented to ensure:
 - construction noise is minimise;
 - compliance with the relevant noise criteria and operating conditions in this consent;
 - best management practice is being employed; and
 - the noise impacts of the development are minimised during meteorological conditions under which the noise criteria in this consent do not apply;
 - (d) describe the proposed noise management system on site; and
 - (e) include a quarterly (or as otherwise agreed with the Secretary) noise monitoring program that:
 - uses attended monitoring to evaluate the compliance of the development against the noise criteria in this consent;
 - evaluates and reports on the effectiveness of the noise management system and the best practice noise management measures; and
 - defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

AIR QUALITY

Air Quality Criteria

7. The Applicant **must** implement all reasonable and feasible avoidance and mitigation measures so that particulate matter emissions generated by the development do not exceed the criteria in Tables 3 to 6 at any residence on privately-owned land.

Table 3: Long-Term Criteria for Particulate Matter

Pollutant	Averaging period	^a Criterion
Total suspended particulates (TSP)	Annual	^a 90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³

Table 4: Short-Term Criteria for Particulate Matter

Pollutant	Averaging period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³

Table 5: Long-Term Criteria for Deposited Dust

Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Table 6: Long and Short-Term Stack Emissions

Pollutant	Averaging period	^d Criterion
Sulphur Dioxide	10-minute	712 µg/m ³
	1-Hour	570 µg/m ³
	24-Hour	228 µg/m ³
	Annual	60 µg/m ³
Nitrogen Dioxide	1-Hour	246 µg/m ³
	Annual	62 µg/m ³
Hydrogen Chloride	1 hour	0.14 mg/m ³

Notes to Tables 3-6:

- ^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).
- ^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).
- ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.
- ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Secretary in consultation with EPA.

Operating Conditions

8. The Applicant **must**:
 - (a) implement all reasonable and feasible measures to minimise the stack and dust emissions of the development;
 - (b) minimise surface disturbance and maximise progressive rehabilitation;
 - (c) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see note (d) to Tables 3-6 above); and
 - (d) monitor and report on compliance with the relevant air quality conditions in this consent; to the satisfaction of the Secretary.

Air Quality Management Plan

9. The Applicant **must** prepare an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (a) be prepared in consultation with the EPA;
 - (b) be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (c) describe the measures that would be implemented to ensure:
 - compliance with the air quality criteria and operating conditions under this consent;
 - best practice management is being employed; and
 - the air quality impacts of the development are minimised during adverse meteorological conditions;
 - (d) describe the air quality management system; and
 - (e) include an air quality monitoring program that:
 - evaluates and reports on:
 - o the effectiveness of the air quality management system; and
 - o compliance with the air quality criteria and operating conditions; and
 - defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

METEOROLOGICAL MONITORING

10. For the life of the development, the Applicant **must** ensure that there is a suitable meteorological station operating in the vicinity of the site that:
- (a) complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline; and
 - (b) is capable of continuous measurement of stability class, in accordance with the *NSW Industrial Noise Policy*, or as otherwise approved by EPA.

TRANSPORT

Monitoring of Product Transport

11. The Applicant **must** keep accurate records of the:
- (a) **tonnage** of bricks transported from the site (monthly and annually);
 - (b) amount of raw material imported to the site (monthly and annually); and
 - (c) **tonnage of each type of raw materials imported to the site (monthly and annually);** and provide the Secretary with a summary of this information upon request.

Parking

12. The Applicant **must** provide sufficient parking on-site for all development-related traffic, in accordance with Camden Council's parking codes, to the satisfaction of the Secretary.

Operating Conditions

13. The Applicant **must** ensure that:
- (a) all development-related heavy vehicles enter and exit the site in a forward direction;
 - (b) all laden vehicles entering or exiting the site have their loads covered (with the exception of vehicles carrying bricks);
 - (c) all laden vehicles that have accessed the extraction and/or stockpile areas are cleaned of sand and other material that may fall on the road, before leaving the site;
 - (d) all heavy vehicles exiting the site travel east of the site along Greendale Road to The Northern Road and/or Bringelly Road;
 - (e) the dispatch of laden trucks is avoided during the peak drop-off and pick-up times at the Bringelly Public School to the greatest extent practicable, particularly prior to the upgrade of the Greendale Road/Bringelly Road intersection by RMS; and
 - (f) no trucks queue at the entrance to the site before 6am.

Access Road Intersection Construction

14. Within 12 months of commencing development under this consent, unless otherwise agreed with the Secretary, the Applicant must design and construct the new site access road intersection with Greendale Road in accordance with applicable AUSTROADS standards, to the satisfaction of Camden Council. The Applicant must notify the Secretary in writing within 30 days of obtaining Council approval.

Within 7 days of completing construction and the new site access road being operational, the existing site access road must be permanently closed.

Transport Management Plan

15. The Applicant **must** prepare a Transport Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with RMS, Camden Council, Liverpool City Council and Bringelly Public School, and be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (b) describe the measures that would be implemented to ensure compliance with the transport operating conditions under this consent, including specific measures to avoid **the arrival and**

- dispatch of laden trucks from the site during the peak drop-off and pick-up times at the Bringelly Public School;
- (c) include a Code of Conduct for heavy vehicle drivers that addresses:
- travelling speeds;
 - procedures to minimise noise including a regular Truck Noise Auditing Program;
 - procedures to minimise diesel exhaust emissions;
 - instructions to avoid grouping or convoying of trucks;
 - procedures to ensure that drivers adhere to the designated haulage routes and the haulage hours permitted under this consent;
 - instructions to drivers not to overtake each other on the haulage route, as far as practicable, and to maintain appropriate distances between vehicles; and
 - instruction to drivers to be properly safety conscious and to strictly obey all traffic regulations, particularly in relation to school zones along Greendale Road; and
- (d) describe the measures that would be put in place to ensure compliance with the drivers' Code of Conduct and include a program to monitor the effectiveness of the implementation of these measures.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

SOIL AND WATER

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development, including in respect of the extraction and/or interception of groundwater.

Water Supply

16. The Applicant **must** ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of operations under the consent to match its available water supply to the satisfaction of the Secretary.

Water Discharges

17. The Applicant **must** comply with the discharge limits in any EPL or with Section 120 of the POEO Act.

Water Management Plan

18. The Applicant **must** prepare a Water Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared by suitably qualified person/s approved by the Secretary;
 - (b) be prepared in consultation with the EPA and **DPI Water**;
 - (c) be submitted to the Secretary for approval **prior to the commencement of development under this consent**, unless the Secretary agrees otherwise;
 - (d) include a Site Water Balance that:
 - includes details of:
 - o quantity of water required to support operations;
 - o sources and security of water supply;
 - o water use and management on site;
 - o reporting procedures; and
 - o measures to be implemented to minimise potable water use on site;
 - (e) include a Surface Water Management Plan, that includes:
 - baseline data on surface water flows and quality in the watercourses that could be affected by the development;
 - a description of the surface water management system on site, including:
 - o clean water diversions;
 - o erosion and sediment controls;
 - o the dirty water management system; and
 - o water storages (addressing maximum harvestable rights if applicable);
 - performance criteria, including trigger levels for investigating any potentially adverse surface water quality impacts;
 - a program to monitor and report on:
 - o any surface water discharges;

- o the effectiveness of the water management system; and
 - o surface water flows and quality in local watercourses;
 - a plan to respond to any exceedances of the performance criteria.
- (f) a Groundwater Management Plan, which includes:
- baseline data on groundwater levels, yield and quality in surrounding aquifers;
 - groundwater assessment and performance criteria, including trigger levels for investigating potentially adverse groundwater impacts;
 - a program to monitor:
 - o groundwater inflows to the quarry pit; and
 - o impacts of the development on surrounding aquifers;
 - an analysis of the monitoring results to determine long-term water levels within the quarry void; and
 - a plan to respond to any exceedances of the performance criteria.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

BIODIVERSITY

Biodiversity Offset Strategy

19. The Applicant **must** implement the Biodiversity Offset Strategy described in the EIS, as summarised in Table 7 and shown conceptually in Appendix 4, to the satisfaction of the Secretary.

Table 7: Summary of the Biodiversity Offsets

Area	Offset Criteria	Size (Ha)
On-site offset	Existing vegetation to be enhanced to establish an area of native woodland comprising species associated with Cumberland Plain Woodland.	1.93

Security of Offsets

20. Within 2 years of **notifying the Department of commencement of development (see condition 8 of Schedule 2)**, unless otherwise agreed with the Secretary, the Applicant **must** make suitable arrangements to provide appropriate long-term security for the offset area, to the satisfaction of the Secretary.

Note: Mechanisms to provide appropriate long term security to the land within the Biodiversity Offset Strategy include a Biobanking Agreement, Voluntary Conservation Agreement or an alternative mechanism that provides for a similar conservation outcome. Any mechanism must remain in force in perpetuity.

Biodiversity Management Plan

21. The Applicant **must** prepare a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with the OEH and Camden Council;
 - (b) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - (c) describe how the implementation of the biodiversity offset strategy would be integrated with the overall rehabilitation of the site;
 - (d) describe the short, medium, and long term measures that would be implemented to:
 - manage the remnant vegetation and habitat on the site and in the offset area and;
 - implement the biodiversity offset strategy, including detailed performance and completion criteria;
 - (e) include performance and completion criteria for evaluating the performance of the biodiversity offset strategy, and triggering remedial action (if necessary);
 - (f) include a description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for:
 - maximising the salvage of resources within the approved disturbance area - including vegetative, soil and cultural heritage resources – for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area;

- minimising the impacts on fauna on site, including pre-clearance surveys and minimising the potential exposure to tailings;
 - controlling weeds and feral pests;
 - controlling erosion;
 - controlling access; and
 - bushfire management;
- (g) identify the potential risks to the successful implementation of the biodiversity offset strategy, and include a description of the contingency measures that would be implemented to mitigate against these risks; and
- (h) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

Conservation Bond

22. Within 6 months of the approval of the Biodiversity Management Plan, the Applicant **must** lodge a conservation bond with the Department to ensure that the biodiversity offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan.

The sum of the bond **must** be determined by:

- a. calculating the full cost of implementing the biodiversity offset strategy (other than land acquisition costs); and
- b. employing a suitably qualified quantity surveyor to verify the calculated costs,
- c. to the satisfaction of the Secretary.

The calculation of the conservation bond must be submitted to the Department for approval at least 1 month prior to lodgement of the final bond.

If the offset strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the Secretary, the Secretary will release the bond.

If the offset strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Secretary will call in all, or part of, the conservation bond, and arrange for the satisfactory completion of the relevant works.

Notes:

- *Alternative funding arrangements for long term management of the biodiversity offset strategy, such as provision of capital and management funding as agreed by OEH as part of a Biobanking Agreement or transfer to conservation reserve estate (or any other mechanism agreed with OEH) can be used to reduce the liability of the conservation bond.*
- *The sum of the bond may be reviewed in conjunction with any revision to the biodiversity offset strategy or the completion of major milestones within the approved plan.*

REHABILITATION

Rehabilitation Objectives

23. The Applicant **must** rehabilitate the site to the satisfaction of the Secretary. Rehabilitation must:
- a. comply with the objectives in Table 8; and
 - b. be generally consistent with the proposed rehabilitation strategy in the EIS, and the final land form shown conceptually in Appendix 4 (unless modified by the Final Land Use Options Plan, prepared in accordance with condition 25 of this consent).

Table 8: Rehabilitation Objectives

Feature	Objective
Site (as a whole)	• Safe, stable and non-polluting • Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of local native species and habitat

Surface infrastructure	To be decommissioned and removed (unless the Secretary agrees otherwise)
Final void	- Minimise the size, depth and slope of the batters of the final void - Minimise the drainage catchment of the final void
Quarry pit floor	Landscaped and revegetated using native flora species, above the anticipated final void water level
Community	Ensure public safety

Progressive Rehabilitation

24. The Applicant **must** rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.

Final Land Use Options Plan

25. The Applicant **must** prepare a Final Land Use Options Plan for the site to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with DRE and Camden Council;
 - be submitted to the Secretary for approval within 2 years of the date of [notifying the Department of commencement of development \(see condition 8 of Schedule 2\)](#), unless the Secretary agrees otherwise;
 - provide details of the conceptual final landform and associated final land uses for the site;
 - ensure that the conceptual final land form is compatible with surrounding land uses, and is consistent with the rehabilitation objectives in Table 8 and the objectives of the Growth Centres SEPP for the South West Growth Centre;
 - inform the Rehabilitation Management Plan (prepared in accordance with condition 26 of this consent); and
 - be reviewed every 7 years to account for applicable land use priorities, and if necessary updated.

Rehabilitation Management Plan

26. The Applicant **must** prepare a Rehabilitation Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH, DRE, [DPI Water](#) and Camden Council;
 - be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - provide details of the conceptual final landform and associated land uses for the site (which must be consistent with the Final Land Use Options Plan under condition 25 of this consent);
 - describe the short, medium and long term measures that would be implemented to:
 - manage remnant vegetation and habitat on site; and
 - ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this consent;
 - include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, including triggers for any necessary remedial action;
 - include a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria; and
 - include details of who would be responsible for monitoring, reviewing, and implementing the plan.

[The Applicant must implement the approved management plan as approved from time to time by the Secretary.](#)

Note: The Rehabilitation Management Plan must be reviewed, and if necessary updated, following any update of the Final Land Use Options Plan.

HERITAGE

Heritage Management Plan

27. The Applicant **must** prepare a Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH;
 - (a) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - b. describe the measures that would be implemented to:
 - manage identified heritage objects, previously unidentified heritage objects or the discovery of any human remains on site;
 - ensure ongoing consultation with Aboriginal stakeholders in the conservation and management of any Aboriginal cultural heritage values on site; and
 - protect sites identified adjacent to the development.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

VISUAL

28. The Applicant **must** establish a vegetation screen on both noise bunds, as soon as practicable after construction of the bunds, to minimise visibility of site infrastructure from outside the development area. Following establishment, the Applicant **must** maintain the vegetation screen, to the satisfaction of the Secretary.
29. The Applicant **must**:
- implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development; and
 - b) ensure that all external lighting associated with the development complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*, or its latest version.

BUSHFIRE MANAGEMENT

30. The Applicant **must**:
- ensure that the development is suitably equipped to respond to any fires on site; and
 - b) assist the Rural Fire Service, emergency services and National Parks and Wildlife Service as much as practicable if there is a fire in the surrounding area.

WASTE

31. Prior to importing onto the site any material that may be classified as a waste under the EPA *Waste Classification Guidelines 2009* (or its latest version), the Applicant must obtain a 'resource recovery exemption' under the POEO Act and provide evidence of this exemption to the Department.

Note: This condition does not apply to routine deliveries to the site.

32. The Applicant **must**:
- manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Camden Council; and
 - b) pump all sewage generated and stored on-site to a sewage treatment facility, unless otherwise agreed with the Secretary.
33. The Applicant **must**:
- minimise the waste generated by the development;
 - b) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and
 - c) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. As soon as practicable after obtaining monitoring results showing an exceedance of any relevant criteria in schedule 3, the Applicant **must** notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the development is again complying with the relevant criteria.

INDEPENDENT REVIEW

2. If an owner of privately-owned land considers the development to be exceeding the relevant criteria in schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Applicant **must**:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
 - consult with the landowner to determine his/her concerns;
 - conduct monitoring to determine whether the development is complying with the relevant criteria in schedule 3;
 - if the development is not complying with these criteria then identify the measures that could be implemented to ensure compliance with the relevant criteria; and
- (b) give the Secretary and landowner a copy of the independent review.

SCHEDULE 5
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. If the Secretary requires, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
 - (a) be submitted to the Secretary for approval within 6 months of the Secretary requiring preparation of the strategy by notice to the Applicant;
 - (b) provide the strategic framework for environmental management of the development;
 - (c) identify the statutory approvals that apply to the development;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance;
 - respond to emergencies; and
 - (f) include:
 - copies of any strategies, plans and programs approved under the conditions of this consent; and
 - a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.

The Applicant must implement any Environmental Management Strategy as approved from time to time by the Secretary.

Adaptive Management

2. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity:

- (a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Secretary; to the satisfaction of the Secretary.

Management Plan Requirements

3. The Applicant must ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria; and
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:

- impacts and environmental performance of the development; and
- effectiveness of any management measures (see (c) above);
- (e) a contingency plan to manage any unpredicted impacts and their consequences;
- (f) a program to investigate and implement ways to improve the environmental performance of the development over time;
- (g) a protocol for managing and reporting any:
 - incidents;
 - complaints;
 - non-compliances with statutory requirements; and
 - exceedances of the impact assessment criteria and/or performance criteria; and
- (h) a protocol for periodic review of the plan.

Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

Annual Review

4. By the end of September each year, the Applicant [must submit a report to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary](#). This review must:
 - (a) describe the development (including rehabilitation) that was carried out in the previous [financial](#) year, and the development that is proposed to be carried out over the current [financial](#) year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous [financial](#) year, which includes a comparison of these results against:
 - the relevant statutory requirements, limits or performance measures/criteria;
 - the monitoring results of previous years; and
 - the relevant predictions in the [documents in condition 2\(a\) of Schedule 2](#);
 - (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the development;
 - (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measures will be implemented over the current [financial](#) year to improve the environmental performance of the development.

Revision of Strategies, Plans and Programs

5. [Within 3 months of the submission of an:](#)
 - (a) [Annual Review under condition 4 above;](#)
 - (b) [incident report under condition 7 below;](#)
 - (c) [audit report under condition 9 below; and](#)
 - (d) [any modifications to this consent,](#)
 the Applicant must review the strategies, plans and programs required under this consent, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Secretary.

Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the development.

Community Consultative Committee

6. The Applicant [must](#) establish and operate a Community Consultative Committee (CCC) for the development to the satisfaction of the Secretary. This CCC must be operated in general accordance with the [Guidelines for Establishing and Operating Community Consultative Committees for Mining Developments](#) (Department of Planning, 2007, or its latest version), and be operating [prior to the commencement of development under this consent](#).

Notes:

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.*

- In accordance with the guideline, the Committee should comprise an independent chair and appropriate representation from the Applicant, Camden Council and the local community.

REPORTING

Incident Reporting

7. The Applicant **must** immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Applicant **must** provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Regular Reporting

8. The Applicant **must** provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

INDEPENDENT ENVIRONMENTAL AUDIT

9. Within a year of **commencing development under this consent**, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant **must** commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
 - (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL and/or Water Licence (including any assessment, plan or program required under these approvals);
 - (d) review the adequacy of any approved strategy, plan or program required under these approvals;
 - (e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals; **and be conducted and reported to the satisfaction of the Secretary.**

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.

10. Within **12 weeks of commencing** this audit, unless the Secretary agrees otherwise, the Applicant **must** submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report, including a timetable for the implementation of any measures proposed to address the recommendations in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.

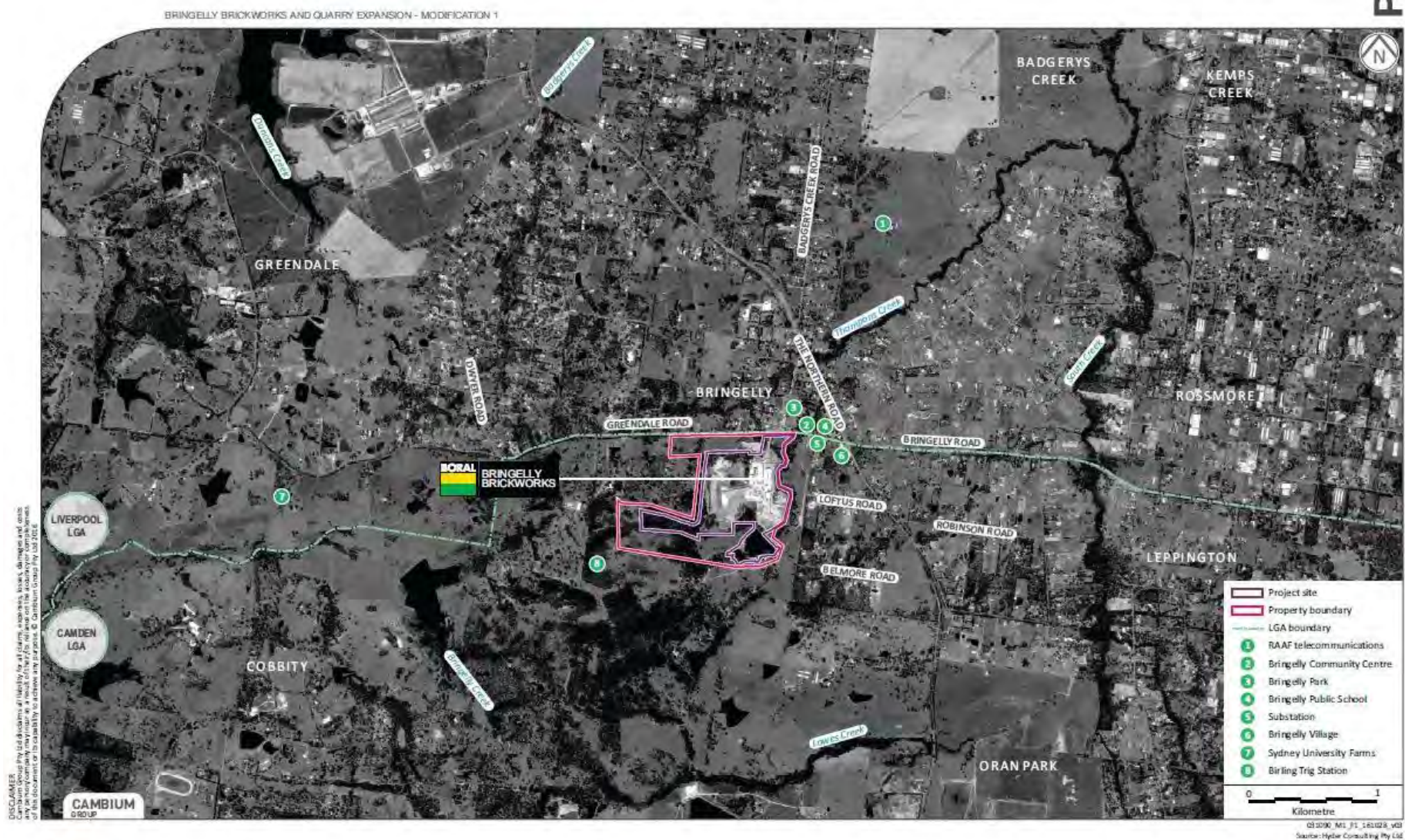
Within 7 days of commencing the audit, the Applicant must notify the Department in writing of the commencement of the audit.

ACCESS TO INFORMATION

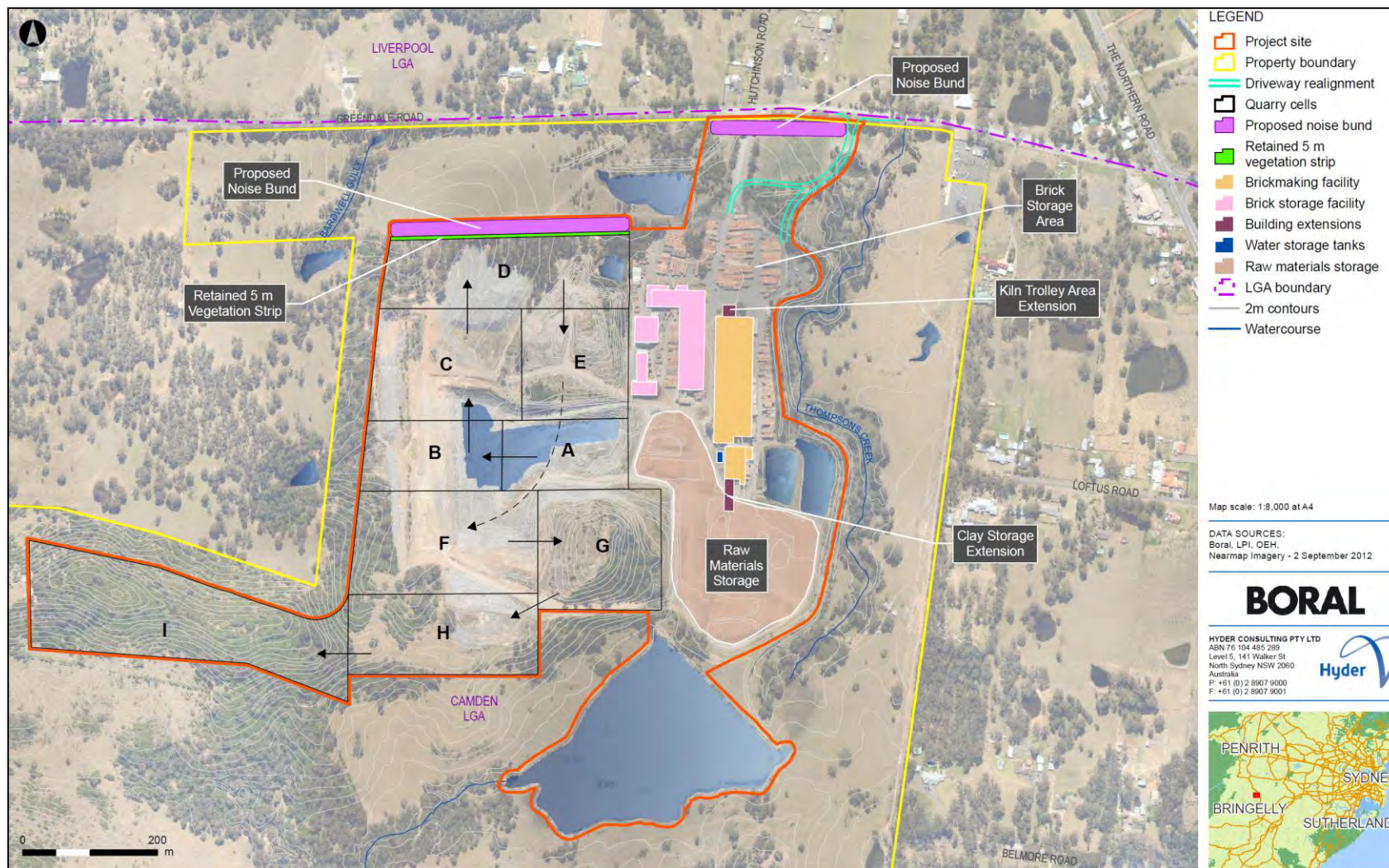
11. Within 6 months of **commencing development under this consent**, the Applicant **must**:
 - (a) make copies of the following publicly available on its website:
 - the documents in **condition 2(a) of Schedule 2**;
 - current statutory approvals for the development;
 - approved strategies, plans and programs required under the conditions of this consent;
 - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - a complaints register, which is to be updated monthly;
 - minutes of CCC meetings;
 - the annual reviews of the development (for the last 5 years);
 - any independent environmental audit of the development, and the Applicant's response to the recommendations in any audit;
 - any other matter required by the Secretary; and

(b) keep this information up-to-date,
to the satisfaction of the Secretary.

APPENDIX 1 DEVELOPMENT AREA



APPENDIX 2 DEVELOPMENT LAYOUT



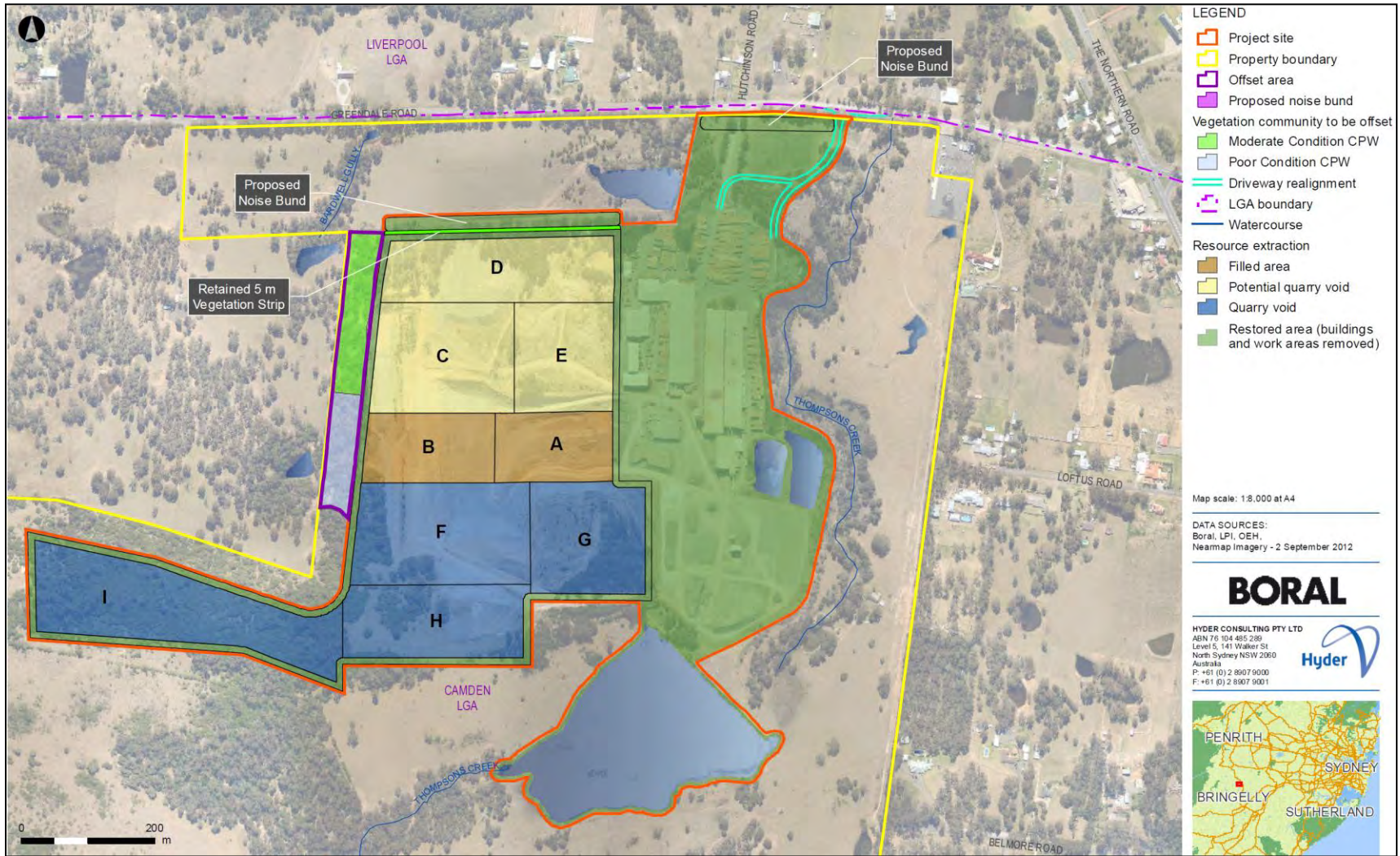
APPENDIX 3 RECEIVER LOCATIONS



Receiver number	Receiver address
1	55 Loftus Road
2	54 Loftus Road
3	20 Greendale Road
4	9 Greendale Road
5	5 Greendale Road (Bringelly Community Centre)
6	46 Loftus Road
7	36 Loftus Road
8	47 Loftus Road
9	37 Loftus Road
10	27 Loftus Road
11	26 Loftus Road
12	15 Loftus Road
13	5 Loftus Road
14	23 Greendale Road
15	27 Greendale Road
16	29 Greendale Road
17	25 Greendale Road
18	31 Greendale Road
19	35 Greendale Road
20	170 Tyson Road
21	196 Greendale Road
22	46 Belmore Road
23	55 Belmore Road
24	63 Belmore Road
25	67 Belmore Road
26	73 Belmore Road
27	83-85 Belmore Road
28	76 Belmore Road
29	86 Belmore Road
30	87 Belmore Road
31	93 Belmore Road
32	95-97 Belmore Road
33	107 Belmore Road
34	96 Belmore Road
35	108 Belmore Road
36	1037 Northern Road
37	10 Greendale Road
38	Bringelly Public School

APPENDIX 4

CONCEPTUAL FINAL LANDFORM AND BIODIVERSITY OFFSET STRATEGY



APPENDIX 5 NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 2 of the conditions are to apply under all meteorological conditions except the following:
 - (a) wind speeds greater than 3 m/s at 10 m above ground level; or
 - (b) temperature inversion conditions between 1.5 °C and 3°C/100 m and wind speeds greater than 2 m/s at 10 m above ground level; or
 - (c) temperature inversion conditions greater than 3°C/100 m.

Determination of Meteorological Conditions

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions **must** be that recorded by the meteorological station on or in the vicinity of the site.

Compliance Monitoring

3. Unless directed otherwise by the Secretary, quarterly attended monitoring is to be used to evaluate compliance with the relevant conditions of consent.

Note: The Secretary may direct that the frequency of attended monitoring increase or decrease at any time during the life of the development.

4. Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
 - (a) monitoring locations for the collection of representative noise data;
 - (b) meteorological conditions during which collection of noise data is not appropriate;
 - (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
 - (d) modifications to noise data collected including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.

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Noise Monitoring Assessment

PGH Bringelly Brickworks
Bringelly, NSW
Quarter Ending May 2024



Document Information

Noise Monitoring Assessment

PGH Bringelly Brickworks

Bringelly, NSW

Quarter Ending May 2024

Prepared for: PGH Bricks & Pavers Pty Ltd

60 Greendale Road

Bringelly NSW 2256

Prepared by: Muller Acoustic Consulting Pty Ltd

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Document ID	Date	Prepared By	Signed	Reviewed By	Signed
MAC190946-02RP14	18 March 2024	Nicholas Shipman		Oliver Muller	

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APPENDIX A – GLOSSARY OF TERMS

APPENDIX B – DEVELOPMENT CONSENT

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1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by PGH Bricks & Pavers Pty Ltd (PGH) to complete a Noise Monitoring Assessment (NMA) for the PGH Bringelly Brickworks (the site) at 60 Greendale Road, Bringelly, NSW.

This assessment has been undertaken for the quarterly period ending May 2024, and forms part of the annual noise monitoring program to address conditions outlined in the Development Consent and Environmental Protection Licence (EPL).

The NMA has quantified potential operational and sleep disturbance noise emissions from the operation and has been conducted in accordance with the following documents:

- NSW Environment Protection Authority (EPA), Noise Policy for Industry (NPI), 2017;
- NSW Environment Protection Authority (EPA's), Approved Methods for the measurement and analysis of environmental noise in NSW, 2022;
- Environment Protection Licence EPL #1808 (EPL);
- Bringelly Brickworks Noise Management Plan (NMP Reference: BRK-BRI-NMP Version 4, dated 12 December 2019), 2019;
- Bringelly Brickworks Development Consent, 2015 (SSD_5684); and
- Standards Australia AS 1055:2018 - Acoustics - Description and measurement of environmental noise.

A glossary of terms, definitions and abbreviations used in this report is provided in **Appendix A**.

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2 Noise Criteria

Section L4 of the projects EPL (EPL #1808) outlines the applicable operational noise criteria for all privately owned receivers surrounding the project. The criteria outlined in the EPL is reproduced below in **Table 1** along with relevant noise conditions:

L4.1 Noise from the mobile plant must not exceed an LA10 (15 minute) noise emission criterion of 35 dB(A) at all times except as expressly provided by this licence.

L4.2 Noise from the premises must not exceed an LA10 (15 minute) noise emission criterion of 35dB(A) at all times except as expressly provided by this licence.

L4.3 Noise from the premises is to be measured or computed at any point within 30 meters of the most affected residence to determine compliance with condition L4.1 and L4.2. 5dB(A) must be added if the noise is tonal or impulsive in character.

Table 1 EPL Noise Criteria¹

Receiver	Activity	All Operating Periods dB LA10(15min)
All receiver locations	Mobile Plant	35
	Total Noise from Premises	

Note 1: Noise criteria adopted from the EPL (EPL #1808).

The Bringelly Brickworks NMP outlines the applicable noise criteria for representative residential receivers surrounding the site and are presented in **Table 2**. The site includes the operation of a quarry and brickmaking plant, and as the quarry operates during the daytime, there are separate criteria relating to each period.

Table 2 Development Consent Noise Criteria¹

Activity	Receiver	Day/Evening/Shoulder ^{2,3}	Night ²	
		dB LAeq(15min)	dB LAeq(15min)	dB LA1(max) ³
Brickmaking and Quarrying	R1, R2	47	N/A	
	R3, R4, R14	46		
	R15, R17	45		
	All Other Receivers	44		
Brickmaking	All Receivers	44	43	53

Note 1: Noise criteria adopted from the Development Consent.

Note 2: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 3: Periods and parameters as expressed in the Development Consent.

Figure 1 presents the identified receiver locations and representative measurement locations.

Section 4 of the Bringelly Brickworks Development Consent, 2015 (SSD_5684, see **Appendix B**) outlines requirements for Noise Bunds adjacent to the northern boundary of the extraction area and adjacent to Greendale Road. It is noted that the proposed new access road and associated noise bund adjacent to Greendale Road are not in place at the time of the monitoring. Further details on review of noise mitigation measures for the site are contained in a historic report (Reference: Muller Acoustic Consulting Pty Ltd, MAC190946LR1, 27 September 2019).



FIGURE 1
SITE LAYOUT
MAC190946-02
PGH Bringelly Brickworks

KEY

- Monitoring Locations
- Receivers



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3 Methodology

3.1 Locality

PGH Bringelly Brickworks is located at 60 Greendale Road, Bringelly, NSW. Receivers in the locality surrounding the site are primarily rural/residential and for consistency the naming conventions for each receiver have been retained from historic noise assessments. The monitoring locations with respect to PGH are presented in the locality plan shown in **Figure 1**.

3.2 Assessment Methodology

The attended noise measurements were conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, "Acoustics - Description and Measurement of Environmental Noise" and as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022). Measurements were conducted using a Svantek Type 1, 971 noise analyser. All acoustic instrumentation used carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022) and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed $\pm 0.5\text{dBA}$.

Noise measurements were of 15-minutes in duration and where possible, throughout each survey the operator quantified the contribution of each significant noise source. Measurements were conducted at five locations (N1, N3, N14, N20, N35) on Wednesday 6 March 2024 during the day, evening, and night periods to satisfy the requirements of the NMP.

Extraneous noise sources were excluded from the analysis to determine the $\text{LA}_{\text{eq}}(15\text{min})$ quarry noise contribution for comparison against the relevant criteria. In the event of site attributed noise being above criteria, prevailing meteorological conditions for the monitoring period are analysed in accordance with Fact Sheet D of the NPI to determine the stability category present at the time of each attended measurement.

Where the site is inaudible, the contribution is estimated to be at least 10dBA below the ambient noise level.

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4 Results

4.1 Meteorological Conditions

Weather data for the noise assessment period was sourced from Badgerys Creek AWS Site 67108 as well as operator measured conditions at each EPL nominated receiver location. The data was used to determine prevailing meteorological conditions at the time of the attended measurements. Meteorological data is presented in **Table 3** and are generally below levels where noise limits are applicable. Furthermore, wind speed at the microphone height satisfies requirements of Fact Sheet A of the NPI.

Table 3 Prevailing Meteorological Conditions

Date & Time	Badgerys Creek AWS Site 67108 (10m AGL)		Operator Measured Weather Monitoring Location (1.8m AGL)	
	Wind Direction	Wind (m/s)	Wind Direction	Wind (m/s)
06/03/2024 14:43	NNE	2.4	N	0.8
06/03/2024 15:05	NE	2.4	N	0.3
06/03/2024 15:25	N	1.9	N	0.5
06/03/2024 15:43	N	2.4	N	0.5
06/03/2024 16:12	N	1.6	N	0.1
06/03/2024 20:12	ESE	1.1	N	0.1
06/03/2024 20:35	ESE	1.6	N	0.1
06/03/2024 20:54	ESE	1.1	N	0.1
06/03/2024 21:12	ESE	1.1	N	0.1
06/03/2024 21:30	ESE	1.1	N	0.1
06/03/2024 22:00	N	0.0	N	0.1
06/03/2024 22:18	ESE	1.1	N	0.1
06/03/2024 22:37	ESE	1.1	N	0.1
06/03/2024 22:58	ESE	1.6	N	0.1
06/03/2024 23:20	ESE	1.1	N	0.1

4.2 Assessment Results - Location N1

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N1 for the NMA are presented in **Table 4**.

Table 4 Operator-Attended Noise Survey Results - Location N1

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL, dBA
		L _{Amax}	LA1	LA _{eq}	LA ₉₀	LA ₁₀		
06/03/2024	15:05 (Day)	71	60	52	41	55	WD: N WS: 0.3m/s Rain: Nil	Insects <39
								Traffic 39-71
								Birds 39-50
								Aircraft 40-48
								PGH mobile plant <31 (barely perceptible)
PGH Site LA _{eq} (15min) Contribution								<35
06/03/2024	20:35 (Evening)	59	53	48	47	49	WD: N WS: 0.1m/s Rain: Nil	Insects 45-50
								Traffic 45-59
								Birds 45-48
								Aircraft 45-50
								PGH site inaudible
PGH Site LA _{eq} (15min) Contribution								<35
06/03/2024	22:58 (Night)	54	47	45	44	46	WD: N WS: 0.1m/s Rain: Nil	Insects 38-42 (constant)
								Traffic 38-46
								Operator 52-54
								PGH site inaudible
								PGH Site LA _{eq} (15min) Contribution
PGH Site LA ₁ (max) Contribution								<35

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.3 Assessment Results - Location N3

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N3 for the NMA are presented in **Table 5**.

Table 5 Operator-Attended Noise Survey Results - Location N3

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL, dBA
		L _{Amax}	L _{A1}	L _{Aeq}	L _{A90}	L _{A10}		
06/03/2024	15:25 (Day)	83	76	64	45	67	WD: N	Traffic 41-83
							WS: 0.5m/s	Birds 41-50
							Rain: Nil	Insects 41-44
								PGH site inaudible
PGH Site L _{Aeq} (15min) Contribution								<35
06/03/2024	20:54 (Evening)	75	70	56	42	56	WD: N	Traffic 40-75
							WS: 0.1m/s	Insects 40-44
							Rain: Nil	PGH site inaudible
PGH Site L _{Aeq} (15min) Contribution								<35
06/03/2024	22:37 (Night)	76	70	56	41	51	WD: N	Traffic 40-76
							WS: 0.1m/s	Insects 40-43
							Rain: Nil	PGH site hum <31
								(audible only on lulls)
PGH Site L _{Aeq} (15min) Contribution								<35
PGH Site L _{A1} (max) Contribution								<35

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.4 Assessment Results - Location N14

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N14 for the NMA are presented in **Table 6**.

Table 6 Operator-Attended Noise Survey Results - Location N14

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL,
		L _{Amax}	LA1	LA _{eq}	LA ₉₀	LA ₁₀		dBA
06/03/2024	15:43 (Day)	86	81	68	44	70	WD: N	Insects 40-43
							WS: 0.5m/s	Traffic 40-86
							Rain: Nil	Birds 40-50
								Aircraft 40-52
								PGH site inaudible
PGH Site LA _{eq} (15min) Contribution								<35
06/03/2024	21:12 (Evening)	86	75	63	55	62	WD: N	Insects 53-55
							WS: 0.1m/s	Traffic 53-86
							Rain: Nil	Aircraft 54-56
								PGH alarms
								(1 minute)
								(barely perceptible)
PGH Site LA _{eq} (15min) Contribution								<35
06/03/2024	22:18 (Night)	85	70	59	51	56	WD: N	Insects 40-44
							WS: 0.1m/s	Traffic 44-85
							Rain: Nil	PGH site inaudible
PGH Site LA _{eq} (15min) Contribution								<35
PGH Site LA ₁ (max) Contribution								<35

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.5 Assessment Results - Location N20

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N20 for the NMA are presented in **Table 7**.

Table 7 Operator-Attended Noise Survey Results - Location N20

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL, dBA
		L _A max	L _A 1	L _A eq	L _A 90	L _A 10		
06/03/2024	16:12 (Day)	93	83	70	40	71	WD: N	Birds 35-49
							WS: 0.1m/s	Traffic 35-93
							Rain: Nil	Insects <34
								Aircraft 35-56
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<35
06/03/2024	21:30 (Evening)	93	74	63	39	53	WD: N	Insects 38-42
							WS: 0.1m/s	Traffic 38-93
							Rain: Nil	Livestock 40-46
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<35
06/03/2024	22:00 (Night)	91	70	61	39	49	WD: N	Insects 38-42
							WS: 0.1m/s	Traffic 38-91
							Rain: Nil	Livestock 41-44
								PGH site inaudible
PGH Site L _A eq(15min) Contribution								<35
PGH Site L _A 1(max) Contribution								<35

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

4.6 Assessment Results - Location N35

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location N35 for the NMA are presented in **Table 8**.

Table 8 Operator-Attended Noise Survey Results - Location N35

Date	Time (hrs) ¹	Descriptor (dBA re 20µPa)					Meteorology	Description and SPL, dBA
		L _{Amax}	L _{A1}	L _{Aeq}	L _{A90}	L _{A10}		
06/03/2024	14:43 (Day)	65	54	43	35	44	WD: N WS: 0.8m/s Rain: Nil	Aircraft 34-50
								Birds 36-52
								Traffic 33-65
								Local residential noise <33
								Insects 33-34
								Wind in vegetation 33-38
								Dog bark 33-39
								PGH mobile plant <33 (3 minutes)
								PGH Site L _{Aeq} (15min) Contribution
								<35
06/03/2024	20:12 (Evening)	53	49	48	47	48	WD: N WS: 0.1m/s Rain: Nil	Insects 47-50 (constant)
								Traffic 47-52
								Dog bark <47
								Aircraft 47-53
								PGH alarms (1 minute)
								(barely perceptible)
								PGH Site L _{Aeq} (15min) Contribution
								<35
							WD: N WS: 0.1m/s Rain: Nil	Insects 35-38
								Traffic 35-51
								PGH site inaudible
								PGH Site L _{Aeq} (15min) Contribution
								<35
								PGH Site L _{A1} (max) Contribution
								<35

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

5 Discussion

5.1 Assessment Results - Location N1

Monitoring on Wednesday 6 March 2024 identified that PGH activities were inaudible and barely perceptible during the measurement period at location N1. Therefore, the site contributions were estimated to be below the relevant noise limits for each assessed period. Extraneous sources such as insects, traffic, birds, aircraft, and operator noise were audible during the measurement period.

5.2 Assessment Results - Location N3

Monitoring on Wednesday 6 March 2024 identified that PGH activities were audible during the night measurement period at location N3. Site noise emissions remained inaudible during the day and evening measurement periods. The site contributions were estimated to be below the relevant noise limits for each assessed period. Extraneous sources such as traffic, birds and insects were audible during the measurement period.

5.3 Assessment Results - Location N14

Monitoring on Wednesday 6 March 2024 identified that PGH activities were inaudible and barely perceptible during the measurement period at location N14. Therefore, the site contributions were estimated to be measured below the relevant noise limit for each assessed period. Extraneous sources such as insects, traffic, birds and aircraft were audible during the measurement period.

5.4 Assessment Results - Location N20

Monitoring on Wednesday 6 March 2024 identified that PGH activities were inaudible during the measurement period at location N20. Therefore, the estimated site contributions estimated to be measured below the relevant noise limit for each assessed period. Extraneous sources such as birds, traffic, insects, aircraft, and livestock were audible during the measurement period.

5.5 Assessment Results - Location N35

Monitoring on Wednesday 6 March 2024 identified that PGH activities were audible during the day and evening measurement periods and inaudible during the night period at location N35. The site contributions were estimated to be measured below the relevant noise limit for each assessed period. Extraneous sources such as aircraft, birds, traffic, local residential noise, insects, wind in vegetation and dogs barking noise were audible during the measurement period.

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6 Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise Monitoring Assessment (NMA) commissioned by PGH Bricks & Pavers Pty Ltd (PGH) for the PGH Bringelly Brickworks (the site) at 60 Greendale Road, Bringelly, NSW. The assessment was completed to assess the site's compliance with the relevant noise criteria during the quarter period ending May 2024.

Attended noise monitoring was undertaken on Wednesday 6 March 2024 at five representative receiver locations. The assessment has identified that noise emissions generated by Bringelly Brickworks were measured to be below the relevant noise criteria throughout the survey period, satisfying the relevant consent conditions.

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Appendix A – Glossary of Terms

A number of technical terms have been used in this report and are explained in **Table A1**.

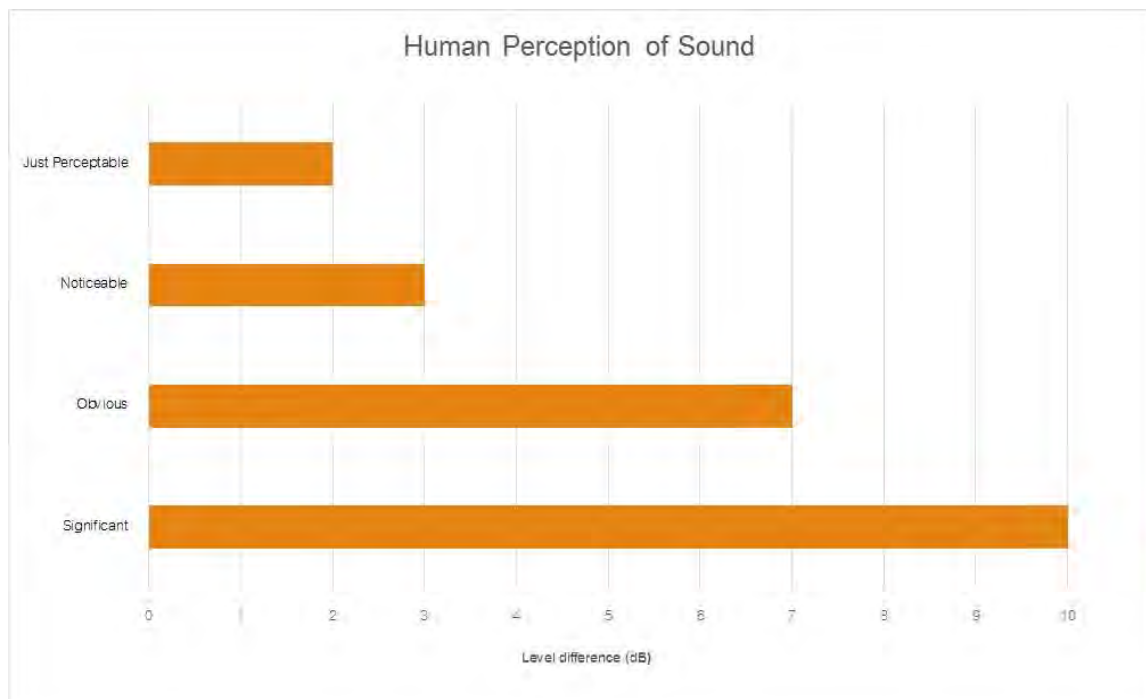
Table A1 Glossary of Acoustical Terms	
Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI as a single figure background level for each assessment period (day, evening and night). It is the tenth percentile of the measured L90 statistical noise levels.
Ambient Noise	The total noise associated with a given environment. Typically, a composite of sounds from all sources located both near and far where no particular sound is dominant.
A Weighting	A standard weighting of the audible frequencies designed to reflect the response of the human ear to sound.
Background Noise	The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is usually represented by the LA90 descriptor
dBA	Noise is measured in units called decibels (dB). There are several scales for describing noise, the most common being the 'A-weighted' scale. This attempts to closely approximate the frequency response of the human ear.
dB(Z), dB(L)	Decibels Z-weighted or decibels Linear (unweighted).
Extraneous Noise	Sound resulting from activities that are not typical of the area.
Hertz (Hz)	The measure of frequency of sound wave oscillations per second - 1 oscillation per second equals 1 hertz.
LA10	A sound level which is exceeded 10% of the time.
LA90	Commonly referred to as the background noise, this is the level exceeded 90% of the time.
LAeq	Represents the average noise energy or equivalent sound pressure level over a given period.
LAmx	The maximum sound pressure level received at the microphone during a measuring interval.
Masking	The phenomenon of one sound interfering with the perception of another sound. For example, the interference of traffic noise with use of a public telephone on a busy street.
RBL	The Rating Background Level (RBL) as defined in the NPI, is an overall single figure representing the background level for each assessment period over the whole monitoring period. The RBL, as defined is the median of ABL values over the whole monitoring period.
Sound power level (Lw or SWL)	This is a measure of the total power radiated by a source in the form of sound and is given by $10 \cdot \log_{10} (W/W_0)$. Where W is the sound power in watts to the reference level of 10^{-12} watts.
Sound pressure level (Lp or SPL)	the level of sound pressure; as measured at a distance by a standard sound level meter. This differs from Lw in that it is the sound level at a receiver position as opposed to the sound 'intensity' of the source.

Table A2 provides a list of common noise sources and their typical sound level.

Table A2 Common Noise Sources and Their Typical Sound Pressure Levels (SPL), dBA

Source	Typical Sound Pressure Level
Threshold of pain	140
Jet engine	130
Hydraulic hammer	120
Chainsaw	110
Industrial workshop	100
Lawn-mower (operator position)	90
Heavy traffic (footpath)	80
Elevated speech	70
Typical conversation	60
Ambient suburban environment	40
Ambient rural environment	30
Bedroom (night with windows closed)	20
Threshold of hearing	0

Figure A1 – Human Perception of Sound



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Appendix B – Development Consent

Development Consent

Section 89E of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, I approve the development application referred to in schedule 1, subject to the conditions in schedules 2 to 5.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.

David Kitto
Executive Director
Resource Assessments and Business Systems

Sydney

2015

SCHEDULE 1

Application Number:

SSD_5684

Applicant:

Boral Bricks Pty Ltd

Consent Authority:

Minister for Planning

Land:

[Lot 100 in DP 1203966](#)

Development:

Bringelly Brickworks Extension Project

Modification 1 (October 2016 shown in [blue](#) text)

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DEFINITIONS

AHD	Australian Height Datum
Annual Review	The review required by condition 4 of schedule 5
Applicant	Boral Bricks Pty Ltd, or any other person or persons who rely on this consent to carry out the development that is subject to this consent
BCA	Building Code of Australia
Biodiversity offset strategy	The conservation and enhancement strategy described in the EIS, and shown conceptually in Appendix 4
Brick making operations	Includes the receipt, handling, processing, storage and transportation of raw materials on site, brick making on site and transportation of finished bricks on site
CCC	Community Consultative Committee
Conditions of consent	Conditions contained in schedules 1 to 5 inclusive
Construction	The demolition of buildings or works, carrying out of works and erection of buildings covered by this consent
CPI	Australian Bureau of Statistics Consumer Price Index
Date of commencement	The date notified to the Department by the Applicant under condition 8 of Schedule 2
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Development	The development described in the documents of condition 2(a) of Schedule 2
Development area	All land to which the development application applies, as listed under "Land" in schedule 1 and shown in Appendix 1
DPI Water	Department of Primary Industries - Water
DRE	Division of Resources and Energy, within the NSW Department of Industry
EEC	Endangered Ecological Community, as defined under the <i>Threatened Species Conservation Act 1995</i>
EIS	Environmental Impact Statement titled <i>Bringelly Brickworks and Quarry Expansion</i> (2 volumes), dated September 2013, as modified by the Response to Submissions titled, <i>Bringelly Brickworks and Quarry Expansion, Response to Submissions</i> dated February 2014 and the letter entitled <i>Bringelly Brickworks – Biodiversity Offsets</i> , dated 2 June 2014
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6pm to 10pm
Extension area	The area outside of the existing quarry footprint (i.e. cells D, E, F, G, H and I, as shown conceptually in Appendix 2)
Feasible	Feasible relates to engineering considerations and what is practical to build
GDE	Groundwater Dependent Ecosystem
GPS	Global Positioning System
Growth Centres SEPP	<i>State Environmental Planning Policy (Sydney Regional Growth Centres) 2006</i>
Ha	Hectare
Incident	A set of circumstances that: - causes or threatens to cause material harm to the environment; and/or - breaches or exceeds the limits or performance measures/criteria in this consent
Land	As defined in the EP&A Act, except for where the term is used in the noise and air quality conditions in schedules 3 and 4 of this consent

	where it is defined to mean the whole of a lot, or contiguous lots, owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
m	Metres
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the development
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NP&W Act	<i>National Parks and Wildlife Act 1974</i>
OEH	NSW Office of Environment and Heritage
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or the Applicant (or its subsidiary)
Quarrying operations	Includes the removal of overburden and extraction, handling, storage and transportation of extractive materials on site
Raw materials	Raw materials imported for use in brick making including clay/shale and additives (such as manganese and iron oxides)
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the development to a good condition, ensuring that it is safe, stable and non-polluting and appropriately revegetated
RMS	Roads and Maritime Services
Secretary	Secretary of the Department, or nominee
SEE (Mod 1)	Statement of Environmental Effects titled ' <i>Section 96(1A) Modification Supporting Information</i> ' dated August 2016 and prepared by Element Environment, including the Response to Submissions document dated September 2016
Site	The land listed under "Land" in schedule 1
Shoulder	The period between 6am to 7am on Monday to Saturday
South West Growth Centre	An area of land identified under the Growth Centres SEPP

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance criteria established under this consent, the Applicant **must** implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.

TERMS OF CONSENT

2. The Applicant **must**:
 - (a) carry out the development generally in accordance with the EIS **and SEE (Mod 1)**; and
 - (b) the conditions of this consent.

Note: The general layout of the development is shown in Appendix 2.

3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.
4. The Applicant **must** comply with any reasonable requirement/s of the Secretary arising the Department's assessment of:
 - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent;
 - (b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; or
 - (c) the implementation of any actions or measures contained in these documents.

LIMITS ON CONSENT

Quarrying and Brick Making Operations

5. The Applicant may carry out quarrying **operations** and brick making operations from the date of commencement of development under this consent until 1 March 2045.

Note: Under this consent, the Applicant is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary. Consequently, this consent will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.

Production Limits

6. The Applicant **must** not:
 - (a) extract more than 200,000 tonnes of clay/shale from the site in any calendar year;
 - (b) produce more than 263,500 tonnes of bricks at the site in any calendar year;
 - (c) carry out quarrying operations beyond 46 m AHD; and
 - (d) receive more than **321,000** tonnes of raw materials required for brick making to the site in any calendar year.

Transportation Limits

7. The Applicant **must** not:
 - (a) transport more than 263,500 tonnes of bricks from the site in a calendar year;
 - (b) receive more than 90 trucks to the site per day or more than 18 trucks per hour; and
 - (c) dispatch more than 90 trucks from the site per day or more than 18 trucks per hour.

NOTIFICATION OF COMMENCEMENT

8. **Prior to commencing development under this consent, the Applicant must notify the Department in writing of the date on which it will commence development permitted under this consent.**

SURRENDER OF EXISTING DEVELOPMENT CONSENT

9. Within 4 months of commencing development under this consent, the Applicant must surrender the development consent (DA 91/1194) for existing operations on the site in accordance with Section 104A of the EP&A Act.

Following the commencement of development under this consent, the conditions of this consent (including any notes) shall prevail to the extent of any inconsistency with the conditions of the existing development consent (DA 91/1194).

STRUCTURAL ADEQUACY

10. The Applicant must ensure that any new buildings and structures, and any alterations, or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

DEMOLITION

11. The Applicant must ensure that all demolition work on site is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

PROTECTION OF PUBLIC INFRASTRUCTURE

12. The Applicant must:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
 - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

Note: This condition does not apply to any damage to roads caused as a result of general road usage.

OPERATION OF PLANT AND EQUIPMENT

13. The Applicant must ensure that all plant and equipment used on site or any monitoring equipment used off site for monitoring the performance of the development is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

UPDATING AND STAGING STRATEGIES, PLANS OR PROGRAMS

14. With the approval of the Secretary, the Applicant may submit any strategies, plans or programs required by this consent on a progressive basis.

To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval.

With the agreement of the Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all parties under the applicable condition of this consent.

Notes:

- While any strategy, plan or program may be submitted on a progressive basis, the Applicant must ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.
- If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

15. Until they are replaced by an equivalent strategy, plan or program approved under this consent, the Applicant **must** implement the existing strategies, plans or programs for the site that have been approved under DA 91/1194.

IDENTIFICATION OF APPROVED LIMITS OF EXTRACTION

16. Prior to undertaking quarrying operations in the extension area, the Applicant **must**:
- (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the development area; and
 - (b) submit a survey plan of these boundaries with applicable GPS coordinates to the Secretary.
17. While quarrying operations are being carried out, the Applicant **must** ensure that these boundaries are clearly marked at all times to allow operating staff and inspecting officers to clearly identify the approved limits of extraction.

PRODUCTION DATA

18. The Applicant **must**:
- (a) provide annual quarry production data to DRE using the standard form for that purpose; and
 - (b) include a copy of this data in the Annual Review (see condition 4 of schedule 5).

DEVELOPER CONTRIBUTIONS

19. The Applicant **must** pay Camden Council road maintenance contributions of \$0.0811 for every tonne of material transported to and from the site, indexed to CPI. Each payment must be:
- (a) paid to Council at the end of each calendar year; and
 - (b) based on weighbridge records of all supplementary brick making materials transported to the site and bricks and spoil transported from the site.

Note: If the parties are not able to agree on any aspect of the maintenance contributions, either party may refer the matter to the Secretary for resolution.

SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

HOURS OF OPERATION

- The Applicant **must** comply with the operating hours set out in Table 1.

Table 1: Operating Hours

Activity	Operating Hours
- Quarrying operations - Deliveries - Dispatch of finished bricks	6am to 6pm, Monday to Friday 6am to 1pm, Saturday No activities on Sundays or Public Holidays
Brick making operations (except dispatch of finished bricks)	24 hours a day, 7 days a week
Construction activities	7am to 6pm, Monday to Friday 8am to 1pm, Saturday No construction to be undertaken on Sundays or Public Holidays

NOISE

Noise Criteria

- The Applicant **must** ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence on privately-owned land.

Table 2: Noise criteria dB(A)

Activity	Receiver	Day/Evening/Shoulder	Night	
		<i>L_{Aeq}(15 min)</i>	<i>L_{Aeq}(15 min)</i>	<i>L_{A1}(max)</i>
Brick making and quarrying	R1, R2	47	Not Applicable	
	R3, R4, R14	46		
	R15, R17	45		
	All other receivers	44		
Brick making	All receivers	44	43	53

Notes:

- To locate the receivers referred to in Table 2 refer to Appendix 3.
- After the first review on any EPL granted for this development under Section 78 of the POEO Act, nothing in this consent prevents the EPA from imposing stricter noise limits on the quarrying operations on site under the EPL.

Appendix 5 sets out the metrological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, these criteria do not apply if the Applicant has a written agreement with the relevant landowner/s to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.

Construction Noise

- The Applicant **must** manage noise generated during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road, in accordance with the guidelines specified in Table 2 of the *Interim Construction Noise Guideline*.

Note: Management guidelines are applicable to receivers 3 and 4, shown in Appendix 3.

Noise Bunds

4. The Applicant must ensure that the noise bund adjacent to the northern boundary of the extraction area is constructed prior to the commencement of quarrying operations in the extension area.
- 4A. The Applicant must ensure that the noise bund adjacent to Greendale Road is constructed prior to the commencement of brick making operations.

Operating Conditions

5. The Applicant **must**:
 - (a) implement all reasonable and feasible mitigation measures to minimise construction, operational and road noise of the development;
 - (b) implement periods of respite during the construction of the new site access road and associated road alignment works, and the noise bund adjacent to Greendale Road;
 - (c) regularly assess noise monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the noise criteria in this consent;
 - (d) maintain the effectiveness of noise suppression equipment on plant and equipment on site;
 - (e) minimise the noise impacts of the development during meteorological conditions under which the noise criteria in this consent do not apply (see Appendix 5); and
 - (f) carry out regular noise monitoring to determine whether the development is complying with the relevant conditions of this consent, to the satisfaction of the Secretary.

Noise Management Plan

6. The Applicant **must** prepare a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (a) be prepared in consultation with the EPA;
 - (b) be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (c) describe the reasonable and feasible mitigation measures that would be implemented to ensure:
 - construction noise is minimise;
 - compliance with the relevant noise criteria and operating conditions in this consent;
 - best management practice is being employed; and
 - the noise impacts of the development are minimised during meteorological conditions under which the noise criteria in this consent do not apply;
 - (d) describe the proposed noise management system on site; and
 - (e) include a quarterly (or as otherwise agreed with the Secretary) noise monitoring program that:
 - uses attended monitoring to evaluate the compliance of the development against the noise criteria in this consent;
 - evaluates and reports on the effectiveness of the noise management system and the best practice noise management measures; and
 - defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

AIR QUALITY

Air Quality Criteria

7. The Applicant **must** implement all reasonable and feasible avoidance and mitigation measures so that particulate matter emissions generated by the development do not exceed the criteria in Tables 3 to 6 at any residence on privately-owned land.

Table 3: Long-Term Criteria for Particulate Matter

Pollutant	Averaging period	^a Criterion
Total suspended particulates (TSP)	Annual	^a 90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³

Table 4: Short-Term Criteria for Particulate Matter

Pollutant	Averaging period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³

Table 5: Long-Term Criteria for Deposited Dust

Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Table 6: Long and Short-Term Stack Emissions

Pollutant	Averaging period	^d Criterion
Sulphur Dioxide	10-minute	712 µg/m ³
	1-Hour	570 µg/m ³
	24-Hour	228 µg/m ³
	Annual	60 µg/m ³
Nitrogen Dioxide	1-Hour	246 µg/m ³
	Annual	62 µg/m ³
Hydrogen Chloride	1 hour	0.14 mg/m ³

Notes to Tables 3-6:

- ^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).
- ^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).
- ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.
- ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Secretary in consultation with EPA.

Operating Conditions

8. The Applicant **must**:
 - (a) implement all reasonable and feasible measures to minimise the stack and dust emissions of the development;
 - (b) minimise surface disturbance and maximise progressive rehabilitation;
 - (c) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see note (d) to Tables 3-6 above); and
 - (d) monitor and report on compliance with the relevant air quality conditions in this consent; to the satisfaction of the Secretary.

Air Quality Management Plan

9. The Applicant **must** prepare an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (a) be prepared in consultation with the EPA;
 - (b) be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (c) describe the measures that would be implemented to ensure:
 - compliance with the air quality criteria and operating conditions under this consent;
 - best practice management is being employed; and
 - the air quality impacts of the development are minimised during adverse meteorological conditions;
 - (d) describe the air quality management system; and
 - (e) include an air quality monitoring program that:
 - evaluates and reports on:
 - o the effectiveness of the air quality management system; and
 - o compliance with the air quality criteria and operating conditions; and
 - defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

METEOROLOGICAL MONITORING

10. For the life of the development, the Applicant **must** ensure that there is a suitable meteorological station operating in the vicinity of the site that:
- (a) complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline; and
 - (b) is capable of continuous measurement of stability class, in accordance with the *NSW Industrial Noise Policy*, or as otherwise approved by EPA.

TRANSPORT

Monitoring of Product Transport

11. The Applicant **must** keep accurate records of the:
- (a) **tonnage** of bricks transported from the site (monthly and annually);
 - (b) amount of raw material imported to the site (monthly and annually); and
 - (c) **tonnage of each type of raw materials imported to the site (monthly and annually);** and provide the Secretary with a summary of this information upon request.

Parking

12. The Applicant **must** provide sufficient parking on-site for all development-related traffic, in accordance with Camden Council's parking codes, to the satisfaction of the Secretary.

Operating Conditions

13. The Applicant **must** ensure that:
- (a) all development-related heavy vehicles enter and exit the site in a forward direction;
 - (b) all laden vehicles entering or exiting the site have their loads covered (with the exception of vehicles carrying bricks);
 - (c) all laden vehicles that have accessed the extraction and/or stockpile areas are cleaned of sand and other material that may fall on the road, before leaving the site;
 - (d) all heavy vehicles exiting the site travel east of the site along Greendale Road to The Northern Road and/or Bringelly Road;
 - (e) the dispatch of laden trucks is avoided during the peak drop-off and pick-up times at the Bringelly Public School to the greatest extent practicable, particularly prior to the upgrade of the Greendale Road/Bringelly Road intersection by RMS; and
 - (f) no trucks queue at the entrance to the site before 6am.

Access Road Intersection Construction

14. Within 12 months of commencing development under this consent, unless otherwise agreed with the Secretary, the Applicant must design and construct the new site access road intersection with Greendale Road in accordance with applicable AUSTROADS standards, to the satisfaction of Camden Council. The Applicant must notify the Secretary in writing within 30 days of obtaining Council approval.

Within 7 days of completing construction and the new site access road being operational, the existing site access road must be permanently closed.

Transport Management Plan

15. The Applicant **must** prepare a Transport Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with RMS, Camden Council, Liverpool City Council and Bringelly Public School, and be submitted to the Secretary for approval prior to the commencement of **development** under this consent, unless the Secretary agrees otherwise;
 - (b) describe the measures that would be implemented to ensure compliance with the transport operating conditions under this consent, including specific measures to avoid **the arrival and**

- dispatch of laden trucks from the site during the peak drop-off and pick-up times at the Bringelly Public School;
- (c) include a Code of Conduct for heavy vehicle drivers that addresses:
- travelling speeds;
 - procedures to minimise noise including a regular Truck Noise Auditing Program;
 - procedures to minimise diesel exhaust emissions;
 - instructions to avoid grouping or convoying of trucks;
 - procedures to ensure that drivers adhere to the designated haulage routes and the haulage hours permitted under this consent;
 - instructions to drivers not to overtake each other on the haulage route, as far as practicable, and to maintain appropriate distances between vehicles; and
 - instruction to drivers to be properly safety conscious and to strictly obey all traffic regulations, particularly in relation to school zones along Greendale Road; and
- (d) describe the measures that would be put in place to ensure compliance with the drivers' Code of Conduct and include a program to monitor the effectiveness of the implementation of these measures.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

SOIL AND WATER

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development, including in respect of the extraction and/or interception of groundwater.

Water Supply

16. The Applicant **must** ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of operations under the consent to match its available water supply to the satisfaction of the Secretary.

Water Discharges

17. The Applicant **must** comply with the discharge limits in any EPL or with Section 120 of the POEO Act.

Water Management Plan

18. The Applicant **must** prepare a Water Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared by suitably qualified person/s approved by the Secretary;
 - (b) be prepared in consultation with the EPA and **DPI Water**;
 - (c) be submitted to the Secretary for approval **prior to the commencement of development under this consent**, unless the Secretary agrees otherwise;
 - (d) include a Site Water Balance that:
 - includes details of:
 - o quantity of water required to support operations;
 - o sources and security of water supply;
 - o water use and management on site;
 - o reporting procedures; and
 - o measures to be implemented to minimise potable water use on site;
 - (e) include a Surface Water Management Plan, that includes:
 - baseline data on surface water flows and quality in the watercourses that could be affected by the development;
 - a description of the surface water management system on site, including:
 - o clean water diversions;
 - o erosion and sediment controls;
 - o the dirty water management system; and
 - o water storages (addressing maximum harvestable rights if applicable);
 - performance criteria, including trigger levels for investigating any potentially adverse surface water quality impacts;
 - a program to monitor and report on:
 - o any surface water discharges;

- o the effectiveness of the water management system; and
 - o surface water flows and quality in local watercourses;
 - a plan to respond to any exceedances of the performance criteria.
- (f) a Groundwater Management Plan, which includes:
- baseline data on groundwater levels, yield and quality in surrounding aquifers;
 - groundwater assessment and performance criteria, including trigger levels for investigating potentially adverse groundwater impacts;
 - a program to monitor:
 - o groundwater inflows to the quarry pit; and
 - o impacts of the development on surrounding aquifers;
 - an analysis of the monitoring results to determine long-term water levels within the quarry void; and
 - a plan to respond to any exceedances of the performance criteria.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

BIODIVERSITY

Biodiversity Offset Strategy

19. The Applicant **must** implement the Biodiversity Offset Strategy described in the EIS, as summarised in Table 7 and shown conceptually in Appendix 4, to the satisfaction of the Secretary.

Table 7: Summary of the Biodiversity Offsets

Area	Offset Criteria	Size (Ha)
On-site offset	Existing vegetation to be enhanced to establish an area of native woodland comprising species associated with Cumberland Plain Woodland.	1.93

Security of Offsets

20. Within 2 years of **notifying the Department of commencement of development (see condition 8 of Schedule 2)**, unless otherwise agreed with the Secretary, the Applicant **must** make suitable arrangements to provide appropriate long-term security for the offset area, to the satisfaction of the Secretary.

Note: Mechanisms to provide appropriate long term security to the land within the Biodiversity Offset Strategy include a Biobanking Agreement, Voluntary Conservation Agreement or an alternative mechanism that provides for a similar conservation outcome. Any mechanism must remain in force in perpetuity.

Biodiversity Management Plan

21. The Applicant **must** prepare a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with the OEH and Camden Council;
 - (b) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - (c) describe how the implementation of the biodiversity offset strategy would be integrated with the overall rehabilitation of the site;
 - (d) describe the short, medium, and long term measures that would be implemented to:
 - manage the remnant vegetation and habitat on the site and in the offset area and;
 - implement the biodiversity offset strategy, including detailed performance and completion criteria;
 - (e) include performance and completion criteria for evaluating the performance of the biodiversity offset strategy, and triggering remedial action (if necessary);
 - (f) include a description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for:
 - maximising the salvage of resources within the approved disturbance area - including vegetative, soil and cultural heritage resources – for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area;

- minimising the impacts on fauna on site, including pre-clearance surveys and minimising the potential exposure to tailings;
 - controlling weeds and feral pests;
 - controlling erosion;
 - controlling access; and
 - bushfire management;
- (g) identify the potential risks to the successful implementation of the biodiversity offset strategy, and include a description of the contingency measures that would be implemented to mitigate against these risks; and
- (h) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

Conservation Bond

22. Within 6 months of the approval of the Biodiversity Management Plan, the Applicant **must** lodge a conservation bond with the Department to ensure that the biodiversity offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan.

The sum of the bond **must** be determined by:

- a. calculating the full cost of implementing the biodiversity offset strategy (other than land acquisition costs); and
- b. employing a suitably qualified quantity surveyor to verify the calculated costs,
- c. to the satisfaction of the Secretary.

The calculation of the conservation bond must be submitted to the Department for approval at least 1 month prior to lodgement of the final bond.

If the offset strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the Secretary, the Secretary will release the bond.

If the offset strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Secretary will call in all, or part of, the conservation bond, and arrange for the satisfactory completion of the relevant works.

Notes:

- *Alternative funding arrangements for long term management of the biodiversity offset strategy, such as provision of capital and management funding as agreed by OEH as part of a Biobanking Agreement or transfer to conservation reserve estate (or any other mechanism agreed with OEH) can be used to reduce the liability of the conservation bond.*
- *The sum of the bond may be reviewed in conjunction with any revision to the biodiversity offset strategy or the completion of major milestones within the approved plan.*

REHABILITATION

Rehabilitation Objectives

23. The Applicant **must** rehabilitate the site to the satisfaction of the Secretary. Rehabilitation must:
- a. comply with the objectives in Table 8; and
 - b. be generally consistent with the proposed rehabilitation strategy in the EIS, and the final land form shown conceptually in Appendix 4 (unless modified by the Final Land Use Options Plan, prepared in accordance with condition 25 of this consent).

Table 8: Rehabilitation Objectives

Feature	Objective
Site (as a whole)	• Safe, stable and non-polluting • Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of local native species and habitat

Surface infrastructure	To be decommissioned and removed (unless the Secretary agrees otherwise)
Final void	- Minimise the size, depth and slope of the batters of the final void - Minimise the drainage catchment of the final void
Quarry pit floor	Landscaped and revegetated using native flora species, above the anticipated final void water level
Community	Ensure public safety

Progressive Rehabilitation

24. The Applicant **must** rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.

Final Land Use Options Plan

25. The Applicant **must** prepare a Final Land Use Options Plan for the site to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with DRE and Camden Council;
 - be submitted to the Secretary for approval within 2 years of the date of [notifying the Department of commencement of development \(see condition 8 of Schedule 2\)](#), unless the Secretary agrees otherwise;
 - provide details of the conceptual final landform and associated final land uses for the site;
 - ensure that the conceptual final land form is compatible with surrounding land uses, and is consistent with the rehabilitation objectives in Table 8 and the objectives of the Growth Centres SEPP for the South West Growth Centre;
 - inform the Rehabilitation Management Plan (prepared in accordance with condition 26 of this consent); and
 - be reviewed every 7 years to account for applicable land use priorities, and if necessary updated.

Rehabilitation Management Plan

26. The Applicant **must** prepare a Rehabilitation Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH, DRE, [DPI Water](#) and Camden Council;
 - be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - provide details of the conceptual final landform and associated land uses for the site (which must be consistent with the Final Land Use Options Plan under condition 25 of this consent);
 - describe the short, medium and long term measures that would be implemented to:
 - manage remnant vegetation and habitat on site; and
 - ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this consent;
 - include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, including triggers for any necessary remedial action;
 - include a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria; and
 - include details of who would be responsible for monitoring, reviewing, and implementing the plan.

[The Applicant must implement the approved management plan as approved from time to time by the Secretary.](#)

Note: The Rehabilitation Management Plan must be reviewed, and if necessary updated, following any update of the Final Land Use Options Plan.

HERITAGE

Heritage Management Plan

27. The Applicant **must** prepare a Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH;
 - (a) be submitted to the Secretary for approval prior to undertaking quarrying operations in the extension area, unless the Secretary agrees otherwise;
 - b. describe the measures that would be implemented to:
 - manage identified heritage objects, previously unidentified heritage objects or the discovery of any human remains on site;
 - ensure ongoing consultation with Aboriginal stakeholders in the conservation and management of any Aboriginal cultural heritage values on site; and
 - protect sites identified adjacent to the development.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

VISUAL

28. The Applicant **must** establish a vegetation screen on both noise bunds, as soon as practicable after construction of the bunds, to minimise visibility of site infrastructure from outside the development area. Following establishment, the Applicant **must** maintain the vegetation screen, to the satisfaction of the Secretary.
29. The Applicant **must**:
- implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development; and
 - b) ensure that all external lighting associated with the development complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*, or its latest version.

BUSHFIRE MANAGEMENT

30. The Applicant **must**:
- ensure that the development is suitably equipped to respond to any fires on site; and
 - b) assist the Rural Fire Service, emergency services and National Parks and Wildlife Service as much as practicable if there is a fire in the surrounding area.

WASTE

31. Prior to importing onto the site any material that may be classified as a waste under the EPA *Waste Classification Guidelines 2009* (or its latest version), the Applicant must obtain a 'resource recovery exemption' under the POEO Act and provide evidence of this exemption to the Department.

Note: This condition does not apply to routine deliveries to the site.

32. The Applicant **must**:
- manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Camden Council; and
 - b) pump all sewage generated and stored on-site to a sewage treatment facility, unless otherwise agreed with the Secretary.
33. The Applicant **must**:
- minimise the waste generated by the development;
 - b) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and
 - c) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. As soon as practicable after obtaining monitoring results showing an exceedance of any relevant criteria in schedule 3, the Applicant **must** notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the development is again complying with the relevant criteria.

INDEPENDENT REVIEW

2. If an owner of privately-owned land considers the development to be exceeding the relevant criteria in schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Applicant **must**:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
 - consult with the landowner to determine his/her concerns;
 - conduct monitoring to determine whether the development is complying with the relevant criteria in schedule 3;
 - if the development is not complying with these criteria then identify the measures that could be implemented to ensure compliance with the relevant criteria; and
- (b) give the Secretary and landowner a copy of the independent review.

SCHEDULE 5
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. If the Secretary requires, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
 - (a) be submitted to the Secretary for approval within 6 months of the Secretary requiring preparation of the strategy by notice to the Applicant;
 - (b) provide the strategic framework for environmental management of the development;
 - (c) identify the statutory approvals that apply to the development;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance;
 - respond to emergencies; and
 - (f) include:
 - copies of any strategies, plans and programs approved under the conditions of this consent; and
 - a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.

The Applicant must implement any Environmental Management Strategy as approved from time to time by the Secretary.

Adaptive Management

2. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity:

- (a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Secretary; to the satisfaction of the Secretary.

Management Plan Requirements

3. The Applicant must ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria; and
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:

- impacts and environmental performance of the development; and
- effectiveness of any management measures (see (c) above);
- (e) a contingency plan to manage any unpredicted impacts and their consequences;
- (f) a program to investigate and implement ways to improve the environmental performance of the development over time;
- (g) a protocol for managing and reporting any:
 - incidents;
 - complaints;
 - non-compliances with statutory requirements; and
 - exceedances of the impact assessment criteria and/or performance criteria; and
- (h) a protocol for periodic review of the plan.

Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

Annual Review

4. By the end of September each year, the Applicant [must submit a report to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary](#). This review must:
 - (a) describe the development (including rehabilitation) that was carried out in the previous [financial](#) year, and the development that is proposed to be carried out over the current [financial](#) year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous [financial](#) year, which includes a comparison of these results against:
 - the relevant statutory requirements, limits or performance measures/criteria;
 - the monitoring results of previous years; and
 - the relevant predictions in the [documents in condition 2\(a\) of Schedule 2](#);
 - (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the development;
 - (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measures will be implemented over the current [financial](#) year to improve the environmental performance of the development.

Revision of Strategies, Plans and Programs

5. [Within 3 months of the submission of an:](#)
 - (a) [Annual Review under condition 4 above;](#)
 - (b) [incident report under condition 7 below;](#)
 - (c) [audit report under condition 9 below; and](#)
 - (d) [any modifications to this consent,](#)
 the Applicant must review the strategies, plans and programs required under this consent, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Secretary.

Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the development.

Community Consultative Committee

6. The Applicant [must](#) establish and operate a Community Consultative Committee (CCC) for the development to the satisfaction of the Secretary. This CCC must be operated in general accordance with the [Guidelines for Establishing and Operating Community Consultative Committees for Mining Developments](#) (Department of Planning, 2007, or its latest version), and be operating [prior to the commencement of development under this consent](#).

Notes:

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.*

- In accordance with the guideline, the Committee should comprise an independent chair and appropriate representation from the Applicant, Camden Council and the local community.

REPORTING

Incident Reporting

7. The Applicant **must** immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Applicant **must** provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Regular Reporting

8. The Applicant **must** provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

INDEPENDENT ENVIRONMENTAL AUDIT

9. Within a year of **commencing development under this consent**, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant **must** commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
 - (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL and/or Water Licence (including any assessment, plan or program required under these approvals);
 - (d) review the adequacy of any approved strategy, plan or program required under these approvals;
 - (e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals; **and be conducted and reported to the satisfaction of the Secretary.**

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.

10. Within **12 weeks of commencing** this audit, unless the Secretary agrees otherwise, the Applicant **must** submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report, including a timetable for the implementation of any measures proposed to address the recommendations in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.

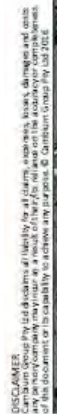
Within 7 days of commencing the audit, the Applicant must notify the Department in writing of the commencement of the audit.

ACCESS TO INFORMATION

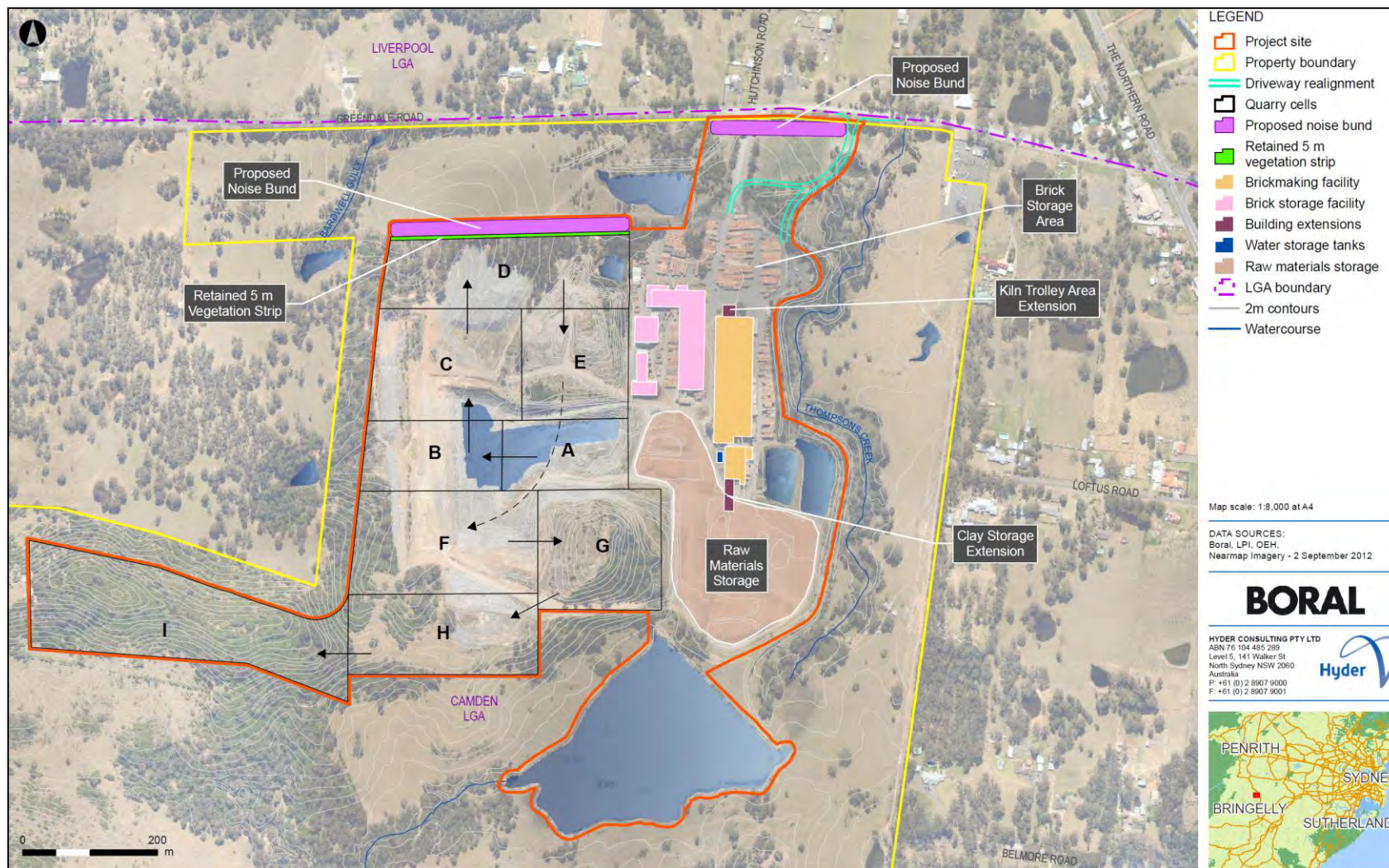
11. Within 6 months of **commencing development under this consent**, the Applicant **must**:
 - (a) make copies of the following publicly available on its website:
 - the documents in **condition 2(a) of Schedule 2**;
 - current statutory approvals for the development;
 - approved strategies, plans and programs required under the conditions of this consent;
 - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - a complaints register, which is to be updated monthly;
 - minutes of CCC meetings;
 - the annual reviews of the development (for the last 5 years);
 - any independent environmental audit of the development, and the Applicant's response to the recommendations in any audit;
 - any other matter required by the Secretary; and

(b) keep this information up-to-date,
to the satisfaction of the Secretary.

L



APPENDIX 2 DEVELOPMENT LAYOUT



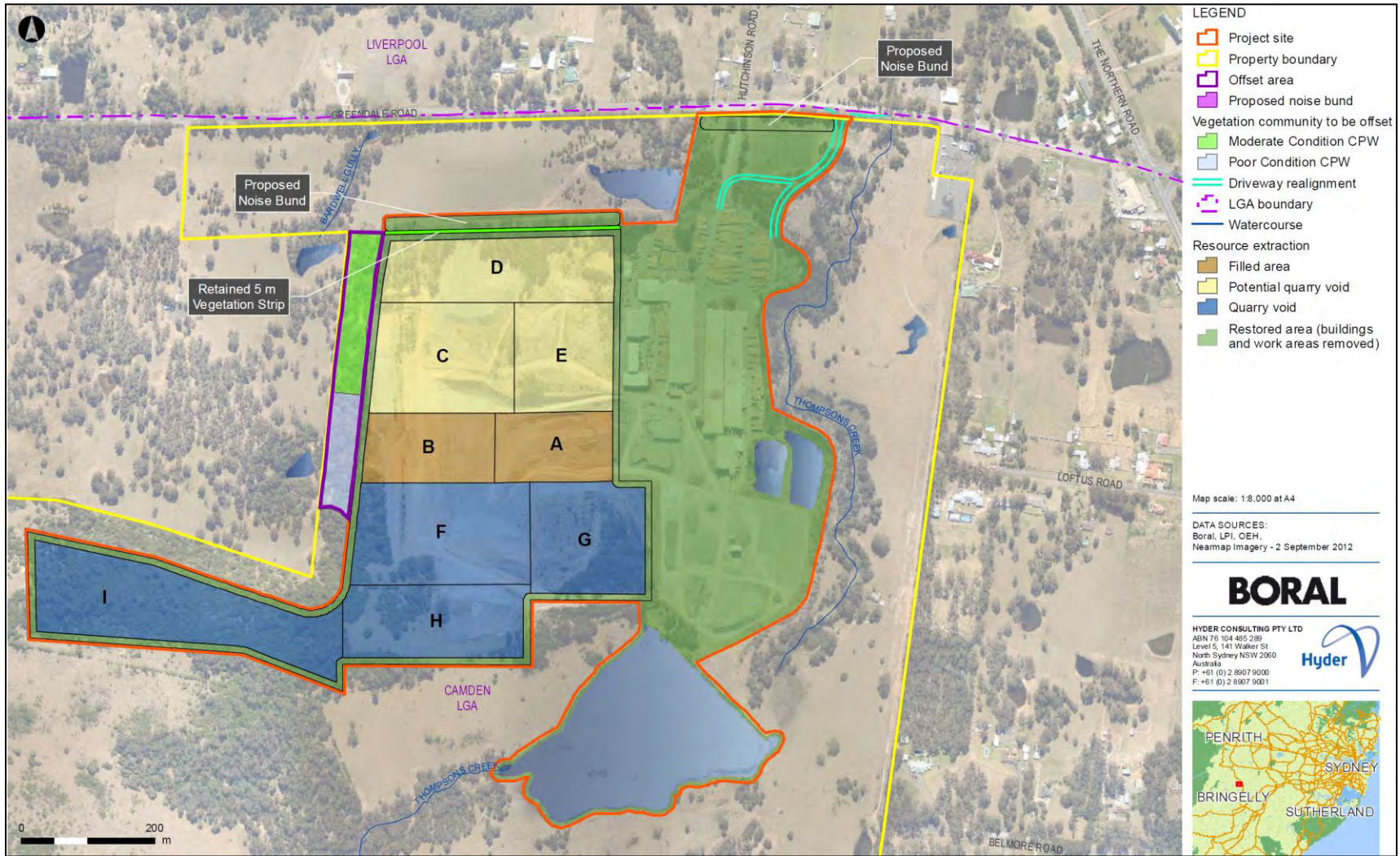
APPENDIX 3 RECEIVER LOCATIONS



Receiver number	Receiver address
1	55 Loftus Road
2	54 Loftus Road
3	20 Greendale Road
4	9 Greendale Road
5	5 Greendale Road (Bringelly Community Centre)
6	46 Loftus Road
7	36 Loftus Road
8	47 Loftus Road
9	37 Loftus Road
10	27 Loftus Road
11	26 Loftus Road
12	15 Loftus Road
13	5 Loftus Road
14	23 Greendale Road
15	27 Greendale Road
16	29 Greendale Road
17	25 Greendale Road
18	31 Greendale Road
19	35 Greendale Road
20	170 Tyson Road
21	196 Greendale Road
22	46 Belmore Road
23	55 Belmore Road
24	63 Belmore Road
25	67 Belmore Road
26	73 Belmore Road
27	83-85 Belmore Road
28	76 Belmore Road
29	86 Belmore Road
30	87 Belmore Road
31	93 Belmore Road
32	95-97 Belmore Road
33	107 Belmore Road
34	96 Belmore Road
35	108 Belmore Road
36	1037 Northern Road
37	10 Greendale Road
38	Bringelly Public School

APPENDIX 4

CONCEPTUAL FINAL LANDFORM AND BIODIVERSITY OFFSET STRATEGY



APPENDIX 5 NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 2 of the conditions are to apply under all meteorological conditions except the following:
 - (a) wind speeds greater than 3 m/s at 10 m above ground level; or
 - (b) temperature inversion conditions between 1.5 °C and 3°C/100 m and wind speeds greater than 2 m/s at 10 m above ground level; or
 - (c) temperature inversion conditions greater than 3°C/100 m.

Determination of Meteorological Conditions

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions **must** be that recorded by the meteorological station on or in the vicinity of the site.

Compliance Monitoring

3. Unless directed otherwise by the Secretary, quarterly attended monitoring is to be used to evaluate compliance with the relevant conditions of consent.

Note: The Secretary may direct that the frequency of attended monitoring increase or decrease at any time during the life of the development.

4. Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
 - (a) monitoring locations for the collection of representative noise data;
 - (b) meteorological conditions during which collection of noise data is not appropriate;
 - (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
 - (d) modifications to noise data collected including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.

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Appendix I Annual Rehabilitation Report

ARR0001308

BRINGELLY CLAY MINE ANNUAL REHABILITATION REPORT

Saturday 1 July 2023 to Sunday 30 June 2024



Summary table

DETAIL	
Mine	Bringelly Clay Mine
Reference	ARR0001308
Annual report period commencement date	Saturday 1 July 2023
Annual report period end date	Sunday 30 June 2024
Forward program	FWP0001210
Mining leases	ML 1731 (1992)
Lease holder(s)	PGH Bricks & Pavers Pty Ltd
Contact	Georgina Thompson
Date of submission	Friday 23 August 2024

Important

The department may make the information in your report and any supporting information available for inspection by members of the public, including by publication on its website or by displaying the information at any of its offices. If you consider any part of your report to be confidential, please communicate this to the department via the message function on this submission within the NSW Resources Regulator Portal.

Mine details

Project description

PGH Bricks & Pavers Pty Ltd Bringelly Clay / Shale Mine located off Greendale Road, in the Camden Council Government Area, Bringelly NSW. The site is approximately 18km west of Liverpool. The site is constituted of the active mine and brickworks, situated on Lot 100, DP 1203966. The mine and associated brickworks are freehold owned and operated by PGH Bricks & Pavers Pty Ltd.

Life of mine

12 years

Current development consents, leases and licences

Development consents granted under the *Environmental Planning and Assessment Act 1979*

SSD6484MOD1
SSD6484MOD1
SSD6484MOD1
SSD6484MOD1
SSD6484MOD1
SSD6484MOD1
SSD6484MOD1

Authorisations covering the mining area granted under the *Mining Act 1992*

ML 1731 (1992)

Any other approvals, licences, or authorities issued by government agencies that are relevant to the progress of mining operation and rehabilitation activities

EPL1808

Summary of the scope and/or purpose of the new applications or modifications to existing approvals (if applicable)

N/A

Changes to land ownership and land use

N/A

Surface disturbance and rehabilitation activities during the reporting period

Surface disturbance and rehabilitation activities that were conducted and an analysis of the progress against the rehabilitation schedule

Mining has continued on site as per the previous ARR during the reporting period. Works have continued on the bund parallel to the western boundary, and this is now completed.

Rehabilitation planning activities that were conducted, including any specialist studies

No specific rehabilitation planning activities or specialist studies were conducted during the reporting period.

Overview of subsidence repair and/or remediation works undertaken

Not applicable for this site.

Overview of rehabilitation management and maintenance activities

No weed spraying was conducted on site within the reporting period. Ongoing management of rehabilitation areas will involve regular visual assessment of weed coverage and recurrent spraying if deemed necessary.

Details of any rehabilitation actions taken as required by any letters, notices or directions issued by government agencies, including the NSW Resources Regulator

No letters, notices or directions were received by any agency during the reporting period.

Details of any rehabilitation areas that have achieved the final land use

No rehabilitation areas have yet reached their final land use. The Rehabilitation Management Plan as approved by DPIE details progressive rehabilitation to occur in logical graduations between 2023 and 2067. Rehabilitation goals set by the RMP for the 2022 - 2027 stage are in progress, with focus on successful ecosystem establishment on existing rehabilitation areas.

Key production milestones

MATERIAL	UNIT	FWP0001210 YEAR 1		THIS REPORT
Stripped topsoil (if applicable)	(m ³)	760		0
Rock/overburden	(m ³)	16,000		0
Ore	(Mt)	0.17		0.1
Reject material ¹	(Mt)	0		0
Product	(Mt)	0		0

¹ This includes coarse rejects, tailings and any other wastes resulting from beneficiation.

Disturbance and rehabilitation statistics

Current disturbance and rehabilitation progression

ELEMENT	UNIT	THIS REPORT
A Total surface disturbance footprint	(ha)	23.83
B Total active disturbance	(ha)	20.19
C Land prepared for rehabilitation	(ha)	3.63
D Ecosystem and land use establishment	(ha)	0
E Ecosystem and land use development	(ha)	0
F Rehabilitation completion	(ha)	0

Rehabilitation key performance indicators (KPIs)

ELEMENT	UNIT	THIS REPORT
G Total new active disturbance area	(ha)	NA - this value will display after 2nd year ARR submission as calculation relies on comparison between sequential yearly ARR data
H New rehabilitation commenced during annual reporting period	(ha)	NA - this value will display after 2nd year ARR submission as calculation relies on comparison between sequential yearly ARR data
I Established rehabilitation	(ha)	0
J Annual rehabilitation to disturbance ratio	%	NA - this value will display after 2nd year ARR submission as calculation relies on comparison between sequential yearly ARR data
K Rehabilitated land to total mine footprint	%	0

Progressive achievement of established rehabilitation

ELEMENT		UNIT	THIS REPORT
L	Established rehabilitation - agricultural final land uses	%	0
M	Established rehabilitation - native ecosystem final land uses	%	0
N	Established rehabilitation - other/non-vegetated final land uses	%	0

Variation to the rehabilitation schedule

Identify the components of the most recent forward program that were not achieved

N/A

Key factors that delayed progressive rehabilitation

N/A

Outline actions that will be included in the forward program and carried out to minimise disturbance and undertake progressive rehabilitation as far as reasonably practical

N/A

Rehabilitation monitoring and research findings

Rehabilitation monitoring

The rehabilitation monitoring carried out in the annual reporting period

Control analogue sites will be identified in consultation with a MEG representative and person(s) suitably qualified in flora and landform assessment. It is expected that these sites will be used as a comparison to assist in determining whether the objectives relating to slope stability and vegetation coverage have been achieved. Progress towards identifying these sites will be reported in the next annual review. Rehabilitation monitoring in active rehabilitation areas will involve ongoing visual assessment of priority weeds in active rehabilitation areas and consequent spraying/management if required. Once these areas reach the Ecosystem and Landuse Establishment phase of rehabilitation, rehabilitation establishment monitoring as described in the approved RMP will apply.

Status of performance against rehabilitation objectives and rehabilitation completion criteria

The monitoring program that has been implemented

Rehabilitation progression is annually evaluated against the expectations & goals contained within the approved rehabilitation objectives, rehabilitation completion criteria and final landform and rehabilitation plan.

Are all rehabilitation areas in Landform Establishment phase or higher represented in the monitoring program to assess performance against the rehabilitation objectives and approved or, if not yet approved rehabilitation completion criteria and final landform and rehabilitation plan?

0

Year rehabilitation areas will be included as part of the monitoring program

2025

An appraisal of whether rehabilitation is moving towards achieving the proposed rehabilitation objectives, approved or, if not yet approved, rehabilitation completion criteria and final landform and rehabilitation plan as soon as reasonably practicable.

Rehabilitation is occurring progressively in line with the approved RMP and associated rehabilitation objectives.

Appraisal description

Rehabilitation is moving towards achieving the final land use as soon as reasonably practicable.

Rehabilitation monitoring program findings

Ecological monitoring carried out in July 2023 by a suitably qualified ecologist confirmed that waste material from vegetation slashing in areas of high weed density was unlikely to result in significant weed re-infestation once the shredded material was mixed with topsoil and spread over bund-walls. Active monitoring of these areas has been conducted throughout the reporting period and no weed reinfestation has been reported. Nest Box monitoring has been conducted 6 monthly in "Cell G", and recruitment of bat species in roosting boxes is steadily improving.

Performance issues and their causes including identification of any knowledge gaps that must be addressed

Nil

Outcomes of rehabilitation research and trials

RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	STATUS	ON TRACK?

A
RR0001308

Outcomes of completed trials and research

N/A

Attachment 1 – Reporting Definitions

REPORTING CATEGORY		DEFINITION
A1	Total disturbance footprint – surface disturbance	All areas within a mining lease that either have at some point in time or continue to pose a rehabilitation liability due to surface disturbance activities. The total disturbance footprint is the sum of the total active disturbance, decommissioning, landform establishment, growth medium development, ecosystem and land use establishment, ecosystem and land use development and rehabilitation completion (see definitions below). Underground mining operations should not include the footprint of underground mining areas/subsidence management areas in the total disturbance footprint.
A2	Underground Mining Area	Underground mining operations areas/subsidence management areas.
B	Total active disturbance	Includes on-lease exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste rock emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped) and temporary stabilised areas (e.g. areas sown with temporary cover crops for dust mitigation and temporary rehabilitation).
C	Rehabilitation – land preparation	Includes the sum of all disturbed land within a mining lease that have commenced any, or all, of the following phases of rehabilitation – decommissioning, landform establishment and growth medium development. Refer to the glossary of terms in this document for the definition of these phases of rehabilitation.

REPORTING CATEGORY	DEFINITION
D Ecosystem and land use establishment	Includes the area which has been seeded/planted with the target vegetation species for the intended final land use. However, vegetation has not matured to a stage where it can be demonstrated that it will be sustainable for the long term and or require only a maintenance regime consistent with target reference/analogue sites. Typically, rehabilitation areas would be in this phase for at least two years (and usually more) before rehabilitation can be classified as being in the ecosystem and land use development phase. This phase does not apply to infrastructure areas that are being retained as part of final land use for the site.
E Ecosystem and Land Use Development	Rehabilitation has matured to a level where target revegetation outcomes are on a trajectory towards meeting the final rehabilitation objectives and rehabilitation completion criteria (as verified by monitoring). This phase includes infrastructure areas that are to be retained for an approved post mining land use, following completion of all necessary measures to render the infrastructure fit for this purpose (for example structural integrity).
F Rehabilitation Completion	The NSW Resources Regulator has determined in writing that the mining area has achieved the approved rehabilitation objectives and approved rehabilitation completion criteria and final landform and rehabilitation plan following the submission of <i>Form: ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate and/or notification of mine or petroleum site closure</i>.
G New active disturbance area	The area of any new active disturbance that has been created during the annual reporting period (definition A1 in Table 5).
H New rehabilitation commenced during annual reporting period	The sum of any new rehabilitation commenced in the annual reporting period. These areas may be in the rehabilitation land preparation phase or the ecosystem & land use establishment phase (definitions C and D in Table 5).
I Established rehabilitation (hectares)	The total area of land that is verified to be within either the ecosystem and land use development phase or the rehabilitation completion phase (definitions E & F in Table 5).

REPORTING CATEGORY		DEFINITION
J	Annual rehabilitation to disturbance ratio	The rehabilitation to disturbance ratio (H/G) indicates how many hectares of new rehabilitation are undertaken for each hectare of land disturbed during the year. A ratio of 1/1 indicates that the area of new rehabilitation and disturbance in that year are the same.
K	% Rehabilitated land to total mine footprint	The proportion of the total mine footprint (area of land that has been disturbed by past or present surface disturbance activities) that has established rehabilitation ($I/A1 \times 100$). For open cut mining, the proportion of the total mine footprint verified to be “established rehabilitation” should substantially increase as an operation progresses towards mine closure.
L	Established rehabilitation for agricultural final land uses (hectares)	The percentage of total area of land that is verified to be within either the ecosystem and land use development phase or the rehabilitation completion phase (definitions E & F in Table 5) that have been returned to an agricultural final land use.
M	Established rehabilitation for native ecosystem final land uses (hectares)	The percentage of total area of land that is verified to be within either the ecosystem and land use development phase or rehabilitation completion phase (definitions E & F in Table 5) that have been returned to native ecosystem final land use.
N	Established rehabilitation for other/non-vegetated final land uses (hectares)	The percentage of total area of land that is verified to be within either the ecosystem and land use development phase or the rehabilitation completion phase (definitions E & F in Table 5) that have been returned to other/non-vegetated final land use.

Attachment 2 – Definitions

WORD	DEFINITION
Active	In the context of rehabilitation, land associated with mining domains is considered 'active' for the period following disturbance until the commencement of rehabilitation.
Active mining phase of rehabilitation	In the context of rehabilitation, the active mining phase of rehabilitation constitutes the rehabilitation activities undertaken during mining operations such as salvaging and managing soil resources, salvaging habitat resources, and native seed collection. This phase also includes management actions taken during operations to manage risks to rehabilitation and enhance rehabilitation outcomes such as selective handling of waste rock and management of tailings emplacements.
Analogue site	In the context of rehabilitation, an analogue site is a 'reference site' that represents an example of the defining characteristics (such as vegetation composition and structure or agricultural productivity) of the final land use. Characteristics of analogue sites can be assessed to develop the rehabilitation objectives and completion criteria for final land use domains.
Annual rehabilitation report and forward program	As described in the Mining Regulation 2016.
Annual reporting period	As defined in the Mining Regulation 2016.
Closure	A whole-of-mine-life process, which typically culminates in the relinquishment of the mining lease. It includes decommissioning and rehabilitation to achieve the approved final land use(s).
Decommissioning	The process of removing mining infrastructure and removing contaminants and hazardous materials.
Decommissioning Phase of Rehabilitation	Activities associated with the removal of mining infrastructure and removal and/or remediation of contaminants and hazardous materials. In the context of the rehabilitation management plan this phase of rehabilitation may also include studies and assessments associated with decommissioning and demolition of infrastructure or works carried out to make safe or 'fit for purpose' built infrastructure to be retained for future use(s) following lease relinquishment.

WORD	DEFINITION
Department	The Department of Regional NSW.
Disturbance	See Surface Disturbance.
Disturbance area	An area that has been disturbed and that requires rehabilitation. This may include areas such as on-licence exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped), and areas requiring rehabilitation that are temporarily stabilised (i.e. managed to minimise dust generation and/or erosion).
Domain	An area (or areas) of the land that has been disturbed by mining and has a specific operational use (mining domain) or specific final land use (final land use domain). Land within a domain typically has similar geochemical and/or geophysical characteristics and therefore requires specific rehabilitation activities to achieve the associated final land use.
Ecosystem and Land Use Development	This phase of rehabilitation consists of the activities to manage maturing rehabilitation areas on a trajectory to achieving the approved rehabilitation objectives and completion criteria. For vegetated land uses this phase may include processes to develop characteristics of functional self-sustaining ecosystems, such as nutrient recycling, vegetation flowering and reproduction, and increasing habitat complexity, and development of a productive, self-sustaining soil profile. This phase of rehabilitation may include specific vegetation management strategies and maintenance such as tree thinning, supplementary plantings and weed management.
Ecosystem and Land Use Establishment	This phase of rehabilitation consists of the processes to establish the approved final land use following construction of the final landform. For vegetated land uses this rehabilitation phase includes establishing the desired vegetation community and implementing land management activities such as weed control. This phase of rehabilitation may also include habitat augmentation such as installation of nest boxes.
Exploration	Has the same meaning as that term under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

WORD	DEFINITION
Final landform and rehabilitation plan	As defined in the Mining Regulation 2016.
Final land use	As defined in the Mining Regulation 2016.
Form and way	Means the form and way approved by the Secretary. Approved form and way documents are available on the Department's website.
Growth Medium Development	This phase of rehabilitation consists of activities required to establish the physical, chemical and biological components of the substrate required to establish the desired vegetation community (including short lived pioneer species). This phase may include spreading the prepared landform with topsoil and/or subsoil and/or soil substitutes, applying soil ameliorants to enhance the physical, chemical and biological characteristics of the growth media, and actions to minimise loss of growth media due to erosion.
Habitat	Has the same meaning as that term under the <i>Biodiversity Conservation Act 2016</i> and the <i>Fisheries Management Act 1994</i> (as relevant).
Indicator	An attribute of the biophysical environment (e.g. pH, topsoil depth, biomass) that can be used to approximate the progression of a biophysical process. It can be measured and audited to demonstrate (and track) the progress of an aspect of rehabilitation towards a desired completion criterion (i.e. defined end point). It may be aligned to an established protocol and used to evaluate changes in a system.
Land	As defined in the <i>Mining Act 1992</i> .
Landform Establishment	This phase of rehabilitation consists of the processes and activities required to construct the final landform. In addition to profiling the surface of rehabilitation areas to the approved final landform profile this phase may include works to construct surface water drainage features, encapsulate problematic materials such as tailings, and prepare a substrate with the desired physical and chemical characteristics (e.g. rock raking or ameliorating sodic materials).
Large mine	As defined in the Mining Regulation 2016.
Lease holder	The holder of a mining lease.

WORD	DEFINITION
Life of mine	The timeframe of how long a mine is approved to mine, from commencement to closure.
Mine rehabilitation portal	Means the NSW Resources Regulator's online portal that lease holders must use (via a registered account) to: ■ upload rehabilitation geographical information system (GIS) spatial data ■ develop rehabilitation GIS spatial data (using online tracing functions) ■ generate rehabilitation plans and rehabilitation statistics using the map viewer and Rehabilitation Key Performance Indicator functionalities. Data submitted to the mine rehabilitation portal is collated in a centralised geodatabase for use by the NSW Resources Regulator to regulate rehabilitation performance of lease holders.
Mining area	As defined in the <i>Mining Act 1992</i> .
Mining domain	A land management unit with a discrete operational function (e.g. overburden emplacement), and therefore similar geophysical characteristics, that will require specific rehabilitation treatments to achieve the final land use(s).
Mining land	As defined in the <i>Mining Act 1992</i> .
Native vegetation	Has the same meaning as that term under section 60B of the <i>Local Land Services Act 2013</i> .
Overburden	Material overlying coal or a mineral deposit.
Performance indicator	An attribute of the biophysical environment (for example pH, slope, topsoil depth, biomass) that can be used to demonstrate achievement of a rehabilitation objective. It can be measured and audited to demonstrate (and track) the progress of an aspect of rehabilitation towards a desired completion criterion, that is, a defined end point. It may be aligned to an established protocol and used to evaluate changes in a system.

WORD	DEFINITION
Phases of rehabilitation	The stages and sequences of actions required to rehabilitate disturbed land to achieve the final land use. The phases of rehabilitation are: ■ active mining ■ decommissioning ■ landform Establishment ■ growth medium development ■ ecosystem and land use establishment ■ ecosystem and land use development.
Progressive rehabilitation	The progress of rehabilitation towards achieving the approved rehabilitation completion criteria. This may be described in terms of domains, phases, performance indicators and rehabilitation completion criteria.
Rehabilitation Completion	The final phase of rehabilitation when a rehabilitation area has achieved the approved rehabilitation objectives and rehabilitation completion criteria for the final land use. Rehabilitation areas may be classified as complete when the NSW Resources Regulator has determined in writing that the relevant rehabilitation obligations have been fulfilled following submission of <i>Form ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate</i> application by the lease holder.
Rehabilitation Completion criteria	As defined in the Mining Regulation 2016.
Rehabilitation cost estimate	As defined in the Mining Regulation 2016.
Rehabilitation management plan	As defined in the Mining Regulation 2016.
Rehabilitation objectives	As defined in the Mining Regulation 2016.
Rehabilitation risk assessment	As defined in the Mining Regulation 2016.
Rehabilitation schedule	The defined timeframes for progressive rehabilitation set out in the forward program.

WORD	DEFINITION
Relevant stakeholders	Means any persons or bodies who may be affected by the mining operations, including rehabilitation, carried out on the lease land, and includes: ■ the relevant development consent authority ■ the local council ■ the relevant landholder(s) ■ community consultative committee (if required under the development consent) or equivalent consultative group ■ affected land holder(s) ■ government agencies relevant to the final land use ■ affected infrastructure authorities (electricity, telecommunications, water, pipeline, road, rail authorities) ■ local Aboriginal communities, and ■ any other person or body determined by the Minister to be a relevant stakeholder in relation to a mining lease.
Risk	The effect of uncertainty on objectives. It is measured in terms of consequences and likelihood (AS/NZS ISO 31000:2009).
Secretary	The Secretary of the Department.
Security deposit	An amount that a mining lease holder is required to provide and maintain under a mining lease condition, to secure funding for the fulfilment of obligations under the lease (including obligations that may arise in the future).
Surface disturbance	Includes activities that disturb the surface of the mining area, including mining operations, ancillary mining activities and exploration.
Tailings	A combination of the fine-grained solid material remaining after the recoverable metals and minerals have been extracted from the mined ore, and any process water ² .
Waste	Has the same meaning as that term under the <i>Protection of the Environment Operations Act 1997</i> .

² Commonwealth of Australia (DITR), 2007. *Tailings Management*.

Attachment 3 – Rehabilitation Complaints

DATE	COMPLAINANT	COMPLAINT DETAILS	RESPONSE DETAILS	STATUS OF RESPONSE	DATE RESPONSE COMPLETED (IF APPLICABLE)

Attachment 4 – Stakeholder consultation

DATE	STAKEHOLDER	CONSULTATION ACTIVITIES AND FORMS	MATTERS SUBJECT TO CONSULTATION	ACTIONS TAKEN

Attachment 5 – Plans

Bringelly Plan 1A 2024.pdf

Bringelly Plan 1B 2024.pdf

Annual Report (LARGE MINE) v1.6



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