



July 2024

**Annual Review
for
Badgerys Creek Clay Mine
MP10_0014
Year Ending 4th May 2024**



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Project Name	Badgerys Creek Quarry and Brick Making Project
Report Title	Annual Review
Project Address	225-235 Martin Rd Bradfield (Formerly Badgerys Creek), NSW 2556
Application Number of the Project	10_0014
Mining Authorisations	ML1771
Report Commencement Date	5 th May 2023
Report Completion Date	4 th May 2024
Name of Authorisation Holder	PGH Bricks & Pavers Pty Ltd Trinity 3, Level 5, 39 Delhi Rd, Nth Ryde, NSW 2113
Name of Mine Operator (s)	CSR Limited 39 Delhi Rd Level 6, North Ryde, NSW, 2113, Australia
Name and Contact Details of the Mine Manager	Nelma Arancibia CSR Limited 0424 186 127 narancibia@csr.com.au
Name and Contact Details of the Environmental Representative	Nelma Arancibia CSR Limited 0424 186 127 narancibia@csr.com.au
Name of the Representative of the Authorisation Holder Title	Nelma Arancibia CSR Limited 0424 186 127 narancibia@csr.com.au
Signature of the Representative of the Authorisation Holder	
Declaration Date	

Revision Table

Date	Version	Author	Reviewed	Approved
26/06/2024	D0	LGT/TO	NA/DT	LGT
28/06/024	F0	LGT/TO	NA/DT	TO
02/07/2024	F1	LGT/TO	NA/DT	TO

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1 Executive Summary

The PGH/CSR Clay Shale mine and associated brickworks located on Martin Road at Bradfield (Formerly Badgerys Creek) NSW has been in shut-down mode since 2012. Plans are now in motion to rehabilitate portions of the site to allow industrial / commercial land use. The site operates under MP10_0014 the State Significant consent for a brickworks and clay/shale mine, with modification 5 approved 19/01/2022 allowing importation of Excavated Natural Material and additional storage for brick making materials.

No extraction activities occurred however previously stockpiled raw materials were dispatched to other plants in the Sydney metropolitan region.

The former Pit 3 has been dewatered and filled with site materials. Pit 2 has also completed dewatering and works are being undertaken for filling to commence. Importation of fill materials will commence following completion of roadworks due in October – November 2024.

Transfer of water from Pit 1 to Western Sydney Airport via a purpose-built pipe is underway under the supervision of NRAR

There were three non-compliances as of the SSD consent conditions:

1. Daily truck movements were exceeded on three occasions. (Schedule 2 Condition 12)
2. Groundwater monitoring was not undertaken quarterly as per Surface Water Management Plan (SWMP) (Schedule 3, Condition 23)
3. The conditions regarding all conditions be complied with is also non-compliant (Schedule 2 Condition 2)

SSD Consent Conditions required to be addressed in this Annual Review are listed in *Table 1*.

Table 1. Annual Review Requirements as per Consent

Schedule No.	Condition No.	Condition	Where Addressed in Report
2	17	PRODUCTION DATA The Applicant must: (a) provide calendar year annual quarry production data to MEG using the standard form for that purpose; and (b) include a copy of this data in the Annual Review.	Section 6.4, Appendix F
3	17A	The Applicant must report on water extracted from the site each year (direct and indirect) in the Annual Review, including water taken under each water licence.	Section 9.4.2.2
3	23B	Dewatering Management Plan 23B. The Applicant must prepare a Dewatering Management Plan for the project to the satisfaction of the Secretary. This plan must: (c) include: <ul style="list-style-type: none">* details of:<ul style="list-style-type: none">* off-site water transfer or discharge arrangements; and* Procedures for monitoring on volumes transferred off-site and reporting on this as part of annual review;	Section 9.4 Appendix J
3	38	Waste The Applicant must: (d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.	Section 9.6
5	12	Annual Review	This report

Schedule No.	Condition No.	Condition	Where Addressed in Report
		<p>Prior to recommencing quarrying operations or Fill import, and annually thereafter, the Applicant must submit a review to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary. This review must:</p> <p>(a) describe the development (including any progressive rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;</p> <p>(b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against the:</p> <ul style="list-style-type: none"> • relevant statutory requirements, limits or performance measures/criteria; • requirements of any plan or program required under this consent; • monitoring results of previous years; and • relevant predictions in the documents listed in condition 3 of Schedule 2; <p>(c) evaluate and report on:</p> <ul style="list-style-type: none"> • the effectiveness of the air quality and noise management systems; and • compliance with the performance measures, criteria and operating conditions in this consent. <p>(d) identify any non-compliance over the past calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;</p> <p>(e) identify any trends in the monitoring data over the life of the development;</p> <p>(f) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and</p> <p>(g) describe what measures will be implemented over the current calendar year to improve the environmental performance of the development.</p> <p>The Applicant must ensure that copies of the Annual Review are submitted to Council and are available to the Community Consultative Committee (see condition 8 of Schedule 5) and any interested person upon request.</p>	

2 Scope

This report is the Annual Review (MP10_0014) for the Badgerys Creek Clay Mine located at 235 Martin Rd, Bradfield, NSW 2555, in the Liverpool Council Government Area. The site is approximately 17km south of Penrith, as presented in [Figure One](#). The site includes water-filled voids, a former mine, and demolished brickworks.

This Report was prepared in accordance with Project Approval conditions MP10_0014 consolidated consent for modification 5. The compliance statuses of the Mining Lease (ML - [Appendix B](#)), Environmental Protection Licence (EPL - [Appendix C](#)), and Water Access Licence (WAL - [Appendix D](#)) has not been assessed during the preparation of this Annual Review.

2.1 MINE CONTACTS

Table 2. Contact Details

Aspect	Mine and Rehabilitation Manager
Name	Nelma Arancibia
Company	CSR Limited
Address	39 Delhi Road Level 6, North Ryde, NSW, 2113
Mobile	0424 186 127
Phone	02 9964 1305
Email	narancibia@csr.com.au

2.2 HISTORY OF OPERATIONS

The site is located at 235 Martin Road, Bradfield, accessible at the end of Martin Road off Elizabeth Drive. Boral Bricks Pty Limited (Boral) owned and operated the Badgerys Creek Quarry and Brick Making Facility at Badgerys Creek for over 30 years.

On 27 September 2011, project approval was issued under Section 75J of the EP&A Act for the ongoing production of bricks and the expansion of the existing quarrying operations. Due to uncertain economic conditions and a downturn in residential housing activity, Boral reviewed its bricks production capacity in NSW. Following this review, Boral 'mothballed' its operations at Badgerys Creek effective from 30 March 2012. Shutting down the site gave Boral the option to review its commercial position at a future stage and, if market conditions and business needs allowed, recommence production.

2.2.1 Modification 1

As many of the conditions of consent were not relevant during the shutdown, Boral applied to modify the Project Approval under Section 75W of the EP&A Act. Modification application (10_0014 Mod 1) requested that post-March 2012 activities be limited to:

- minor maintenance and inspection (e.g. water management, equipment testing);
- operation of the retail display facility; and
- irregular and occasional dispatch of bricks from the inventory remaining on-site.

In 2015, Boral and CSR formed a joint venture brick business called Boral CSR Bricks Pty Ltd. The assets held by the respective companies were transferred into the joint venture. At the end of October 2016, CSR acquired Boral's share of the brick business and with it, the Badgerys Creek Quarry and Brick Making Facility.

2.2.2 Modification 2

The 2011 Project Approval did not allow for the exportation of material extracted on-site, which was required due to recent and forecasted closure of many quarries in the region. Also, although the 2011 Project Approval allowed for the storage of finished brick products in the hard stand storage yard, to the east of the brick factory, this storage area would not be used for the storage of bricks manufactured at the site until planning approval has been granted for the upgrade of the existing brick factory and the upgrade has been completed (Modification 3). In the interim CSR urgently required additional finished product storage capacity in the greater Sydney region and therefore proposed to make use of this site for the temporary storage of finished building products.

As the ability to export clay from the Badgerys Creek site and temporarily store finished building products was required as a matter of urgency, CSR lodged a separate modification application (Modification 2) under Section 75W of the EP&A Act for these two activities. CSR obtained planning approval for Modification 2 from DP&E on 5 May 2018.

2.2.3 Modification 3

A review of the business needs forecast an increase in required production at Badgerys Creek. An Environmental Assessment was submitted to propose an:

- Increase in brick production;
- Increase in importation of raw materials;
- Allow continued extraction from Pit 3;
- Increase in laden truck movements;
- And an increase in operational hours.

2.2.4 Modification 4

To address stakeholder requests to facilitate future development associated with the Aerotropolis rezoning of the area due to the construction and development of the Western Sydney Airport (WSA), CSR proposed Modification 4, which broadly consists of dewatering existing voids, continuing the extraction of brick making materials and progressively back filling with Virgin Excavated Natural Materials (VENM) to advance a site able to be used for future industrial development. This modification included changes to the 30-year quarry staging plans and an increase in laden truck movements and hours (for VENM only).

CSR obtained planning approval for modifications 3 and 4 in August 2020.

2.2.5 Modification 5

With the high demand for fill material within the Sydney Metropolitan region due to the number of major infrastructure projects underway, Virgin Excavated Natural Material (VENM) was scarcer than originally anticipated. To allow some flexibility to continue with the project, modification 5 was submitted to allow importation of Excavated Natural Material (ENM) as fill, as well as VENM.

The condition regarding receipt storage and dispatch of brickmaking materials was also modified to remove the end date.

This modification was approved in January 2022.

3 Statement of Compliance

Table 3. Statement of Compliance

Were all conditions of the relevant approvals(s) complied with?	
Major Project Approval MP10_0014 (Mod 5)	No

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

Table 4. Compliance Status Key

Status	Description
Compliant	The proponent has collected sufficient verifiable evidence to demonstrate that all elements of the requirement have been complied with.
Non-Compliant	The proponent has identified a non-compliance with one or more elements of the requirements.
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.

Table 5. Summary of Non-Compliances

Consent No	Compliance Requirement	Development Phase	Evidence and Comments	Status	Where Addressed in this report
Schedule 2 condition 2	Terms of consent	One	Not all conditions of consent are compliant	Non-compliant	This report
Schedule 2 condition 12	Total truck movements	One	Daily truck movements exceeded on three occasions	Non-compliant	Section 6.3
Schedule 3 condition 23	Groundwater monitoring	One	Quarterly monitoring not undertaken as per SWMP	Non-compliant	Section 9.5

4 Actions Required from Previous Reports

CSR received correspondence from DPE dated 29th November 2023 regarding a review of the previous Annual Review. The Annual Review was considered as generally complying with the reporting requirements. Of the eight non-compliances recorded, the ones relating to truck movements and groundwater monitoring frequency were subject to further assessment. The remaining non-compliances relating to general compliance with the SSD CoC, dust monitoring exceedances and notification requirements, have been recorded as breaches with no further enforcement action proposed.

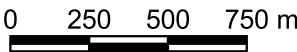
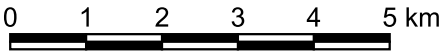
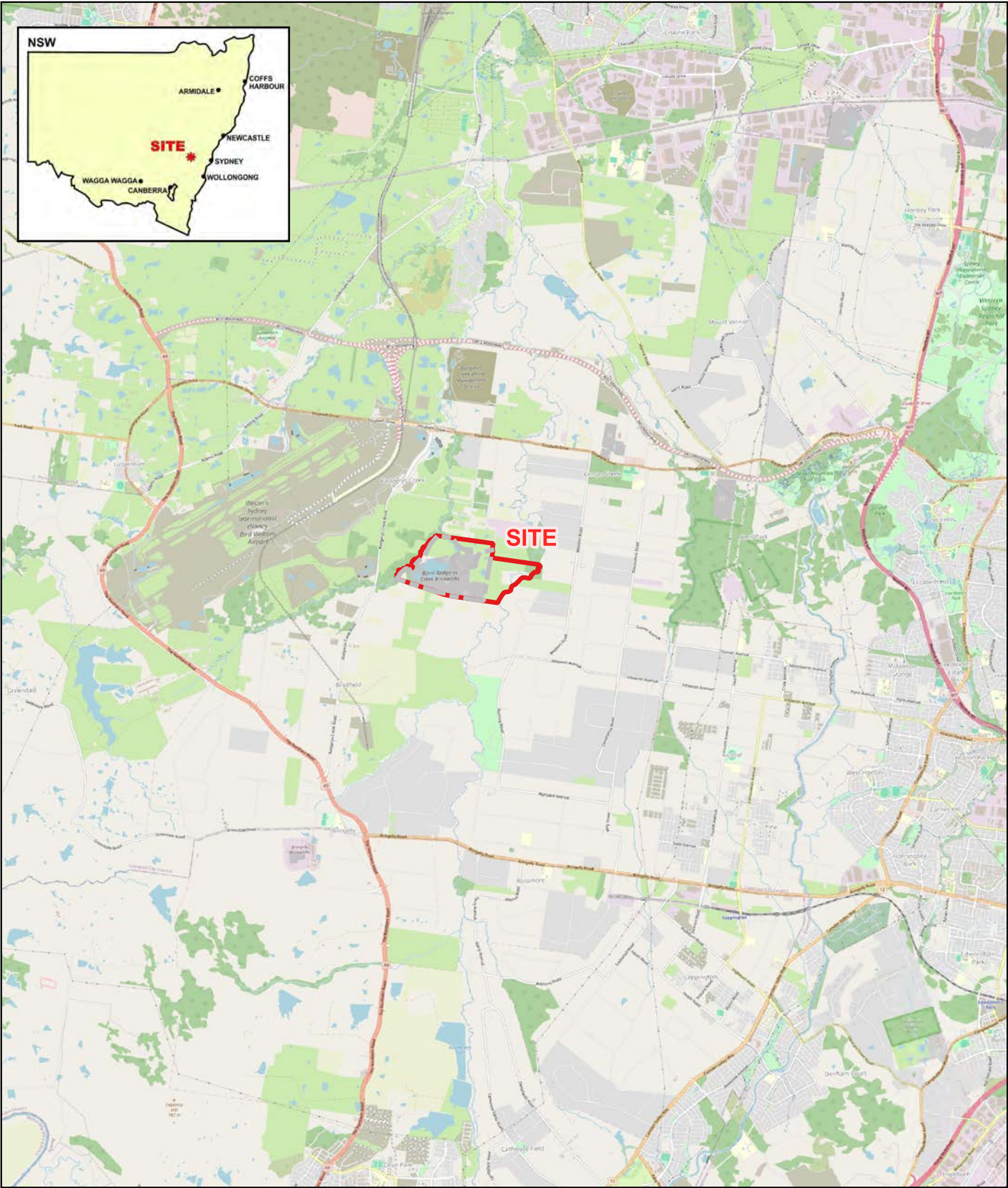
Further correspondence was emailed to CSR on the 16th of May 2024 (see [Appendix K](#)) regarding a non-compliance reported in the 2022-2023 Annual Review. It was noted that groundwater monitoring was completed bi-annually for that reporting period and not quarterly as required by the SWMP. The non-compliance was recorded as a breach of SSD Conditions, but no further enforcement action was undertaken. CSR was required to ensure that all monitoring and reporting is in accordance with the currently approved SWMP while awaiting a revised SWMP to be approved.

A warning letter was received by CSR on the 13th of February 2024 regarding the truck movements (see [Appendix K](#)). DPE advised that the non-compliances have been recorded and breaches no further enforcement action was considered warranted.




Plan of:	Annual Review for Badgerys Creek Clay/Shale Mine 2024 - Site Location	Location:	Martin Road, Badgerys Creek NSW	Source:	Google OpenStreetMap & nearmap - Image Date 29/05/2024 Zone MGA 56	Plan By:	SK/JD
Figure:	ONE	Council:	Liverpool City Council	Survey:	Not Applicable	Project Manager:	LT
Version/Date:	V0 24/06/2024	Tenure:	ML1771 (Act 1992)	Projection:	GDA2020/MGA Zone 56 EPSG:7856	Office:	Thornton
Our Ref:	12625_BB_AR2024_Q001_V0_F1	Client:	CSR Group Property Ltd	Contour Interval:	Not Applicable		



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.



Legend

-  Property Boundary
-  Western Sydney Airport
-  Authority Boundary (ML1771 (Act 1992))

5 Consents, Leases and Licences

5.1 PROJECT APPROVAL

Badgerys Creek Quarry and Brick Making Project received project approval from the Minister for Planning and Infrastructure in 2011 for application number 10_0014. The approval was modified most recently in January 2022 and conditions are included in [Appendix A](#).

Table 6. Development Approvals

No.	Date Approved	Expires
10_0014	Mod 5 January 2022	27 th September 2031 (quarrying activities)

5.2 LAND OWNERSHIP AND LAND USE

The site is freehold land with property descriptions listed below and shown on [Figure Two](#).

- Lots 54-56, DP 3050
- Lots 1-3, DP 1278780

6 Activities During the Reporting Period

6.1 EXPLORATION

There were no exploration activities during the report period.

6.2 CONSTRUCTION

No construction activities have occurred during the report period.

6.3 TRUCK MOVEMENTS AND TONNAGES

The consent has limits on extraction, production, receipt and dispatch volumes per calendar year and on total truck movements. During the period truck movements include:

- Dispatch of stored clay for brickmaking and fill purposes on other sites;
- Import of fill materials for rehabilitation;
- Import of building products for storage on site by Monier;
- Miscellaneous, such as water carts and maintenance vehicles.

The intersection upgrade has not yet occurred, and the Development is in Phase 1. There were 3 exceedances of daily truck movements on Saturdays during the reporting period, as shown in *Table 7*, and none on weekdays. Schedule 2, Condition 12 permits 120 truck movements (in and out) between Monday to Friday, or 60 trucks entering and leaving the site. 40 truck movements are permitted on Saturdays, or 20 trucks entering and leaving the site. 40 truck movements are permitted on Sundays but limited to fill importation only. These exceedances were reported to the Department (see [Appendix I](#)) and a warning was issued (see [Appendix K](#)). The warning was inclusive of exceedances noted in the previous reporting period and well this current reporting period.

Table 7. Truck Movements Exceedances Saturdays in the Report Period

Date	Day	Sum of Laden Trucks	Limit Laden Trucks Saturday
22/7/2023	Saturday	53	20
15/7/2023	Saturday	27	20
3/6/2023	Saturday	26	20

6.3.1 Measures Put in Place to Prevent Further Exceedances

A heavy vehicle automated monitoring system was installed and commissioned at the development. The system is installed at the main central access gate into the site (refer to *Image 1 & 2* and *Figure 3 in Appendix I*) to ensure all heavy vehicle movements are recorded, as vehicles drive across the laser (which is positioned at a height to exclude light vehicles) the interruption registers a movement and record a timestamp. This occurs on both the entry and exit lanes. Once the truck numbers are approaching the daily limit, a notification is sent to the site manager noting that the site is approaching the daily limit, then communication is sent to the site contractor noting that traffic is to cease (incoming or outgoing heavy vehicle movements) when limits is reached. When the daily limit has been reached, a red light will be activated, and the main access gate will automatically close. This lockout will remain until the next day when heavy vehicle movements restarts.

Graph 1. Total Truck Movements During Report Period

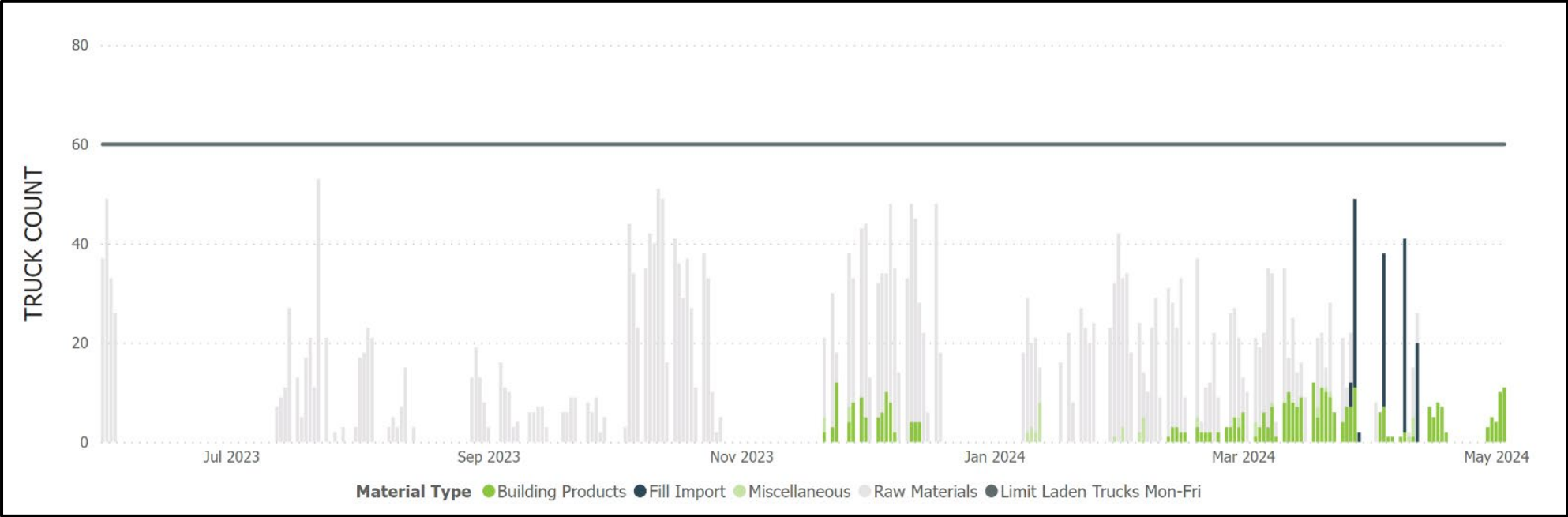


Table 8. Extraction, Production and Material Movements in the Report Period

Activity	Limit (Tonnes per Calendar Year)	Volume Report Period
Extraction from Pit 3	420,000	0
Receive raw materials for brickmaking	215,000 (Phase 1)	0
Dispatch raw materials	275,000	109,103
Brick Production	300,000	0
Dispatch finished building products	330,000	0

Table 9. Material Type Movements in the Report Period

MATERIAL TYPE Month	Building Products		Fill Import		Miscellaneous		Raw Materials		Total	
	Tonnes	Laden Trucks	Tonnes	Laden Trucks	Tonnes	Laden Trucks	Tonnes	Laden Trucks	Tonnes	Laden Trucks
May 2023							1,392	37	1,392	37
June 2023							4,064	108	4,064	108
July 2023							7,794	203	7,794	203
August 2023							5,701	168	5,701	168
September 2023							5,001	136	5,001	136
October 2023							21,325	603	21,325	603
November 2023	874	38			0	6	5,262	139	6,136	183
December 2023	1,083	48					17,140	454	18,223	502
January 2024					0	16	12,341	324	12,341	340
February 2024	839	36			0	14	18,067	440	18,906	490
March 2024	3,434	151	1,753	45		8	10,297	279	15,484	483
April 2024	1,270	56	3,346	90		5	719	25	5,334	176
May 2024	585	25							585	25
Total	8,084	354	5,099	135	0	49	109,103	2,916	122,286	3,454

6.4 MINING OPERATIONS

No mining was undertaken during the reporting period. The proposed works for the next reporting period are displayed on [Figure Three](#). Schedule 2 Condition 17(b) of the consent requires the annual quarry production data as submitted to Department Regional NSW - Mining, Exploration and Geoscience (MEG) to be included in the Annual Review, see Appendix F.

Phase 1 is expected to take more than 5 years, and includes the following activities:

- Dewatering of Pits 2 and 3 to Pit 1
- Dewatering of Pit 1, with use of water for:
 - Onsite processes under WAL 24346
 - Transfer to Western Sydney Airport under agreement (underway)
 - Discharge to local creeks under EPL 684
- Importation of Virgin Excavated Natural Materials (VENM) or Excavated Natural Material (ENM) to fill Pits 1 and 2
- Progressive backfilling of Pit 3 with VENM/ENM
- Construction activities associated with planned rehabilitation works.

Operations on the site occur within the hours shown in [Table 10](#).

Table 10. Hours of Operation

Activity	Days	Permissible Hours
Quarrying operations (excluding truck arrival, loading and dispatch)	Monday to Saturday Sundays or Public Holidays	7:00 am to 6:00 pm At no time
Brickmaking Activities	Monday to Sunday	24 hours
Raw materials truck arrival and dispatch	Monday to Friday Saturday Sunday and Public Holidays	6:00 am to 10:00 pm 6:00 am to 6:00 pm At no time
Finished Products truck arrival and dispatch	Monday to Friday Saturday Sunday and Public Holidays	5:00 am to 10:00 pm 6:00 am to 6:00 pm At no time
Fill importation truck arrival and dispatch	Monday to Friday Saturday Sunday Public Holidays	7:00 am to 6:00 pm 7:00 am to 6:00 pm 9:00 am to 6:00 pm At no time
Cash Sales	Monday to Friday Saturday Sunday and Public Holidays	6:00 am to 6:00 pm 6:00 am to 6:00 pm At no time
Sales Selection and Display Centre	Monday to Sunday	8:00 am to 5:00 pm
Maintenance	At any time provided activities are not audible at a privately-owned residence	

6.5 MAINTENANCE

Maintenance activities on the site this report period included contractors accessing the site to collect samples for environmental monitoring.

7 Incidents

No incidents have been recorded resulting from project-related activities during the reporting period. No further action is required.

8 Complaints

No complaints were recorded during the reporting period.

9 Environmental Management and Performance

The location of monitoring points is provided on [Figure Two](#).

9.1 CLIMATE SUMMARY

A weather station was installed in December 2016.

9.1.1 Relevant Statutory Requirements and Performance Criteria

Consent conditions require that meteorological monitoring is undertaken primarily to determine when noise criteria apply. Monitoring is also required in order to minimise air quality impacts under adverse conditions. More specifically Condition 14 of Schedule 3 requires meteorological monitoring. The monitoring station must comply with the following guidelines and policies.

- Approved Methods for Sampling of Air Pollutants in New South Wales guideline; and
- Capable of continuous measurement of stability class in accordance with the NSW Industrial Noise Policy.

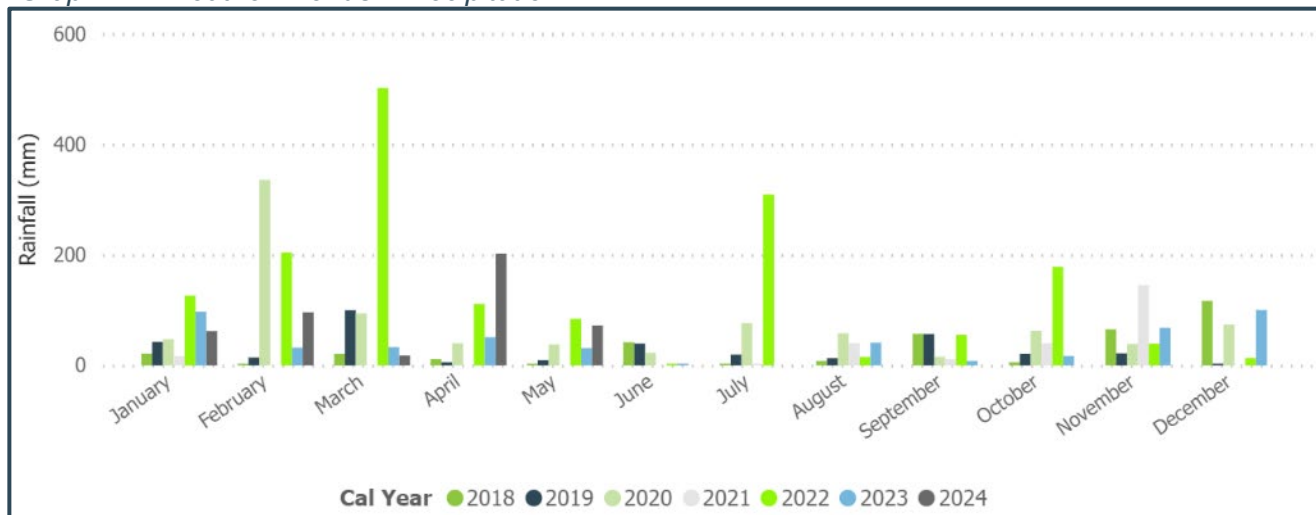
9.1.2 Climate Monitoring Trends

The report period has been warmer than average, and rainfall has been lower.

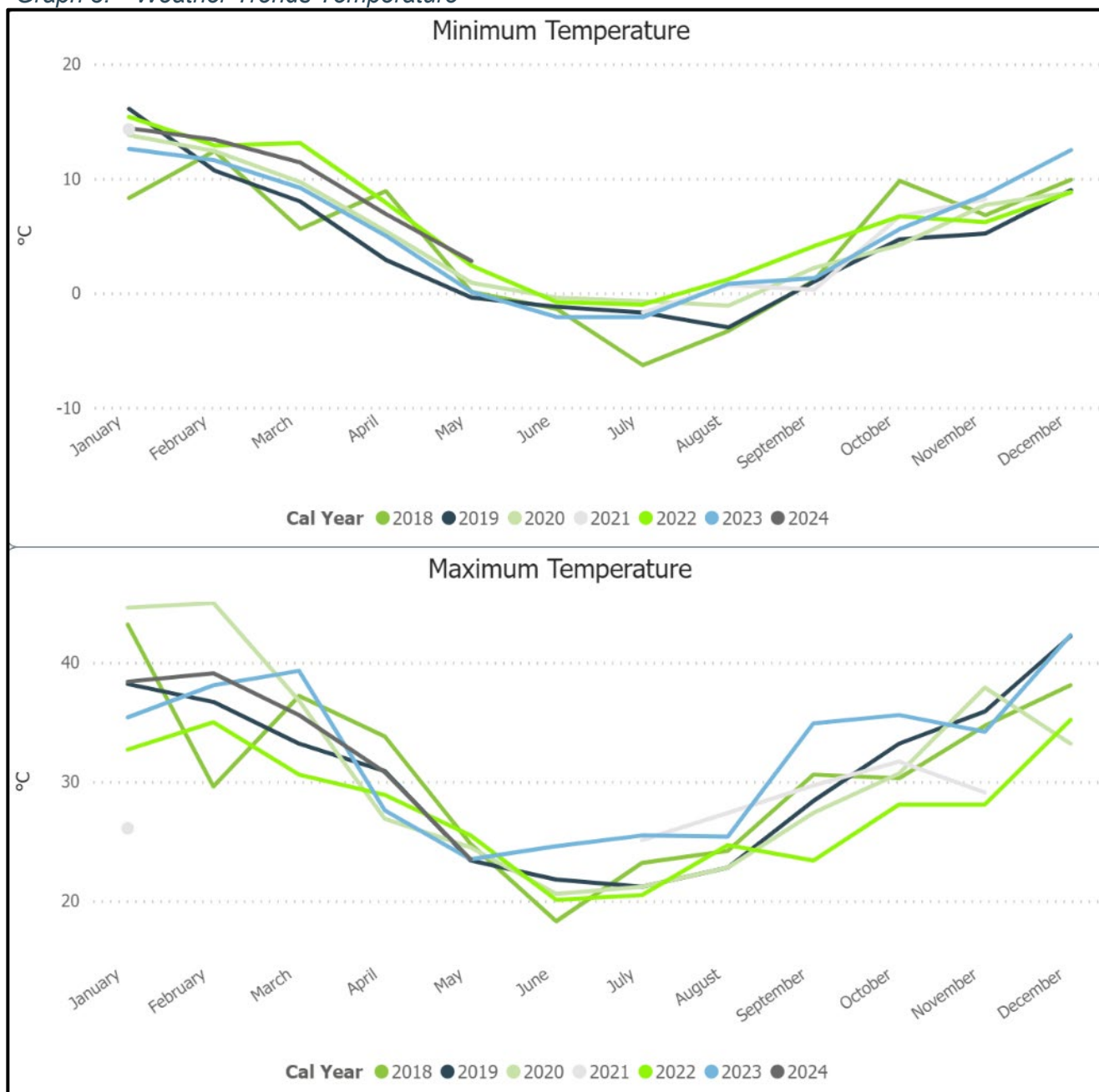
Table 11. Weather Station Data During Report Period

Month	Cal Year	Rain (mm)	Average of Temperature (°C)	Min of Temperature	Max of Temperature	Average of Humidity
May	2023	31	11.5	0.1	23.1	72.7
June	2023	3	10.9	-2.1	24.6	72.8
July	2023	0	11.2	-2.1	25.5	72.9
August	2023	41	12.5	0.8	25.4	74.0
September	2023	8	15.9	1.3	34.9	62.9
October	2023	17	18.2	5.6	35.6	59.4
November	2023	68	20.0	8.6	34.2	73.6
December	2023	100	22.8	12.5	42.3	70.9
January	2024	62	23.1	14.4	38.4	76.1
February	2024	96	22.9	13.4	39.1	76.3
March	2024	18	21.2	11.4	35.6	74.4
April	2024	202	17.3	6.9	30.8	75.8
May	2024	6	15.2	11.1	20.0	79.0
Total		652	17.4	-2.1	42.3	71.9

Graph 2. Weather Trends - Precipitation



Graph 3. Weather Trends Temperature



9.2 NOISE

There are consent conditions requiring compliance with noise levels during quarrying operations and storage yard activities. Since none of these activities have occurred, these conditions are not triggered, and no noise monitoring is strictly required. Notwithstanding this, noise monitoring has commenced in accordance with the approved Noise Management Plan (NMP).

Noise Monitoring was undertaken in March 2024 and May 2024 (see [Appendix G](#)). The assessment has identified that noise emissions generated by CSR were measured to be below the relevant noise criteria throughout the survey period, satisfying the relevant noise conditions. The May 2024 Road Traffic noise levels complied with the relevant noise criteria.

The noise management system is effective for the current stage of the operation.

9.3 AIR QUALITY

9.3.1 Performance Criteria

The consent and Air Quality Management Plan specifies the following Air Quality Criteria to be met at any residence on privately owned land:

Table 12. Air Quality Criteria

Parameter	Criteria [^]	Units	Averaging Period	Source
Total Suspended Particulates (TSP)	90 [*]	µg/m ³	Annual	Sched 3 Cond 9
PM₁₀	50 [#]	µg/m ³	24 hours	Sched 3 Cond 9
PM₁₀	30 [*]	µg/m ³	Annual	Sched 3 Cond 9
Insoluble Solids (Deposited Dust)	4 [*]	g/m ² /month	Annual	Sched 3 Cond 9
Insoluble Solids (Deposited Dust)	2 [#]	g/m ² /month	Annual	Sched 3 Cond 9

^{*} Cumulative impact (i.e. increase in concentrations due to the project plus background concentrations due to all other sources).

[#] Incremental impact (i.e. increase in concentrations due to the project alone, with zero allowable exceedances of the criteria over the life of the project).

[^]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.

Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, *AS/NZS3580.10.1: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter -Deposited Matter - Gravimetric Method*.

9.3.2 Predictions

An air quality assessment undertaken for the modified project by specialist air quality consultants (Todoroski Air Sciences, Feb 2019) predicts no exceedances of relevant criteria during Pit 3 extraction operations.

The following table summarises the predictions made for the Pit 3 extraction operations at the closest sensitive receptors.

Table 13. Air Quality Predictions

Sensitive Receptor	Nearest Air Quality Monitoring Location	PM2.5 (µg/m3)	PM10 (µg/m3)	TSP (µg/m3)	Insoluble Solids (g/m2/month)
R5	D4, HVAS	7.3	17.7	62.9	2.8
R9	D1	7.4	18.3	65.5	2.9
R12a	D2	7.1	17	60.6	2.7

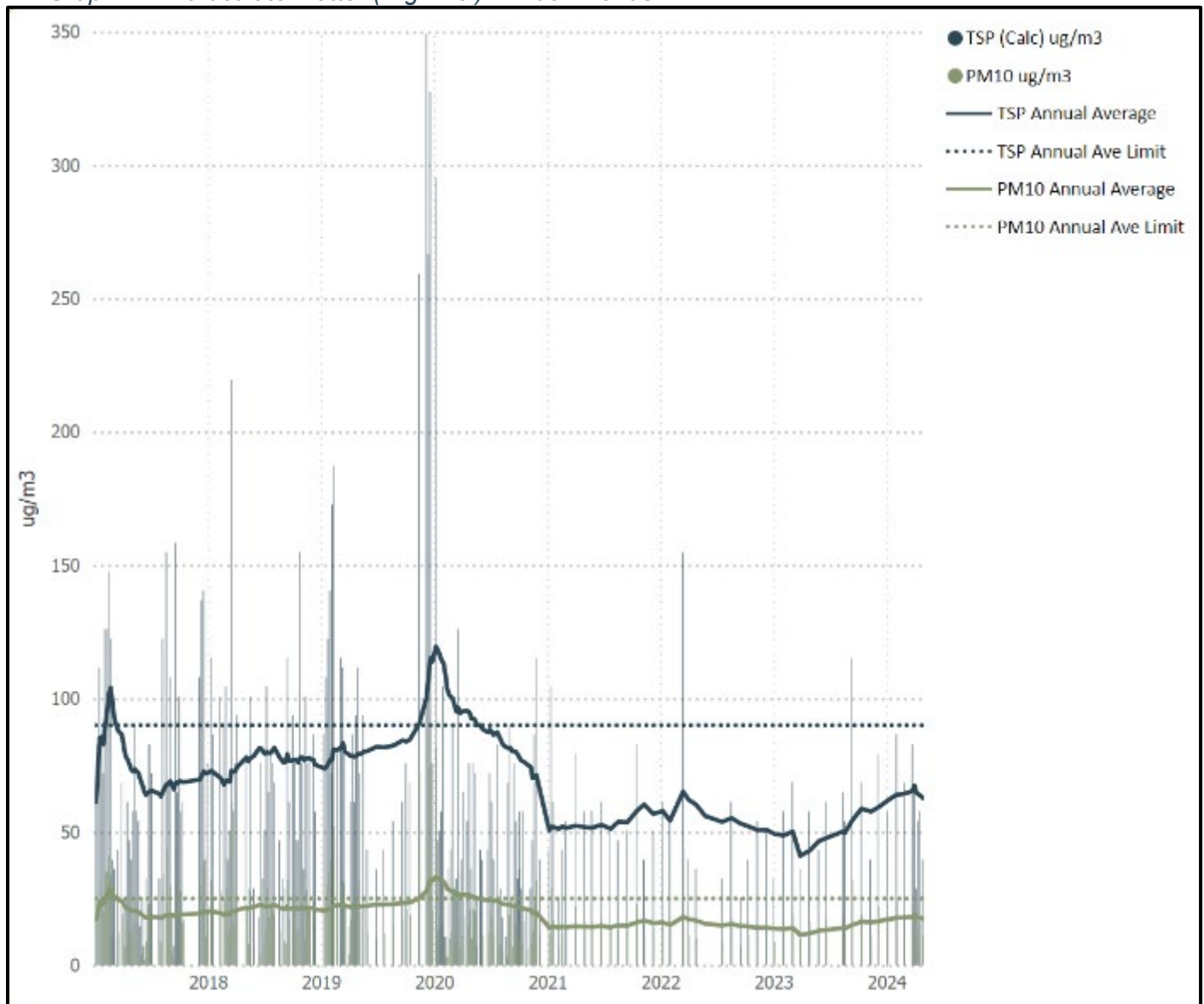
9.3.3 Monitoring Results

Monitoring results obtained this report period are from the High Volume Air Sampler at location shown on [Figure Two](#). A Dust Trax is also used for instantaneous readings on site during site operations.

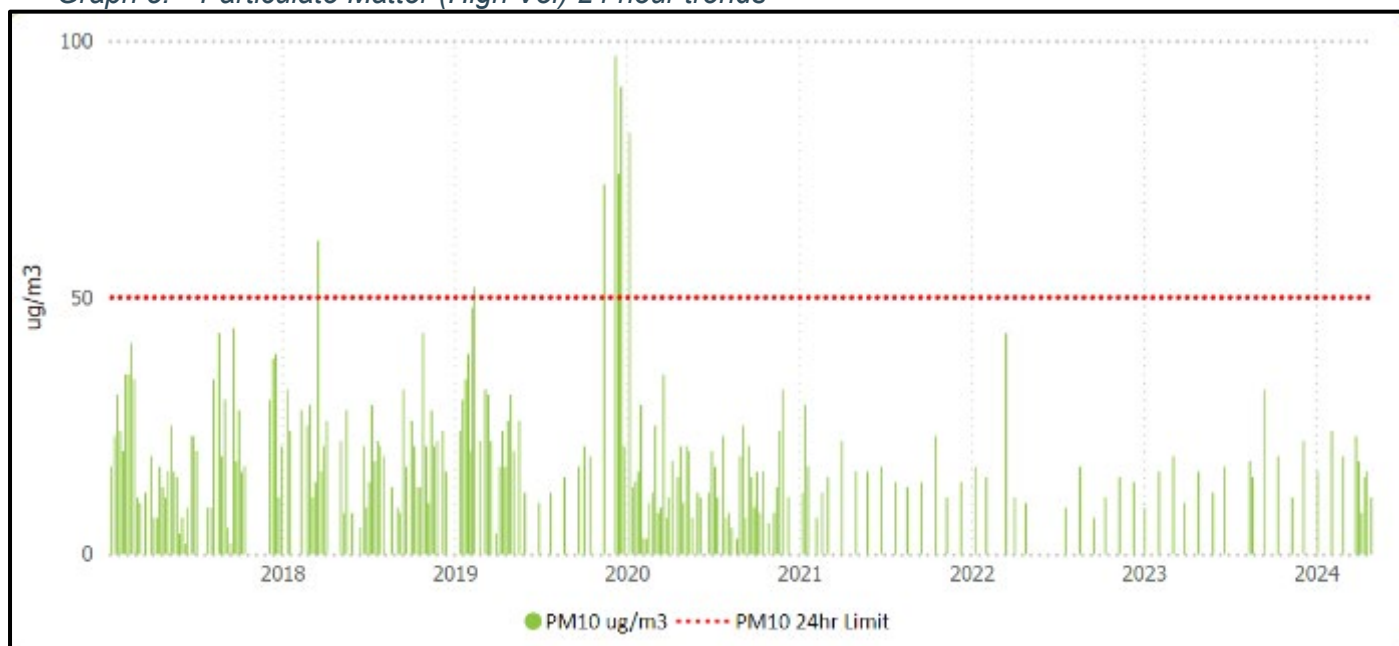
9.3.3.1 Particulate Matter

A High Volume Air Sampler with a PM₁₀ inlet was installed on the site in December 2016. There were no exceedances of either the 24 hour or Annual Average Particulate Matter less than 10 microns (PM₁₀) criteria within the report period. Total Suspended Particulates (TSP) is calculated from the PM₁₀ using the ratio described in the Air Quality Management Plan (AQMP) and trends are shown in the graphs below. This calculated result did not exceed the Annual Average limit for TSP in this report period. Particulate Matter is also measured in “real time” using a portable Dustrax instrument. This instrument gives an output every minute for PM Total, PM 2.5 and PM 10 and is monitored for compliance by the site environmental manager.

Graph 4. Particulate Matter (High Vol) Annual Trends



Graph 5. Particulate Matter (High Vol) 24 hour trends



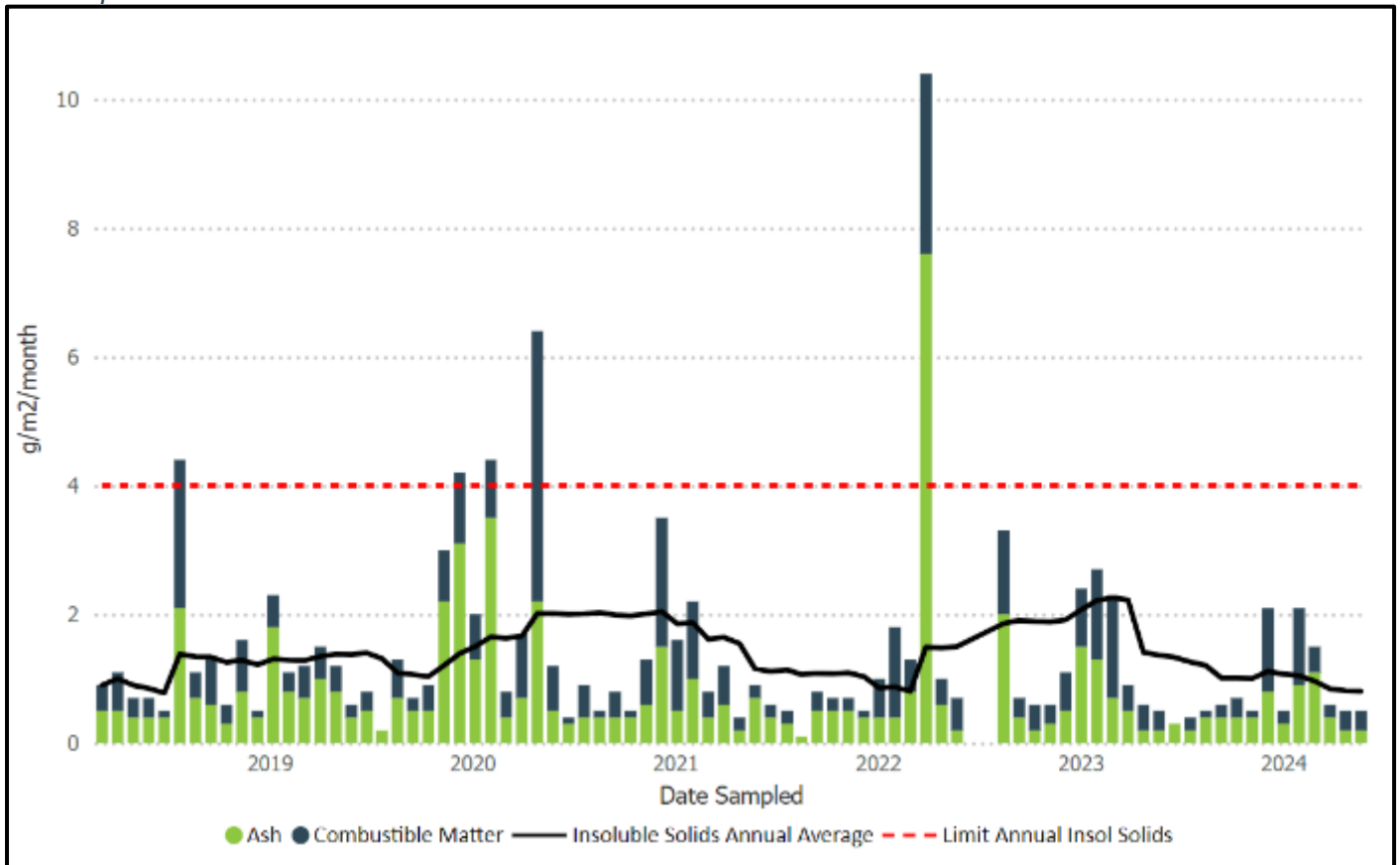
9.3.3.2 Depositional Dust Gauge Monitoring

Air-borne dust is monitored using static depositional dust gauges. Results for four dust gauges (locations shown in [Figure Two](#)) up to May 2024 are summarised below. Trends are shown on the following graphs and high results summarised in [Table 15](#). There were no exceedances of the required limits in the report period.

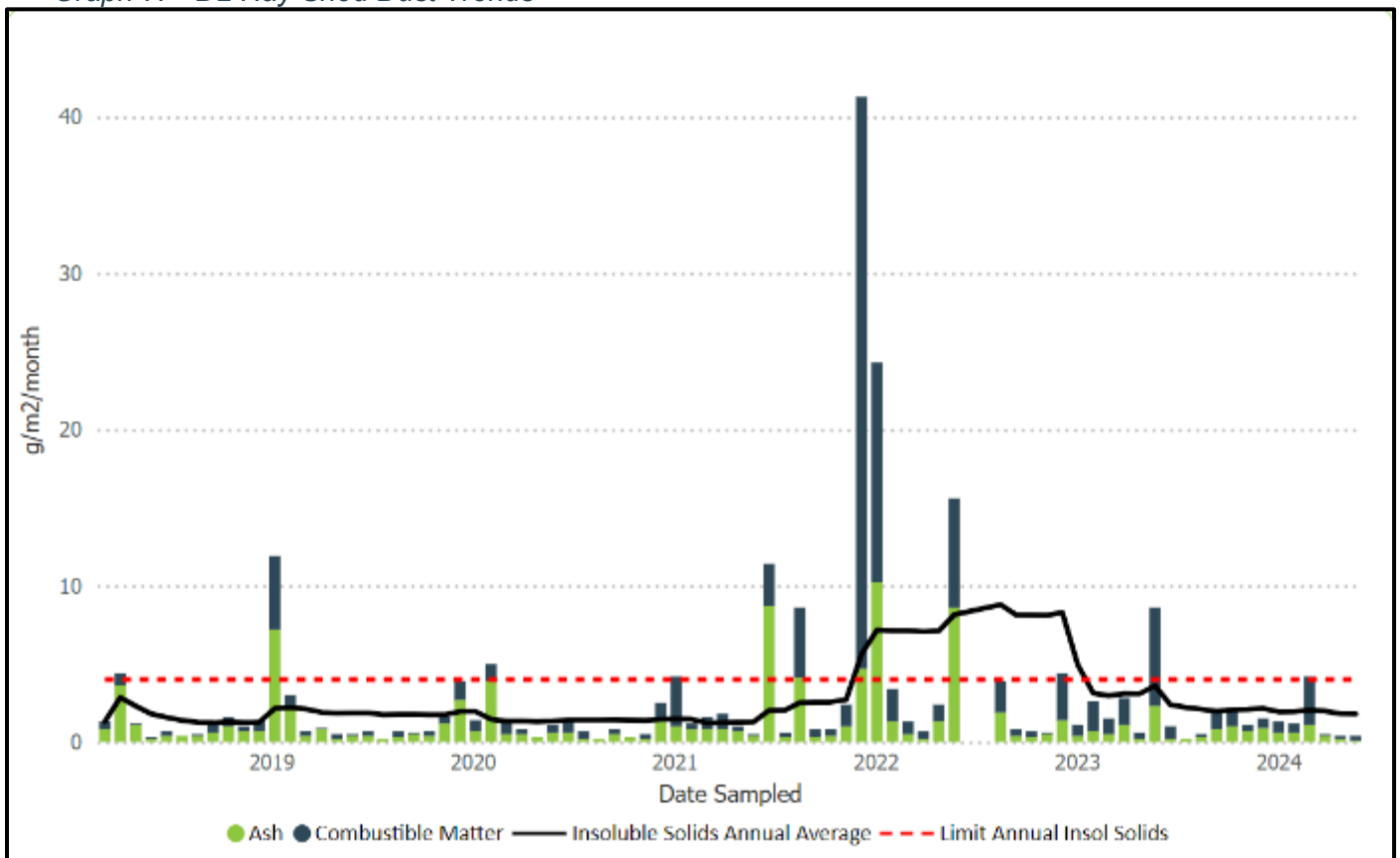
Table 14. Insoluble Solids Annual Averages at Report Period End

Location	Insoluble Solids Annual Average	Limit-Annual Insol Solids
D1 Martin Rd - Near Resident	0.8	4
D2 Hay Shed	1.9	4
D3 Bundwall Near Inghams	1.4	4
D4 Old House	1.5	4

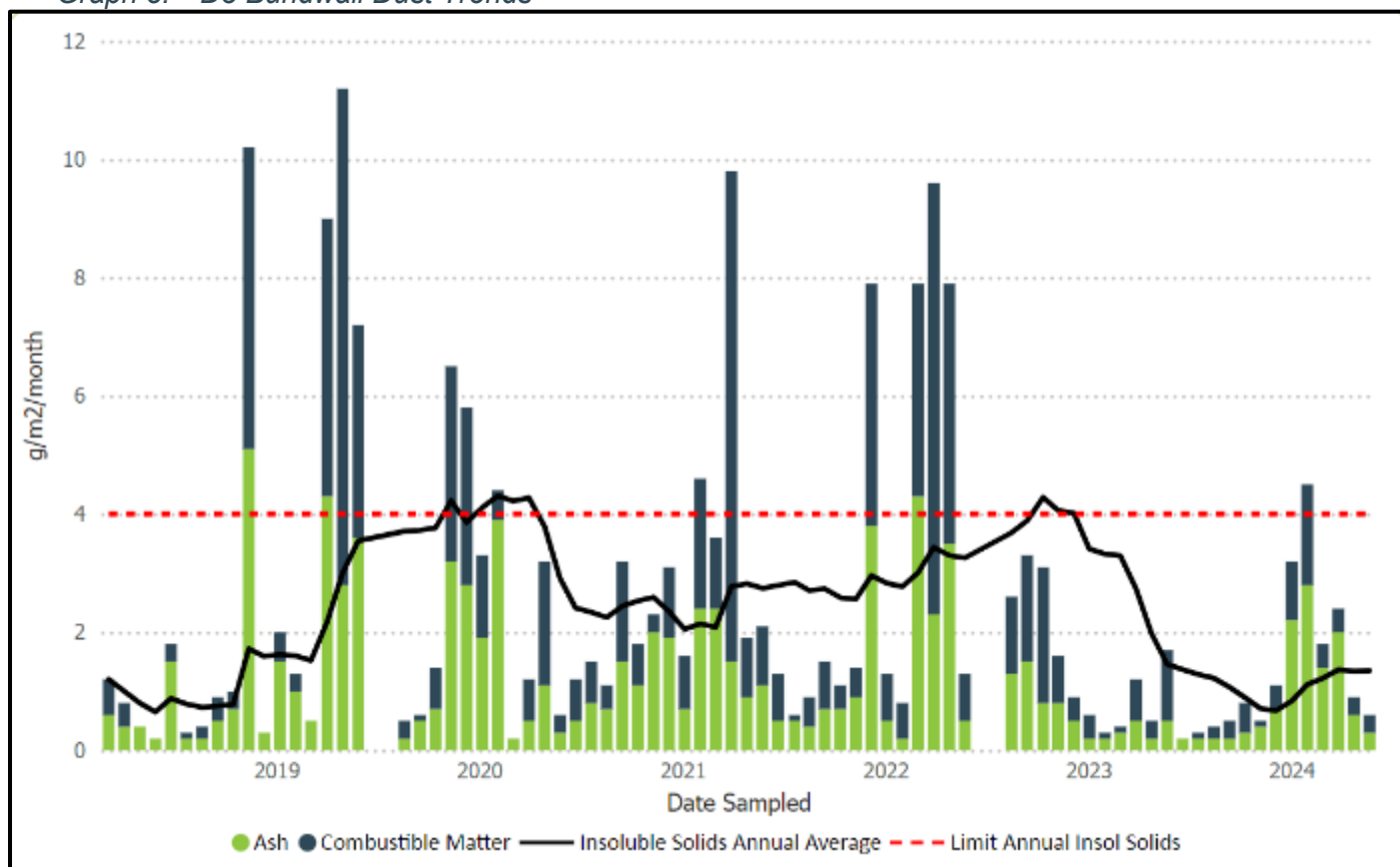
Graph 6. D1 Martin Rd Dust Trends



Graph 7. D2 Hay Shed Dust Trends



Graph 8. D3 Bundwall Dust Trends



Graph 9. D4 Old House

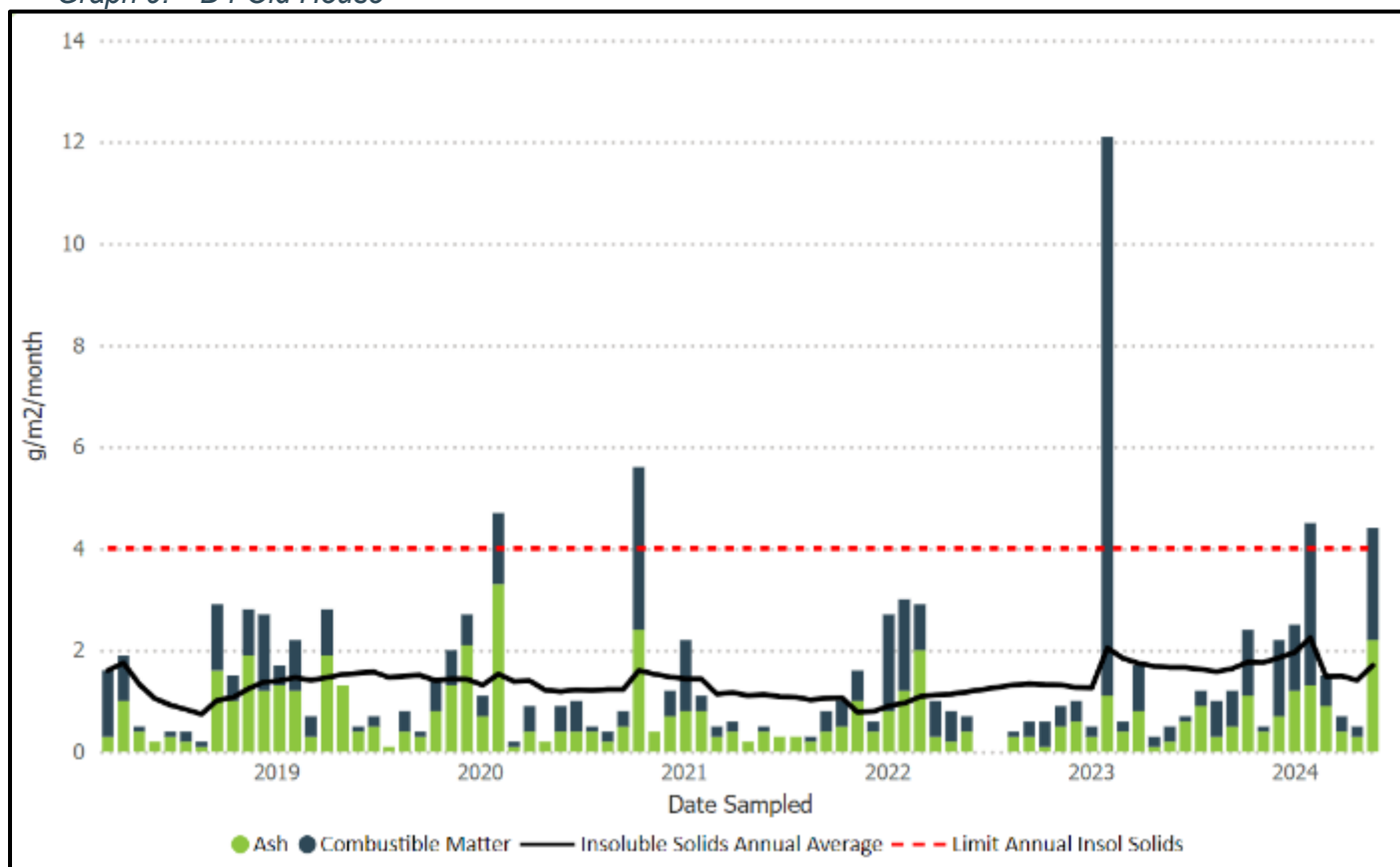


Table 15. Monthly Depositional Dust High Results

Date On	Date Sampled	Location	Insoluble Solids	Sampling Comments
25/04/23	23/05/23	D2 Hay Shed	8.6	Major algae, vegetation. Bird droppings in funnel
2/01/24	30/01/24	D3 Bundwall Near Inghams	4.5	Insects
2/01/24	30/01/24	D4 Old House	4.5	Bird droppings, insects, algae.
30/01/24	27/02/24	D2 Hay Shed	4.2	Insects

NOTE: These are not non-compliances as the Annual Averages were not exceeded.

9.3.4 Effectiveness of Air Quality Management System

There have no exceedances of the required air monitoring criteria this report period. The effectiveness of the air quality system is adequate for the activities undertaken in the report period.

9.4 SURFACE WATER

9.4.1 Performance Criteria and Predictions

9.4.1.1 EPL Criteria

The EPL requires discharge water to be monitoring continuously during discharge via inline instrumentation for Electrical Conductivity, pH and Turbidity, see [Table 16](#). Dissolved Aluminium is required to be tested monthly if discharging.

Table 16. EPL Water Discharge Criteria

EPA ID	Type	Location Description	Pollutant	Limit
3	Discharge to waters and water quality monitoring	Outlet from Sediment Basin B as described in 'Water Pollution Impact Assessment for Discharge of Stormwater Runoff from Disturbed Areas at PGH Badgerys Creek (Version 2)', PGH Bricks, 04/02/2021	pH Turbidity Conductivity Diss Aluminium	6.5 – 8.5 50 NTU <0.055mg/L

9.4.1.2 Surface Water Management Plan Criteria

From the Surface Water Management Plan (SWMP), baseline criteria for assessment of performance of the Site with regard to the on-site water management system as well as potential off-site impacts on water quality and stream health are shown in [Table 17](#). The off-site performance criteria and trigger values for water quality and stream health reflect the degraded environmental values in Badgerys Creek (AECOM, 2010). There were no specific water quality predictions made in the approval documents.

Table 17. Surface Water Trigger Levels and Performance Criteria

Aspect	Trigger Level	Performance Criteria
Water Management System		
Industrial Water Use	Trigger levels for industrial water use in accordance with brick plant process design (to be developed).	Industrial process water meets processing plant design requirements (to be developed).
Discharge	pH: 6.5 – 8.5 Turbidity: 50 NTU Electrical Conductivity: Reported only Dissolved Aluminium: 0.055mg/L	Discharged water meets EPL criteria.
Creeks and Other Water Bodies		
Water Quality in Creeks**	Total Phosphorus: 1.0mg/L Filterable reactive phosphate: 0.35mg/L Oxides of nitrogen: 0.18mg/L Ammonium: 0.48mg/L Dissolved Oxygen: 85 – 110 % saturation Total Nitrogen: 8.7mg/L pH: 6.5 – 8.0 Conductivity: 3,200µS/cm	No exceedance of the 95% confidence interval for baseline monitoring results for Badgerys Creek.
Stream Health	Visual baseline to be established in close vicinity to the following points: <ul style="list-style-type: none"> • Confluence of Badgerys Creek tributary and Badgerys Creek; • 100 m upstream of the confluence point of Badgerys Creek tributary and Badgerys Creek • 100 m downstream of the confluence point of Badgerys Creek tributary and Badgerys Creek Establish transect for assessment of changes to channel morphology, including geo-referenced photo point monitoring at each of the three above points Condition assessment of riparian vegetation to establish baseline photo point monitoring at each of the three above points	No significant variation from baseline identified in biannual spring and no significant observed variation from baseline vegetation condition identified in biannual spring and autumn monitoring

*Note: Values are extracted from ANZECC (2000) default trigger values for slightly disturbed ecosystems in South-East Australia.)

** Value derived from baseline monitoring data for the 95% confidence interval for expected conductivity results (see the SWMP for details).

9.4.2 Monitoring Results

9.4.2.1 Discharges

There have been no discharges to the creeks during the report period.

9.4.2.2 Water Extracted

Schedule 2 Condition 17A requires that all water extracted from the site either direct or indirect must be reported in the Annual Review. Procedures for monitoring on volumes transferred off-site are required to be included in the Annual Review under Schedule 3 Condition 23B.

The site reports the following water was transferred to the Western Sydney Airport under the Enforceable Undertaking, as reported to NRAR every 6 months.

Table 18. Water Transfer to WSA Volumes

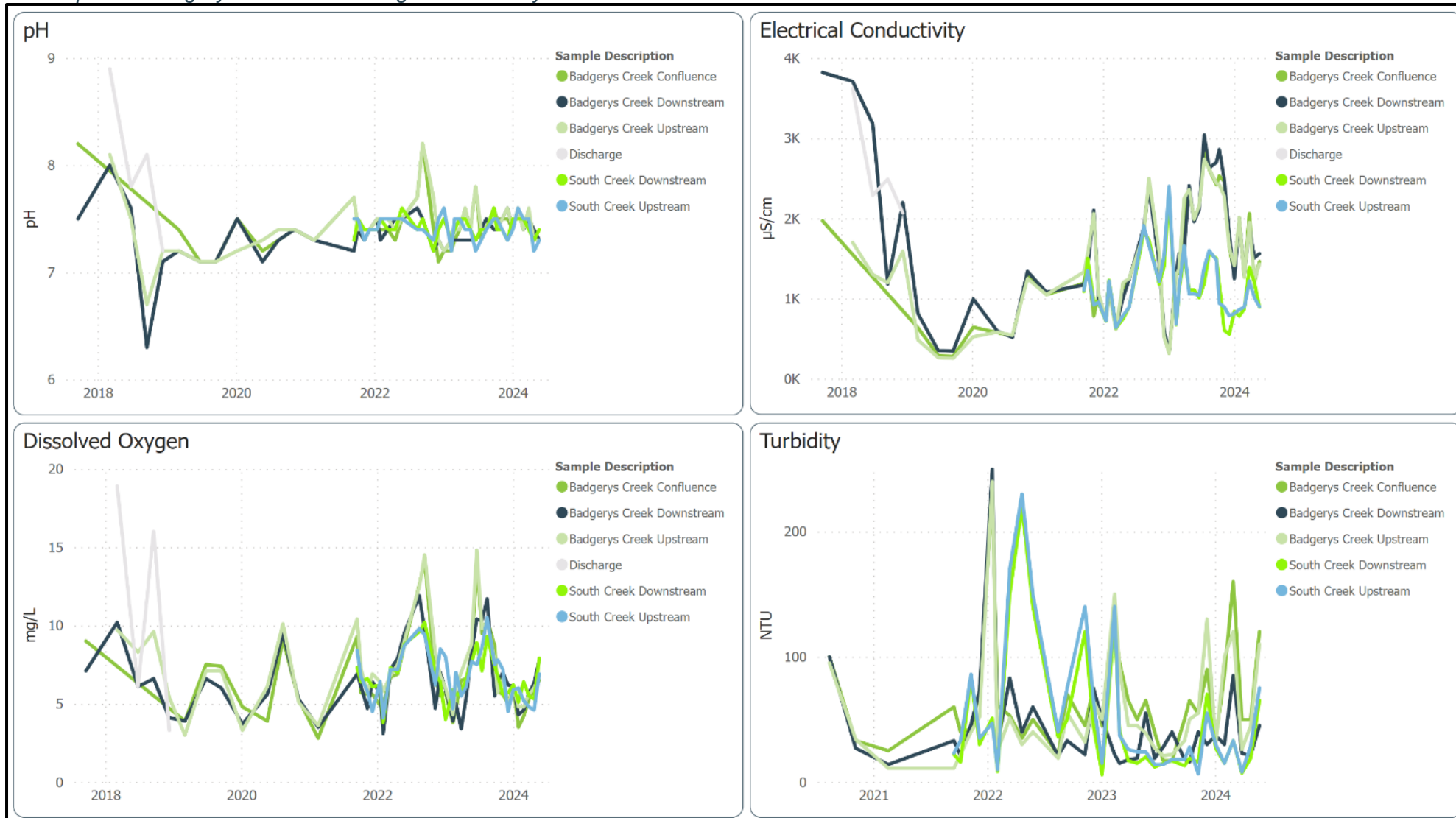
Date	Flowmeter Start	Flowmeter end of Day	Monthly Volume (KL)	Comments
1/12/2012	588,025	588,025	-	Q4: 1st December 2022 - 3rd March 2023
2/03/2023	588,025	593,378	5,353	Q4: 1st December 2022 - 3rd March 2023
30/06/2023	593,378	610,114	16,736	Q1: March 2023
25/07/2023	610,114	613,895	3,781	Q2: July 2023
24/01/2024	613,895	642,641	28,746	Q2: July 2024

No water has been extracted or taken under the water licence ([Appendix D](#)), and no discharges have occurred in accordance with the EPL.

9.4.2.3 Creek Monitoring

Badgerys and South Creeks have been monitored to assist with baseline values. Results are given in the tables and graphs below.

Graph 10. Badgerys Creek Monitoring Trends – Physical Attributes



Graph 11. Badgerys Creek Monitoring Trends – Nutrients

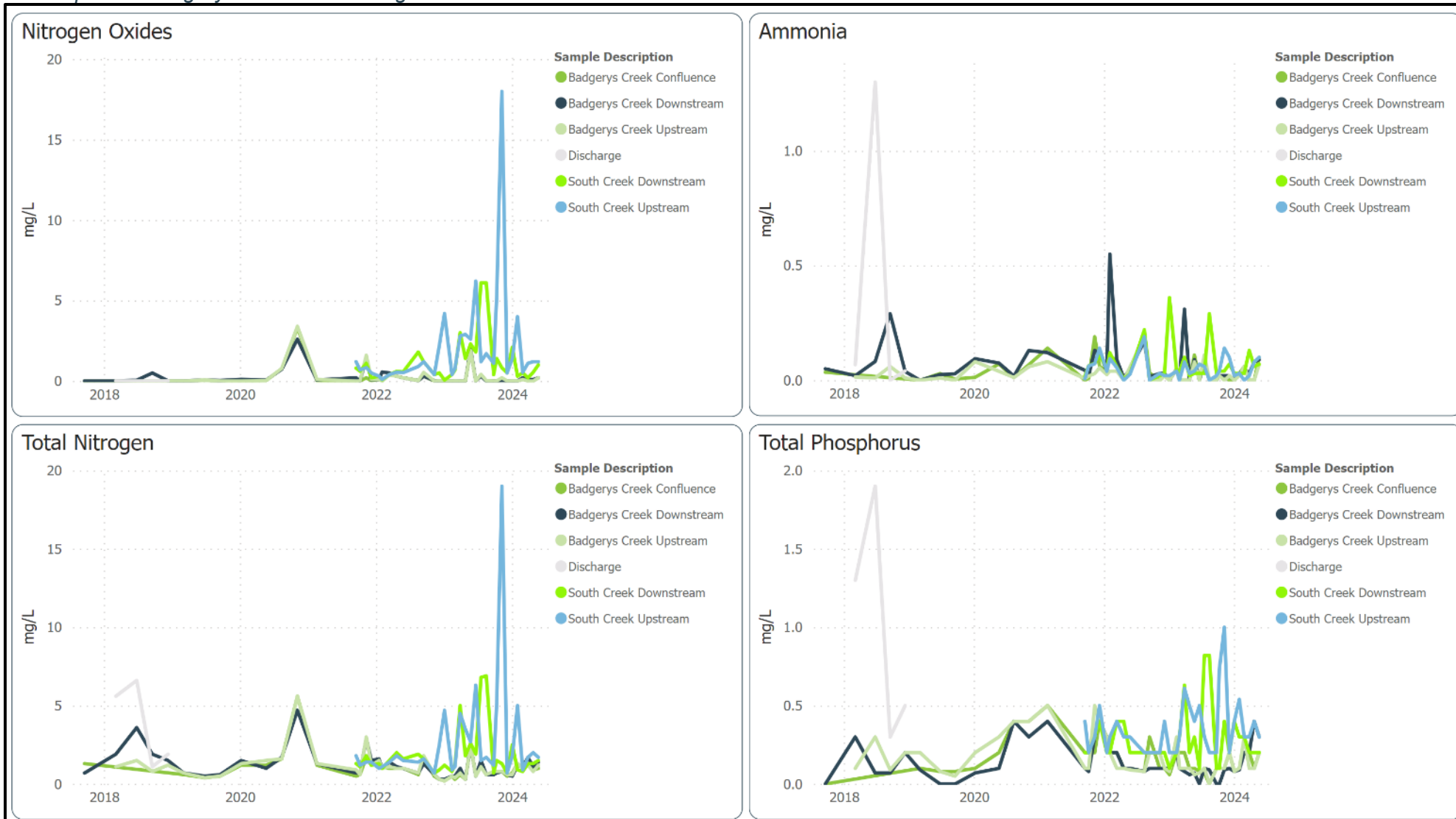


Table 19. Creek Water Results

Creek Water Summary for Report Period

Units are mg/L except where noted

5/05/2023

4/05/2024

Sample Description	No of Samples	Min of pH	Average of pH	Max of pH	Min of Electrical Conductivity uS/cm	Average of Electrical Conductivity uS/cm	Max of Electrical Conductivity uS/cm	Min of Dissolved Oxygen	Average of Dissolved Oxygen	Max of Dissolved Oxygen
▼										
South Creek Upstream	13	7.2	7.4	7.6	785	1,076	1,600	4.5	6.8	10.5
South Creek Downstream	13	7.3	7.4	7.6	557	1,063	1,570	5.1	6.7	9.3
Badgerys Creek Upstream	13	7.3	7.5	7.8	1,230	2,012	2,740	4.8	7.4	14.8
Badgerys Creek Downstream	13	7.3	7.4	7.6	1,250	2,118	3,040	4.3	7.1	11.7
Badgerys Creek Confluence	13	7.3	7.5	7.8	1,200	2,035	2,820	3.5	7.1	14.1

Sample Description	No of Samples	Min of NOx as N	Average of NOx as N	Max of NOx as N	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
▼										
South Creek Upstream	13	0.500	3.442	18.000	0.00	0.05	0.14	0.7	3.8	19.0
South Creek Downstream	13	0.200	1.775	6.100	0.03	0.06	0.29	0.7	2.2	6.9
Badgerys Creek Upstream	13	0.000	0.203	1.900	0.00	0.02	0.11	0.5	1.0	2.5
Badgerys Creek Downstream	13	0.000	0.210	2.000	0.00	0.03	0.09	0.5	1.0	2.5
Badgerys Creek Confluence	13	0.000	0.190	1.900	0.00	0.02	0.11	0.5	1.0	2.4

Sample Description	No of Samples	Min of Total Phosphorus	Average of Total Phosphorus	Max of Total Phosphorus
▼				
South Creek Upstream	13	0.20	0.42	1.00
South Creek Downstream	13	0.10	0.33	0.82
Badgerys Creek Upstream	13	0.00	0.11	0.30
Badgerys Creek Downstream	13	0.00	0.11	0.40
Badgerys Creek Confluence	13	0.00	0.11	0.20

9.5 GROUNDWATER

9.5.1 Performance Criteria

9.5.1.1 Groundwater Levels

The proponent will not extract any extractive materials or carry out any work in the extraction area below 35 m below the pre-existing natural surface of the ground, other than construction of approved bores or in-pit sumps. The depth of extraction will be confirmed annually via survey.

A total of 12 standpipe piezometers are monitored to augment baseline data.

9.5.1.2 Groundwater Quality

Groundwater quality testing and criteria was informed by the Alluvial Aquifer Assessment and was approved as an Appendix in the SWMP. It includes testing of groundwater monitoring bores, in-pit collected waters, and surface creek waters so that collected sources can be estimated. Parameters currently being monitored to augment baseline data include:

- pH, EC and total dissolved solids (TDS);
- Major cations and anions; and
- Dissolved metals (Aluminium, Arsenic, Chromium, Copper, Lead, Manganese, Molybdenum, Nickel, Selenium, Silver, Zinc, Boron, Iron).

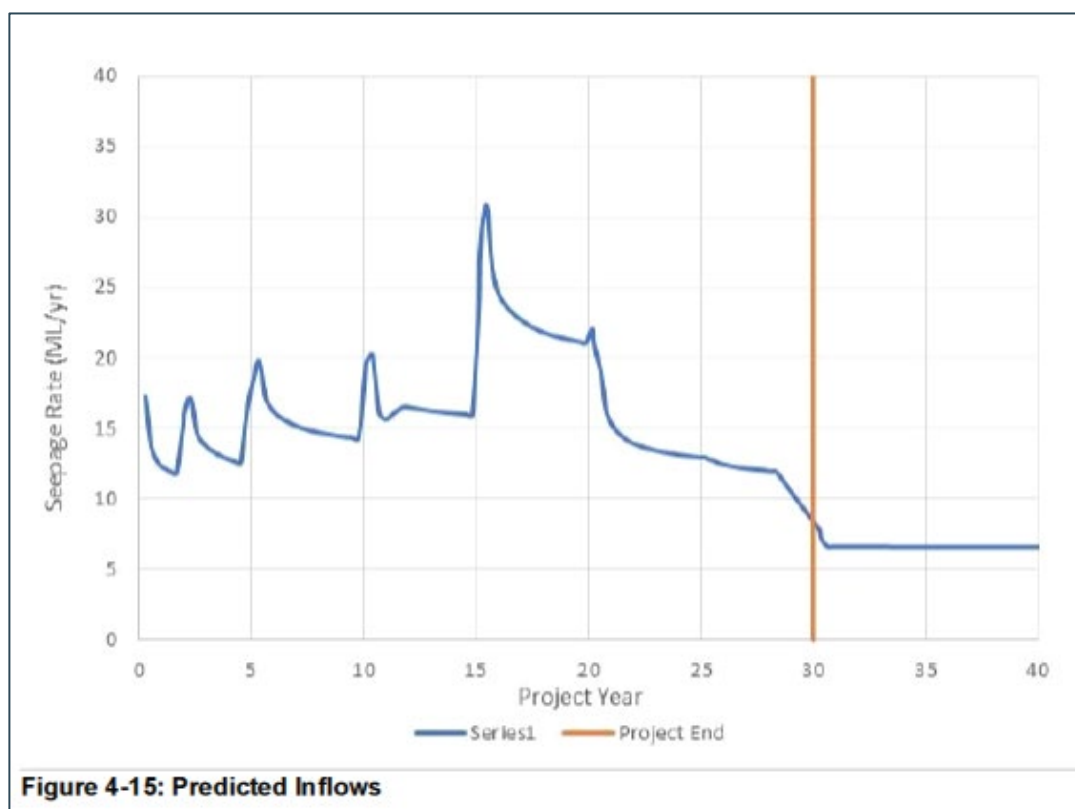
9.5.2 Predictions

9.5.2.1 Groundwater Inflow and Dewatering of Aquifers

The draft Alluvial Aquifer Assessment (Groundwater Exploration Services January 2019) predicted that;

‘Combined temporal seepage into the various separate pit excavations from the prediction model are shown in Figure 4-15. The punctuated nature of increases in seepage rates is partly a function of the drain implementation and the time stepping used within the model. However, it is anticipated that short term increases in seepage rates would occur as new excavation areas are opened. Predicted rates indicate the inflows increase slightly from current static inflow rates into Pit 1 and peaking at approximately 31 ML/yr in Year 16 as multiple excavations are open. A gradual decline following Year 16 to approximately 9 ML/year at the completion of mining activities on site. The decline reflects the progressive backfilling of completed pits and the associated recovery that occurs. Inflows continue to decline following project completion until static conditions prevail at approximately 7 ML/yr similar to the current modelled conditions associated with Pit 1.’

Graph 12. Predicted Groundwater Inflows
(Figure 4-15 of draft Alluvial Aquifer Assessment)



9.5.2.2 Groundwater Levels

There were no specific predictions regarding the groundwater levels in the EIS.

The draft Alluvial Aquifer Assessment predicts that the extent of impact on groundwater level will have a very small footprint surrounding the open excavations with a steep drawdown cone surrounding each one. This will insulate potential impacts on either Badgerys Creek or South Creek, or any alluvium associated with either of these creek systems.

9.5.2.3 Groundwater Quality

The EIS states there is the potential for spills and contamination by metals and hydrocarbons from the machinery, waste disposal, waste oil used in maintenance of equipment and fuel storage areas; however adequate prevention measures should prevent contamination of the groundwater system.

Groundwater Quality monitoring will continue to be undertaken and will be compared to performance criteria once established.

9.5.2.4 Impact of Groundwater Dependant Ecosystems

Dewatering of the alluvial sediments has the potential to result in impacts to base flows and groundwater dependant ecosystems (if present).

The draft Alluvial Aquifer Assessment predicts that overall, the proposal will have a very limited impact on baseflow to local creeks. This is primarily due to limited impact on surficial soils and the influence of low hydraulic conductivities on the groundwater system.

9.5.2.5 Existing Groundwater Users

The draft Alluvial Aquifer Assessment states the closest registered bore not associated with the Project Site is located more than 1km to the north. As impacts are predicted to largely be contained with the project boundaries, no impact to other users is anticipated.

9.5.3 Monitoring Results

Monitoring has been undertaken during this reporting period in October 2023 as an annual monitoring event (see [Appendix G](#)). CSR has since sought clarification with DPE as to whether annual sampling as proposed in the SWMP submitted DPE (yet to be approved) is satisfactory and received advice that monitoring must comply with the approved SWMP ([Appendix K](#)). The currently approved SWMP states quarterly monitored will be undertaken. As such, CSR is not compliant with the monitoring frequency as outlined in with Condition 23 of Schedule 3.

CSR has recommenced quarterly groundwater monitoring in the coming reporting period as advised by the correspondence from DPE. The SWMP will be updated to reflect annual reporting in the future.

In summary the monitoring results indicate that the results are consistent with the previous reporting period. Ground water levels reflect the topography of the site and show poor connectivity within the shale geological unit (Wianamatta Shale). Dewatering activities of Pit 3 do not appear to have an impact on the groundwater elevation.

Water quality data confirms that the groundwater is brackish to saline and generally consistent with the previous reporting year.

9.6 WASTE MANAGEMENT

Condition 39 of schedule 3 requires that waste management and minimisation is reported in the Annual Review. All site contractors remove any rubbish when they leave. There has been no waste received on the site for storage, treatment, processing, reprocessing or disposal.

10 Activities Proposed in the Next ARR Period

10.1 OPERATIONAL ACTIVITIES

Activities proposed for the next reporting period will include:

- Stockpiles containing materials not suitable for brickmaking will be placed within existing Pit 3;
- Importation of fill material to continue;
- Dewater Pit 2 and 1, and continue filling of Pit 3 and Pit 2;
- Upgrade intersection at Martin Rd and Elizabeth Rd.

10.2 IMPROVEMENTS TO ENVIRONMENTAL PERFORMANCE

All management plans have been updated and submitted for DPE approval to encompass all proposed activities in the next reporting period. The operators are undertaking an audit of the site to outline any improvements required and will continue to monitor performance against the current approved management plans.

11 **References**

- Element Environment. (March 2019). *Badgerys Creek Modification 3 Environmental Assessment*.
- Element Environment. (March 2019). *CSR Advanced Manufacturing Hub Modification 4 Environmental Assessment*.
- Todoroski Air Sciences. (Feb 2019). *Air Quality Impact Assessment for Badgerys Ck Modification 3*.
- VGT Environmental Compliance Solutions Pty Ltd. (2022). *Annual Exploration Report*.
- VGT Environmental Compliance Solutions Pty Ltd. (August 2018). *Mining Operations Plan for Badgerys Creek Clay Mine ML1771*.

Appendix A

Consent Conditions

Project Approval

Section 75J of the *Environmental Planning & Assessment Act 1979*

As delegate of the Minister for Planning and Infrastructure, I approve the project 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 project.

Richard Pearson
**Deputy Director-General, Development Assessment and
Systems Performance**

Sydney

2011

SCHEDULE 1

Application Number:

10_0014

Applicant:

CSR Building Products Limited

Approval Authority:

Minister for Planning and Infrastructure

Land:

See Appendix 1

Development:

Badgerys Creek Quarry and Brick Making Project

Navy text shows Modification 2 May 2018
Green Type shows Modification 3 and 4 August 2020
Red Type shows Modification 5 January 2022

CONSOLIDATED CONSENT

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CONSOLIDATED CONSENT

DEFINITIONS

Aboriginal object or place	Have the same meaning as the definitions of the terms in section 5 of the NP&W Act
Annual Review	The review required by condition 12 of Schedule 5
Applicant	CSR Building Products Limited (or its successors) or any person carrying out any development to which this consent applies
BCA	Building Code of Australia
BCD	Biodiversity and Conservation Division within the Department
Brickmaking Activities	The manufacturing, storage and sale of brick products, and associated operation of the innovation centre and laboratory described in EA (Mod 3 and 4)
Calendar year	A period of 12 months from 1 January to 31 December
CCC	Community Consultative Committee
Conditions of this consent	Conditions contained in Schedules 2 to 5 (inclusive) of this document
Construction Activities	All physical works to enable mining operations to be carried out, including demolition and removal of buildings or works, and erection of buildings and other infrastructure permitted by this consent
Council	Liverpool City Council
Day	The period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays
Department	NSW Department of Planning and Environment
Demolition	The deconstruction and removal of buildings, sheds and other structures on the site
Development	The development described in the documents listed in condition 3 of Schedule 2 and includes Quarrying Operations, Brickmaking Activities and rehabilitation activities
Development layout	The plans in Appendix 3 of this consent
Dewatering	Removal of accumulated water from Pits 2 and 3 into Pit 1, and removal of water accumulated in Pit 1
DPIE Water	Water Group within the Department
EA	Environmental Assessment titled <i>Boral Badgerys Creek Continued Operation of Quarry and Brick Making Facility</i> (Volumes 1 – 3), prepared by AECOM and dated November 2010, and associated Response to Submissions titled <i>Boral Badgerys Creek Continued Operation of Quarry and Brick Making Facility – Submissions Report</i> , prepared by AECOM and dated June 2011
EA (Mod 1)	Environmental Assessment titled <i>Boral Badgerys Creek Quarry and Brick Making Project, Application Number: 10_0014</i> , prepared by Boral Property Group and dated 5 November 2012
EA (Mod 2)	Environmental Assessment titled <i>Badgerys Creek Brick Making Facility Modification 2 Environmental Assessment</i> prepared by Element Environment and dated November 2017, the associated the Response to Submissions prepared by Element Environment and dated February 2018, and additional information provided by Element Environment dated 8 March 2018
EA (Mod 3 and 4)	Environmental Assessment titled <i>CSR Advanced manufacturing hub – Modification 3 Environmental Assessment</i> prepared by Element Environment and dated March 2019, Environmental Assessment titled <i>CSR Advanced manufacturing hub – Modification 4 Environmental Assessment</i> prepared by Element Environment and dated March 2019, the associated Response to Submissions Reports prepared by Element Environment and dated October 2019, and additional information provided by CSR Limited and dated 5 May 2020
Eastern Airport Ring Road	Transport corridor associated with development of the WSA and depicted in the <i>draft Western Sydney Aerotropolis Plan</i> (or later version)
ENM	Excavated Natural Material, as defined in the EPA's resource recovery orders (ENM Order) and exemptions (ENM Exemption) under clauses 91, 92, and 93 of the Waste Regulation
ENM Exemption	'The excavated natural material exemption 2014' under clauses 91 and 92 of Waste Regulation
ENM Order	'The excavated natural material order 2014' under clause 93 of the Waste Regulation
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6 pm to 10 pm
Fill	VENM and/or ENM
Finished Building Products	Building products prepared or manufactured on site and off site, as described in EA (Mod 3 and 4) and EA (Mod 2), respectively.

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Heritage NSW Incident	Heritage NSW within the Department of Premier and Cabinet An occurrence or set of circumstances that: <ul style="list-style-type: none"> causes or threatens to cause material harm to the environment; and/or breaches or exceeds the limits or performance measures/criteria in this consent
Laden trucks	Trucks transporting bricks, quarry products or finished building products to or from the site
Land	Has the same meaning as the definition of the term in section 4 of the EP&A Act, except where the term is used in the noise and air quality conditions in Schedules 3 and 4 of this consent, where it is defined as 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
m	Metres
Martin Road – Elizabeth Road Intersection Upgrade	The upgrade of the Martin Road – Elizabeth Drive Intersection to a standard required by Condition 25A of Schedule 3
Material harm	Is unauthorised harm that: <ul style="list-style-type: none"> involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)
MEG	Regional NSW – Mining, Exploration & Geoscience
Minimise	Implement all reasonable and feasible mitigation measures to reduce the impacts of the development
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the development prior to or during those impacts occurring
Modification 3 and 4	The modifications to the development, as described in EA (Mod 3 and 4)
Modification Report (Mod 5)	The Modification Report titled <i>Badgerys Creek Quarry and Brick Making Project Modification 5</i> prepared by Element Environment dated October 2021 and further response prepared by CSR Building Products Limited dated December 2021
Morning Shoulder Period	The period from 5 am to 7 am Monday to Saturday
Night	The period from 10 pm to 7 am on Monday to Saturday, and 10 pm to 8 am on Sundays and Public Holidays
NP&W Act	National Parks and Wildlife Act 1974
NRAR	NSW Natural Resources Access Regulator
Phase 1	The initial phase of development associated with Modification 3 and 4, that comprises: <ul style="list-style-type: none"> construction activities; brickmaking activities; dewatering of Pits 1, 2 and 3; quarrying activities in Pit 3. Fill import for quarry rehabilitation activities and preferential backfilling of Pits 1, 2 and 3.
Phase 2	The phase of the development associated with Modification 3 and 4 that commences from the date of completion of backfilling of Pits 1 and 2 and comprises: <ul style="list-style-type: none"> construction activities; brickmaking activities; quarrying activities in Pit 3; Fill import for quarry rehabilitation activities and progressive backfilling of Pit 3.
Phase 3	The phase of the development associated with Modification 3 and 4 that commences from the date of completion of extraction activities in Pit 3 and comprises: <ul style="list-style-type: none"> brickmaking activities; Fill import for quarry rehabilitation activities and backfilling of Pit 3.
Phase 4	The phase of development associated with Modification 3 and 4 that commences from the date of completion Fill import to site and the backfilling of Pit 3, and comprises: <ul style="list-style-type: none"> brickmaking activities; and residual rehabilitation activities (excluding Fill import).
PMF	Probable Maximum Flood event
POEO Act	Protection of the Environment Operations Act 1997
Privately-owned land	Land that is not owned by a public agency or a mining, petroleum or extractive industry company (or its subsidiary)

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Public infrastructure	Linear and other infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc.
Quarrying operations	The extraction, processing, stockpiling and transportation of extractive materials carried out on the site and the associated removal and/or emplacement of vegetation, topsoil and overburden
Quarry products	Includes all saleable quarry products, including raw materials, but excludes bricks, tailings, other wastes and rehabilitation material for use on the site
Quarry water	Water that accumulates within active quarrying areas, overburden emplacement areas and infrastructure areas, synonymous with dirty water
Raw materials	Extractive materials used in making brick, tiles, clay pipes or similar
Registered Aboriginal Parties	As described in the <i>National Parks and Wildlife Regulation 2009</i>
Rehabilitation	The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting
Reasonable	Means applying 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
Resources Regulator	NSW Resources Regulator within the Department of Regional NSW
Secretary	Planning Secretary under the EP&A Act, or nominee
Site	The land defined in Appendix 1
Statement of Commitments	The Applicant's commitments in Appendix 6
TfNSW	Transport for New South Wales
VENM	Virgin Excavated Natural Material, as defined in clause 50 of Schedule 1 of the POEO Act
Waste	Has the same meaning as defined in the Dictionary to the POEO Act
Waste Regulation	<i>Protection of the Environment (Waste) Regulation 2014</i>
WSA	Western Sydney Airport

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SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance measures and criteria established under this **consent**, the **Applicant** must implement all reasonable and feasible measures to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the **development**, and any rehabilitation required under this **consent**.

TERMS OF **CONSENT**

2. The **Applicant**, in acting on this **consent**, must carry out the **development**:
 - (a) in compliance with the conditions of this **consent**;
 - (b) in accordance with all written directions of the Secretary; and
 - (c) in accordance with the **development** layout.
3. The **Applicant**, in acting on this **consent**, must carry out the **development**:
 - (a) generally in accordance with the EA;
 - (b) generally in accordance with EA (Mod 1);
 - (c) generally in accordance with EA (Mod 2);
 - (d) generally in accordance with EA (Mod 3 and 4);
 - (e) generally in accordance with Modification Report (Mod 5); and
 - (f) generally in accordance with the Statement of Commitments.
4. The conditions of this **consent** and directions of the Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document referenced in condition 3 of this Schedule. In the event of an inconsistency, ambiguity or conflict between any of the documents referenced in condition 3 of this Schedule, the most recent document prevails.

*Note: For the purposes of this condition, there will be an inconsistency between documents if it is not possible to comply with both documents, or in the case of a condition of **consent** or direction of the Secretary, and a document, if it is not possible to comply with both the condition or direction, and the document.*

5. Consistent with the requirements of this **consent**, the Secretary may make written directions to the **Applicant** in relation to:
 - (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this **consent**, including those that are required to be, and have been, approved by the Secretary; and
 - (b) the implementation of any actions or measures contained in any such document referred to in (a) above.

*Note: For the purposes of this condition, there will be an inconsistency between documents if it is not possible to comply with both documents, or in the case of a condition of **consent** or direction of the Secretary, and a document, if it is not possible to comply with both the condition or direction, and the document.*

STAGED DEVELOPMENT

- 5A. The **development** as modified by EA Mod 3 and 4, must be undertaken sequentially in the following stages:

- (a) Phase 1;
- (b) Phase 2;
- (c) Phase 3; and
- (d) Phase 4.

Note: Each of these phases is listed in the definitions and shown in Appendix 3.

- 5B. The **Applicant** must notify the Department in writing, at least two weeks before the date of:

- (a) the commencement of each Phase of the **development**;
- (b) the completion of extraction in Pit 3;
- (c) cessation of Brickmaking Activities; and
- (d) decommissioning.

COMPLIANCE

6. The **Applicant** must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this **consent** relevant to activities they carry out in respect of the **development**.

CONSOLIDATED CONSENT

APPLICABILITY OF GUIDELINES

7. References in the conditions of this **consent** to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, standards or policies in the form they are in as at the date of this **consent**.

However, consistent with the conditions of this **consent** and without altering any limits or criteria in this **consent**, the Secretary may, when issuing directions under this **consent** in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, standard or policy, or a replacement of them.

LIMITS OF CONSENT

8. The **Applicant** may carry out quarrying operations on the site until 27 September 2031.

*Note: Under this **consent**, the **Applicant** is required to decommission and rehabilitate the site and carry out additional requirements. Consequently, this **consent** will continue to apply in all respects other than to permit the carrying out the **development**, until the rehabilitation of the site and those requirements and undertakings have been carried out to the required standard.*

9. *(Deleted).*

- 9A. The **Applicant** may receive, store, and dispatch finished building products at the site until brick making at the site commences.

10. The **Applicant** must not exceed the limits in Table 1 during any calendar year.

Table 1: Limits on extraction, production, receipt and dispatch volumes per calendar year

Activity	Development Phase	Total Volume (tonnes per calendar year)
Extraction from Pit 3	Phase 1 and 2	420,000
Receive raw materials for brickmaking	Phase 1 and 2	215,000
	Phase 3 onwards	360,000
Dispatch raw materials	Phase 1,2 and 3	275,000
Brick production	All Phases	300,000
Dispatch finished building products	All Phases	330,000

*Note: The Total Volume limits in Table 1 do not apply to the import of **Fill** for the purpose of backfilling voids. The import of **Fill** is separately managed under the restrictions on truck movements contained in Conditions 12, of this Schedule.*

11. The **Applicant** must not transport bricks or quarry products to or from the site, other than by road.

12. The **Applicant** must not exceed the total truck movements detailed in Table 2.

Table 2: Total Truck Movements

Transport Route Stage	Development Phases	Day	Total truck movements ^a
Prior to the upgrade of the Martin Road-Elizabeth Drive Intersection	1,2 and 3	Monday to Friday	120
		Saturday	40
		Sundays	40
Following completion of the Martin Road-Elizabeth Drive Intersection upgrade	1,2 and 3	Monday to Friday	800
		Saturday	358
		Sundays	200
	4	Monday to Friday	366
		Saturday	98
		Sunday	0

^a *Note: each truck entering or exiting the site is counted as a separate movement.*

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- 12A. Truck movements entering or exiting the site on Sundays are restricted to the importation of Fill for the purpose of backfilling quarry pits and rehabilitation activities.

Note: Truck movements are also controlled, further restricted by the limits in condition 10 of this Schedule and operating hours in condition 1 of Schedule 3.

STRUCTURAL ADEQUACY

13. All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the BCA.

Notes:

- Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for any proposed building works;
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development
- A detailed stormwater drainage design, prepared by a qualified practicing civil engineer, is to be submitted to Council prior to the issue of a construction certificate.

BRICK KILN STACKS

- 13A. The brick kiln stacks must not exceed 41 m above natural ground level.

DEMOLITION

14. All demolition work must be carried out in accordance with the Australian Standard AS 2601-2001: The Demolition of Structures (Standards Australia, 2001).

PROTECTION OF PUBLIC INFRASTRUCTURE

15. Unless the Applicant and the applicable authority agree otherwise 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 damage to roads caused as a result of general road usage or otherwise addressed by contributions required by condition 25 of Schedule 3.

OPERATION OF PLANT AND EQUIPMENT

16. All plant and equipment used on the site, or to monitor the performance of the development, must be:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

- 16A. The external walls of all buildings including additions to existing buildings must comply with the relevant requirements of the BCA. Before the issue of a Construction Certificate and an Occupation Certificate, the Applicant must provide the Certifying Authority with documented evidence that the products and systems proposed for use or used in the construction of external walls, including finishes and claddings such as synthetic or aluminium composite panels, comply with the requirements of the BCA. The Applicant must provide a copy of the documentation given to the Certifying Authority to the Secretary within seven days after the Certifying Authority accepts it.

PRODUCTION DATA

17. The Applicant must:
- (a) provide calendar year annual quarry production data to MEG using the standard form for that purpose; and
 - (b) include a copy of this data in the Annual Review.

LIMITS OF EXTRACTION

Identification of Approved Extraction Limits

18. Within 3 months of the determination of Modification 3 and 4, the Applicant must:
- (a) engage a registered surveyor to mark out the boundary of the approved area of extraction within Pit 3; and
 - (b) provide the Secretary with a survey plan of the boundary.

The boundary of the approved area of extraction within Pit 3 must be clearly marked in a manner that allows them to be easily identified at all times during the carrying out of quarrying operations.

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Maximum Extraction Depth

19. The **Applicant** must not extract any extractive materials or carry out any work in the extraction area below 35 m below the pre-existing natural surface of the ground, other than construction of bores approved by **DPIE Water** or in-pit sumps approved by the Secretary.
-

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SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

NOISE

Hours of Operation

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

Table 1: Operating hours

Activity	Permissible Hours
Quarrying operations (excluding truck arrival, loading and dispatch)	7.00 am to 6.00 pm Monday to Saturday
	At no time on Sundays or public holidays
Brickmaking Activities	24 hours per day, 7 days per week
Truck arrival and dispatch (raw materials only)	6.00 am to 10.00 pm Monday to Friday
	6.00 am to 6.00 pm Saturday
	At no time on Sundays or public holidays
Truck arrival and dispatch (finished building products only)	5.00 am to 10.00 pm Monday to Friday
	6.00 am to 6.00 pm Saturday
	At no time on Sundays or public holidays
Truck arrival and dispatch (Fill import only)	7.00 am to 6.00 pm Monday to Saturday
	9.00 am to 6.00 pm Sunday
	At no time on public holidays
Cash sales	6.00 am to 6.00 pm Monday to Saturday
	At no time on Sundays or public holidays
Sales selection/Customer Display Centre	8.00 am to 5.00 pm Monday to Sunday
Maintenance	At any time, provided that these activities are not audible at any privately-owned residence outside of permissible hours for quarrying operations

- With the written agreement of the Secretary, the **Applicant** may undertake limited campaign trucking (within the limits imposed under conditions 10 and 12 of Schedule 2) for the import of **Fill** outside of the operating hours prescribed in condition 1 of this Schedule.
- The following activities may be carried out outside the hours specified in condition 1 of this Schedule:
 - activities that are inaudible at residences on privately-owned land;
 - the delivery or dispatch of materials as requested by the NSW Police Force or other public authorities for safety reasons; or
 - emergency work to avoid the loss of life, property or to prevent material harm to the environment.

In such circumstances, the **Applicant** must notify the Department and affected residents prior to undertaking the activities, or as soon as is practical thereafter.

Construction Noise

- Approved construction works must only be undertaken during standard construction hours (7 am to 6 pm, Monday to Friday and 8 am to 1 pm on Saturdays), unless the Secretary agrees otherwise.
- (Deleted).

Operational Noise Criteria

5. The **Applicant** must ensure that operational noise generated by the **development** (including construction activities) does not exceed the criteria in Table 2 at any residence on privately-owned land.

Table 2: Operational noise criteria dB(A)

Receiver ID	Morning Shoulder	Day	Evening	Night	
	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{AFmax}
R9, R25, R35	43	45	40	38	52
R5, R26, R27, R28, R29, R30, R31, R32, R34, R42, R43, R44, R45, R46	42	42	41	38	52
R11, R12, R13, R14, R15	43	43	43	38	52
All other residences	-	40	35	35	52

Noise generated by the **development** must be monitored and measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the *NSW Noise Policy for Industry (NSW EPA 2017)*.

However, the noise criteria in Table 2 do not apply if the **Applicant** has an agreement with the relevant landowner to exceed the noise criteria, and the **Applicant** has advised the Department in writing of the terms of this agreement.

Note: Should an agreement with a landowner be terminated for any reason, the **Applicant** must comply with the noise criteria in Table 2.

Road Traffic Noise Criteria

6. The **Applicant** must ensure that the **road** traffic noise generated by the **development** does not exceed the criteria in Table 3 at any privately-owned residence.

Table 3: Road traffic noise criteria dB(A)

Road Noise Receiver ID	Day / Evening L _{Aeq} (1 hour)	Night L _{Aeq} (1 hour)
Prior to Martin Road – Elizabeth Road Intersection Upgrade		
Residents on Martin Road	60	55
Following Martin Road – Elizabeth Road Intersection Upgrade		
RN5	61	55
RN9, RN21	62	55
RN14, RN22	63	55
RN16	64	55
All other residences on Martin Road	60	55

Traffic noise generated by the **development** is to be measured in accordance with the relevant procedures in the NSW Road Noise Policy (Department of Environment, Climate Change and Water NSW).

However, the noise criteria in Table 3 do not apply if the **Applicant** has an agreement with the relevant landowner to exceed the noise criteria, and the **Applicant** has advised the Department in writing of the terms of this agreement.

- 6A. Upon receiving a written request from the owner of residences RN5, RN9, RN14, RN16, RN21 or RN22, the **Applicant** must implement noise mitigation treatment packages as described in the EA (Mod 3 and 4) and as set out in the *RMS Draft At-Receiver Treatment Packages*.

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If within 3 months of receiving this request from the owner, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.

Noise Operating Conditions

7. The Applicant must:
- take all reasonable steps to minimise the construction, operational, low frequency and road transportation noise of the development;
 - take all reasonable steps to minimise the noise impacts of the development during noise enhancing meteorological conditions;
 - operate a noise management system to guide the day to day planning of quarrying operations and the implementation of noise mitigation measures to ensure compliance with the relevant conditions of this consent;
 - carry out regular noise monitoring to determine whether the development is complying with the relevant conditions of this consent; and
 - modify or stop operations on the site to comply with the relevant conditions of this consent.

Note: Monitoring under this consent is not required at all residences and the use of representative monitoring locations can be used to demonstrate compliance with criteria, if agreed to by the Secretary.

Noise Management Plan

8. The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be submitted to the Secretary for approval prior to commencing Modification 3 and 4, unless otherwise agreed by the Secretary;
 - describe the measures to be implemented to ensure:
 - compliance with the noise criteria and operating conditions of this consent;
 - best practice management is being employed;
 - residences listed in condition 6A of this Schedule are notified of their rights to request road noise mitigation measures;
 - vibration impacts are minimised; and
 - the construction and operational noise impacts of the development are minimised during noise enhancing meteorological conditions;
 - describe measures to ensure that all the commitments in the EA (Mod 3 and 4) in relation to noise are implemented;
 - include a consultation plan detailing:
 - procedures for notifying and consulting nearby residents prior to the recommencement of quarrying and brick making activities;
 - procedures for notifying and consulting nearby residents prior to the commencement of construction activities;
 - details of a telephone complaints line (operated at all hours) and relevant site persons responsible for following up complaints;
 - procedures for handling and monitoring all complaints received; and
 - contingency measures that would be implemented where complaints are received;
 - describe the proposed noise management system; and
 - include a noise monitoring program that:
 - is capable of evaluating the performance of the development;
 - includes a protocol for determining any exceedances of the relevant conditions of this consent; and
 - effectively supports the noise management system.

The Applicant must implement the Noise Management Plan as approved by the Secretary.

AIR QUALITY

Air Quality Impact Assessment Criteria

9. The Applicant must ensure that particulate matter emissions generated by the development do not cause exceedances of the criteria in Table 4 at any residence on privately-owned land.

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Table 4: Air quality criteria

Pollutant	Averaging Period	Criterion	
Particulate matter < 2.5 µm (PM ₁₀)	Annual	a,d 8 µg/m ³	
Particulate matter < 2.5 µm (PM ₁₀)	24 hour	b 25 µg/m ³	
Particulate matter < 10 µm (PM ₁₀)	Annual	a,d 25 µg/m ³	
Particulate matter < 10 µm (PM ₁₀)	24 hour	b 50 µg/m ³	
Total suspended particulates (TSP)	Annual	a,d 90 µg/m ³	
^c Deposited dust	Annual	^b 2 g/m ² /month	^{a,d} 4 g/m ² /month

Notes to Table 4:

^a Total impact (ie increase in concentrations due to the **development** plus background concentrations due to all other sources).

^b Incremental impact (ie increase in concentrations due to the **development** alone, with zero allowable exceedances of the criteria over the life of the **development**).

^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 or any other activity agreed by the Secretary.

Operating Conditions

10. The **Applicant** must:
 - (a) implement best practice management to minimise the dust emissions of the **development**;
 - (b) implement all air quality management and mitigation measures that were committed to in the **EA (Mod 3 and 4)**;
 - (c) implement real-time monitoring of 24-hour average PM₁₀ and meteorological conditions;
 - (d) regularly assess meteorological and air quality monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the air quality criteria in this **consent**;
 - (e) minimise the air quality impacts of the **development** during adverse meteorological conditions and extraordinary events (see note d under Table 4);
 - (f) monitor and report on compliance with the relevant air quality conditions in this **consent**; and
 - (g) minimise the area of surface disturbance and undertake progressive rehabilitation of the site, to the satisfaction of the Secretary.
- 10A. During Phase 4, the **Applicant** may request the Secretary's agreement to reduce or waive certain air quality monitoring requirements if the **Applicant** can demonstrate that they are no longer necessary.
11. The **Applicant** must ensure compliance with stack emission limits and gaseous pollutant load limits included in any EPL applicable to the site.
12. Within 14 months of commencement of increased production of bricks to 300,000 tonnes per year, or as otherwise required by the EPA, the **Applicant** must submit an Air Quality Verification Assessment to the EPA, and must provide a copy of this assessment to the Secretary. The Air Quality Verification Assessment must be completed in accordance with the requirements of the EPL for the premises.

Air Quality Management Plan

13. 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 **relevant WSA authorities**;
 - (b) be submitted to the Secretary for approval prior to commencing **Phase 1**, unless otherwise agreed by the Secretary;
 - (c) describe the proposed air quality management system;
 - (d) describe the measures to be implemented to ensure:
 - compliance with the air quality criteria and operating conditions of this **consent**;
 - best practice management is being employed; and
 - the air quality impacts of the **development** are minimised during adverse meteorological conditions and extraordinary events;
 - (e) describe measures to ensure that all the commitments in the **EA (Mod 3 and 4)** in relation to air quality are implemented;
 - (f) include a program to ensure surface disturbance associated with quarrying operations is minimised;

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- (g) include an air quality monitoring program that:
 - is capable of evaluating the performance of the **development** and informing day to day operational decisions;
 - includes a protocol for determining any exceedances of the relevant conditions of this **consent**; and
 - effectively supports the air quality management system; and
- (h) include a program to:
 - notify affected landowners of the potential health-related impacts associated with dust;
 - respond effectively to enquiries or complaints.

The **Applicant** must implement the Air Quality Management Plan as approved by the Secretary.

Meteorological Monitoring

14. 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 complies with the requirements in the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* guideline and is capable of measuring meteorological conditions in accordance with the *NSW Noise Policy for Industry* (EPA, 2017).

Odour

15. The **Applicant** must ensure that no offensive odours, as defined by the POEO Act, are emitted from the site.

Greenhouse Gas Emissions

16. The **Applicant** must implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site.

SOIL AND WATER

*Note: Under the Water Act 1912 and/or the Water Management Act 2000, the **Applicant** is required to obtain all necessary approvals and/or water licences for the **development**.*

Water Supply

17. 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.
- 17A. The **Applicant** must report on water extracted from the site each year (direct and indirect) in the Annual Review, including water taken under each water licence.

Water Discharges

18. The **Applicant** must ensure that all quarry water from the site is contained wholly within the site **except where discharges are otherwise authorised by condition 19 and 19A of this Schedule**.
19. The **Applicant** must ensure that all surface water discharges from the site comply with the limits (both volume and quality) set in any EPL applicable to the site.

Dewatering of Pits 1, 2 and 3

- 19A. All water that is dewatered from Pit 1 (including any water transferred into Pit 1 from Pit 2 and Pit 3) must be transferred from the site in accordance with the Dewatering Management Plan required under Condition 23A of this Schedule.
- 19B. All dewatering activities from Pit 1 must be completed within Phase 1 unless otherwise agreed by the Secretary.

Riparian Buffer Distance

20. The **Applicant** must maintain a minimum setback width of 60 metres (measured from the top of bank) between extraction areas and both Badgerys Creek and Badgerys Creek tributary.

*Note: This condition does not prohibit overburden emplacement or rehabilitation works in accordance with the **Development** Layout Plan.*

Alluvial Aquifers

21. The **Applicant** must ensure that the **development** has no impact on alluvial aquifers associated with South Creek, Badgerys Creek or their tributaries.
22. *(Deleted)*

Soil and Water Management Plan

23. The **Applicant** must prepare a Soil and Water Management Plan for the **development** to the satisfaction of the Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s approved by the Secretary;
 - (b) be prepared in consultation with **Council** and **DPIE-Water**;
 - (c) be submitted to the Secretary for approval prior to commencing **Phase 1**, unless otherwise agreed by the Secretary; and
 - (d) include a:
 - (i) Site Water Balance that includes:
 - details of:
 - sources and security of water supply;
 - water use and management on site;
 - adequacy of water storage facilities to contain all surface water runoff;
 - all existing Water Access Licences and potential Water Access Licences, including information on the relevant Water Sharing Plan and Water Sources;
 - any off-site water transfers, including those described in condition 23A of this Schedule; and
 - reporting procedures; and
 - measures to be implemented to minimise clean water use on site;
 - (ii) Surface Water Management Plan, that includes:
 - a program for obtaining detailed baseline data on surface water flows and quality in water bodies that could potentially be affected by the **development**;
 - a detailed description of the surface water management system on site including the:
 - clean water diversion system;
 - erosion and sediment controls;
 - dirty water management system; and
 - water storages, including the area, depth and capacity of any in-pit sumps;
 - detailed plans, including design objectives and performance criteria, for:
 - reinstatement of drainage lines on the rehabilitated areas of the site; and
 - control of any potential water pollution from rehabilitated areas of the site;
 - performance criteria for the following, including trigger levels for investigating any potentially adverse impacts on:
 - the water management system;
 - surface water quality in creeks and other water bodies that could potentially be affected by the **development** (including Badgerys Creek and Badgerys Creek tributary); and
 - the stream health, vegetation health and channel stability of water bodies that could potentially be affected by the **development**;
 - a program to monitor and report on:
 - any surface water discharges;
 - the effectiveness of the water management system;
 - the quality of water discharged from the site to the environment;
 - surface water flows and quality in local watercourses; and
 - the stream health, riparian vegetation health and channel stability of creeks and other water bodies that could potentially be affected by the **development**; and
 - a plan to respond to any exceedances of the performance criteria, and mitigate and/or offset any adverse surface water impacts of the **development**; and
 - (iii) Groundwater Management Plan that includes:
 - measures to ensure that the maximum extraction depth is not exceeded (see condition 19 of Schedule 2);
 - a protocol to obtain appropriate water licence(s) to cover the volume of any unforeseen groundwater inflows into the quarry from the quarry face or floor;
 - groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts; and

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- a monitoring program to manage potential impacts, if any, on any alluvium and associated surface water source near the proposed extraction area that includes:
 - monitoring of boreholes within the alluvial sediments adjacent to Badgerys and South Creeks and their tributaries, and in the Bringelly Shale bedrock aquifer;
 - monitoring of groundwater inflows into the quarry from the quarry face or floor, or into any in-pit sumps;
 - monitoring the impacts of the development on baseflows to Badgerys and South Creeks and their tributaries;
 - identification of a methodology for determining exceedances of the assessment criteria;
 - a plan to respond to any exceedances of the performance criteria; and
 - a program to regularly report on monitoring.

The Applicant must implement the Soil and Water Management Plan as approved by the Secretary.

Dewatering Infrastructure Plan

- 23A. Prior to carrying out any construction activities associated with the dewatering activities on the site, the Applicant must prepare a Dewatering Infrastructure Plan for the development to the satisfaction of the Secretary. This plan must include:
- (a) detailed designs for:
 - any pipeline infrastructure used for dewatering activities; and
 - the method to be used to cross Badgerys Creek;
 - (b) a flooding assessment which:
 - considers the impacts of any structures (including overland pipelines) to flood flow within the floodplain up to the PMF; and
 - describes the measures that will be implemented to minimise those impacts; and
 - (c) a description of the measures to be implemented for:
 - managing construction and operation of minor surface infrastructure;
 - avoiding significant impacts and minimisation of impacts generally;
 - controlling any potential water pollution from construction;
 - minimising and managing erosion and sedimentation;
 - decommissioning of pipeline infrastructure; and
 - rehabilitating disturbed areas.

The Applicant must implement the Dewatering Management Plan as approved by the Secretary.

Dewatering Management Plan

- 23B. The Applicant must prepare a Dewatering Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with DPIE-Water and NRAR;
 - (b) be submitted to the Secretary for approval prior to dewatering activities from Pit 1, unless otherwise agreed by the Secretary; and
 - (c) include:
 - details of:
 - off-site water transfer or discharge arrangements; and
 - procedures for monitoring on volumes transferred off-site and reporting on this as part of Annual Review;
 - a Fauna Relocation Plan regarding the transfer of aquatic fauna from Pits 1, 2 and 3 prepared by a suitably qualified ecologist which includes details on:
 - native fauna species known to inhabit and/or use the pits which require transfer from the pits;
 - methodology proposed to transfer the fauna;
 - location and suitability of the proposed relocation sites;
 - any potential impacts of relocating the fauna to the relocation sites and proposed mitigation measures; and
 - details of ecologists to monitor dewatering activities;
 - a Geotechnical Monitoring Program, prepared by a suitably qualified and experienced geotechnical engineer, to examine and monitor the faces and high walls of the quarry pits to determine potential geotechnical hazards areas and evaluate risks of potential failures;
 - a program to monitor and report on dewatering that involves any discharge from the site, including:
 - the quality of any water discharged from the site;

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- surface water flows and quality in local watercourses; and
- the stream health, riparian vegetation health and channel stability of creeks and other water bodies that could potentially be affected by the discharges; and
- a plan to respond to any exceedances of the performance criteria and mitigate and/or offset any adverse surface water impacts of the discharges.

The **Applicant** must implement the Dewatering Management Plan as approved by the Secretary.

Flooding

- 23C. The **Applicant** must prepare and implement an Evacuation Plan for the site. This Evacuation Plan must be prepared in consultation with the State Emergency Services and include details of the site evacuation and sheltering procedures during flood events.

TRANSPORT

Road Haulage

24. Prior to commencing **Phase 1**, the **Applicant** must:
- (a) erect signage on Elizabeth Drive advising of “trucks turning”;
 - (b) install a wheel wash on the quarry access road and **Fill haul road** to prevent material being deposited on **Martin Road**; and
 - (c) ensure the access driveway from Martin Road is capable of catering for all heavy vehicles associated with the **development** in accordance with AS2890.2, to the satisfaction of Council.

Road Upgrade and Maintenance Contribution

25. Prior to the recommencement of quarrying operations, the **Applicant** must enter into a formal agreement with Council for:
- (a) the repair of historical impacts of trucking from the **development** on Martin Road; and
 - (b) annual road maintenance contributions to be paid to Council, based on the weight of all laden truck movements to and from the site, for the duration that Martin Road is vested in the Council as the roads authority.

The **Applicant** must provide evidence to the Secretary that the agreement has been executed and implemented to the satisfaction of Council.

If there is any dispute between the **Applicant** and Council, then either of the parties may refer the matter to the Secretary for resolution.

- 25A. Prior to increasing truck movement limits as specified in condition 12 of Schedule 2, the **Applicant** must complete an interim upgrade of the Martin Road and Elizabeth Drive Intersection. The final design of intersection must be to the satisfaction of the relevant roads authority/s and must:
- (a) be designed and constructed in accordance with Austroads Guidelines, Australian Standards and any requirements of the relevant road authority/s;
 - (b) include, at a minimum, a three phase signal operation including a right turn green light and pedestrian crossings on one Martin Road and one Elizabeth Drive approach;
 - (c) be subject to a Works Authorisation Deed (WAD) with TfNSW; and
 - (d) be funded by the **Applicant**, unless otherwise agreed with TfNSW.
- 25B. With the written agreement of the Secretary, the requirements of condition 25A of this Schedule may be waived if the **Applicant** can demonstrate that the Martin Road-Elizabeth Drive Intersection has been upgraded to achieve service, capacity and safety standards equivalent to or greater than those required under condition 25A of this Schedule.
- 25C. The **Applicant** must provide an area for a potential transport corridor associated with an extension of Martin Road through the site (as conceptually shown in Appendix 3). The final design and location of the transport corridor and any associated commercial arrangements must be determined in consultation with TfNSW.

The **Applicant** must advise the Secretary in writing of the final design and location of the transport corridor as agreed with TfNSW, and update relevant management plans, strategies or programs for the **development** to reflect the transport corridor.

Monitoring of Product Transport

26. The **Applicant** must keep accurate records of:
- (a) all truck movements to and from the site (including time of arrival and dispatch and nature of material transported);
 - (b) the weight of all bricks, **Fill** and quarry products transported to and from the site; and
 - (c) publish a summary of these records on its website every 6 months.

Operating Conditions

27. The **Applicant** must:
- (a) ensure that all laden trucks carrying quarry products, raw materials or **Fill** have their loads covered when arriving at or leaving the site;
 - (b) ensure that all trucks are cleaned of material that may fall from vehicles, before leaving the site;
 - (c) use its best endeavours to ensure that appropriate signage is displayed on trucks used to transport finished building materials, quarry products or raw materials to or from the **development** so they can be easily identified by road users; and
 - (d) continue to engage with TfNSW regarding the detailed planning and design for the Eastern Airport Ring Road.

Traffic Management Plan

28. The **Applicant** must prepare a Traffic Management Plan for the **development** to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with TfNSW, WSA and Council;
 - (b) be submitted to the Secretary for approval prior to commencing **Phase 1** operations, unless otherwise agreed by the Secretary;
 - (c) describe the processes in place to control the arrival and dispatch of trucks;
 - (d) include a Drivers' Code of Conduct that details the safe and quiet driving practices that must be used by drivers travelling to and from the site;
 - (e) describe the measures to be put in place to ensure compliance with the Drivers' Code of Conduct; and
 - (f) propose measures to minimise the transmission of dust and tracking of material onto the surface of the public road from vehicles leaving the quarry; and
 - (g) describe the measures to manage construction and cumulative traffic impacts on the surrounding road network;
 - (h) be updated as necessary to reflect the operational phases and truck movement limits specified in condition 12 of Schedule 2 and prior to the commencement of any construction works for the upgrade of the Martin Road – Elizabeth Drive Intersection or the Eastern Airport Ring Road.

The **Applicant** must implement the Traffic Management Plan as approved by the Secretary.

ABORIGINAL HERITAGE

29. The **Applicant** must ensure that:
- (a) archaeological salvage of site BC-01-09 is undertaken in accordance with Recommendation 1, Section 6.0 of the *Aboriginal Heritage Assessment – Addendum* in the EA; and
 - (b) regeneration works, dewatering activities and water discharges in the area of the archaeological deposit identified adjacent to Badgerys Creek (see Appendix 5) are either avoided, or else undertaken in a manner that will minimise harm to Aboriginal objects, to the satisfaction of the Secretary; and
 - (c) measures are implemented prior to the commencement of **Phase 1**, to conserve and protect the hearth feature within site BCBW18 AS 02 02 (AHIMS ID 45-5-5164).
30. The **Applicant** must prepare an Aboriginal Heritage Management Plan for the **development** to the satisfaction of the Secretary. The plan must:
- (a) be prepared by suitably qualified and experienced persons;
 - (b) be prepared in consultation with Registered Aboriginal Parties and Heritage NSW;
 - (c) be submitted to the Secretary for approval within 6 months of the determination of **Modification 3 and 4**, unless otherwise agreed by the Secretary;
 - (d) include a description of the measures that would be implemented to:
 - (i) protect, monitor and manage identified Aboriginal objects and Aboriginal places on the site (including any proposed archaeological investigations and salvage measures), including specific measures to ensure that the archaeological deposit adjacent to Badgerys Creek (see Appendix 5) is not impacted during regeneration operations;

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- (ii) conserve the entire extent of the hearth feature within site BCBW18 AS 02 (AHIMS ID 45-5-5164);
- (iii) manage the discovery of previously unidentified Aboriginal objects or Aboriginal places on the site; and
- (iv) facilitate ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site; and
- (e) include a protocol to be implemented in the event that skeletal remains are discovered during the development.

The Applicant must implement the Aboriginal Heritage Management Plan as approved by the Secretary.

31. If human remains are discovered on the site, then all work in the area surrounding the discovery must cease, and the area must be secured. The Applicant must immediately notify NSW Police Force and Heritage NSW, and work must not recommence in the area until authorised by NSW Police Force and Heritage NSW.
32. If any potential Aboriginal object or Aboriginal place is identified on the site, or suspected to be on the site:
 - (a) all work in the immediate vicinity of the object or place must cease immediately;
 - (b) a 10 m buffer area around the object or place must be cordoned off; and
 - (c) Heritage NSW must be contacted immediately.
33. Work in the immediate vicinity of a site identified in condition 32 of this Schedule may only recommence if:
 - (a) the object or place is confirmed by Heritage NSW upon consultation with the Registered Aboriginal Parties not to be an Aboriginal object or Aboriginal Place;
 - (b) the Aboriginal Cultural Heritage Management Plan is revised to include the object or place and appropriate measures in respect of it; or
 - (c) the Secretary is satisfied with the measures to be implemented in respect of the object or place and makes a written direction in that regard.

REHABILITATION

Rehabilitation Objectives

34. The Applicant must rehabilitate the site in accordance with the conditions imposed on the mining lease(s) associated with the development under the Mining Act 1992. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EA (Mod 3 and 4) and shown in Appendix 4, and must comply with the objectives in Table 5.

Table 5: Rehabilitation Objectives

Feature	Objective
All areas of the site affected by the development	<ul style="list-style-type: none"> • Safe • Hydraulically and geotechnically stable • Non-polluting • Fit for the intended final land use(s) • Final landform integrated with surrounding natural landforms as far as is reasonable and feasible, and minimising visual impacts when viewed from surrounding land
Surface infrastructure	<ul style="list-style-type: none"> • Decommissioned and removed, unless otherwise agreed by the Secretary
Landscaping bunds	<ul style="list-style-type: none"> • Hydraulically and geotechnically stable • Vegetated
Pits 1, 2 and 3	<ul style="list-style-type: none"> • Backfilled to a landform that is consistent with natural ground level and is geotechnically stable • Free draining

Progressive Rehabilitation

35. The Applicant must rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable 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.

Note: It is accepted that parts of the site that are progressively rehabilitated may be subject to future re-disturbance.

- 35A. The Applicant must complete the backfilling of Pits 1 and 2 within 6 years of commencement of Phase 1, or as otherwise agreed by the Secretary.

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- 35B. The **Applicant** must complete the backfilling of Pit 3 within 2 years of the date of completion of extraction activities in Pit 3, or as otherwise agreed by the Secretary.

Rehabilitation Management Plan

36. The **Applicant** must prepare a Rehabilitation Management Plan for the **development**, in accordance with the conditions imposed on the mining lease(s) associated with the **development** under the *Mining Act 1992*. This plan must:
- (a) be prepared in consultation with the Department, DPIE Water, BCD, TfNSW and relevant WSA authorities and Council;
 - (b) build upon the Rehabilitation Objectives in Table 5 and the proposed rehabilitation strategy described in the EA (Mod 3 and 4) and shown in Appendix 4;
 - (c) investigate options for the future use of disturbed areas following the completion of backfilling operations, having regards to the strategic planning associated with the draft Western Sydney Aerotropolis Plan (or subsequently adopted NSW Government strategic plans);
 - (d) describe and justify the proposed rehabilitation strategy for the site, including the landform and use of the site following the completion of quarry operations;
 - (e) include details of the planting of replacement trees in riparian areas consistent with the Statement of Commitments and with vegetation requirements for WSA to minimise wildlife impacts;
 - (f) describe how the rehabilitation of the site would achieve the objectives identified in Table 5 and the requirements of conditions 35A and 35B of this Schedule;
 - (g) include detailed Rehabilitation Objectives, Rehabilitation Completion Criteria and the Final Landform and Rehabilitation Plan for evaluating the performance of the rehabilitation of the site;
 - (h) include procedures for the use of interim stabilisation and temporary vegetation strategies, where reasonable to minimise the area exposed for dust generation;
 - (i) to the maximum extent practicable, build on and integrate with the other management plans required under this consent;
 - (j) include a life of mine rehabilitation and mining schedule and a protocol for progressive reviews of key progressive rehabilitation milestones from the commencement of operations through to decommissioning and mine closure;
 - (k) an overview of the identified risks to achieving successful rehabilitation and strategies to be implemented to address these risks;
 - (l) include a program to monitor, audit and report on the progress against the Rehabilitation Objectives and Rehabilitation Completion Criteria and the Final Landform and Rehabilitation Plan; and
 - (m) describe the measures to be implemented to ensure compliance with the relevant conditions of this **consent**, including intervention and adaptive management techniques that may be required to ensure rehabilitation remains on a trajectory of achieving the Rehabilitation Objectives, Rehabilitation Completion Criteria and the Final Landform and Rehabilitation Plan as soon as reasonably practical.

Note: The Rehabilitation Management Plan may be combined with a Mining Operations Plan, or similar plan, required under the mining lease granted for the development.

VISUAL

37. The **Applicant** must implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the **development** to the satisfaction of the Secretary.
- 37A. Within 3 months of commencing quarrying operations in Pit 3, the **Applicant** must construct landscaped earthen bunds and plant vegetation screens (as shown conceptually in Appendix 3), to minimise the visual impacts of the **development**. The landscaped earthen bunds and plant vegetation screens must be maintained until Pit 3 area has been fully rehabilitated.
- 37B. Within 6 months of the Secretary being advised of the confirmed Eastern Ring Road alignment, as required under condition 25C of this Schedule, the **Applicant** must construct landscaped earthen bunds and plant vegetation screens around the brickmaking facility and raw material stockpile (as shown conceptually in Appendix 3), to minimise the visual impacts of the **development**. The landscaped earthen bunds and plant vegetation screens must be maintained for the life of the **development**.

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- 37C. The **Applicant** must ensure that all outdoor and external lighting at the site:
- (a) complies with AS4282 (INT) 1995 – *Control of Obtrusive Effects of Outdoor Lighting*; and
 - (b) is designed in accordance with any Civil Aviation Safety Authority requirements for the WSA and is mounted, screened and directed in such a manner that it does not cause distraction or confusion to pilots due to light spill above the horizontal plane.

Visual Impact Management Plan

- 37D. Within 6 months of approval of Modification 3 and 4, the **Applicant** must prepare a Visual Impact Management Plan for the **development** to the satisfaction of the Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s;
 - (b) be prepared in consultation with Council, TfNSW and relevant WSA authorities;
 - (c) describe the measures to be implemented to minimise the visual, landscaping and off-site lighting impacts of the **development** to the WSA and surrounding community;
 - (d) include a landscaping strategy to shield public views of the **development** (including views from the Eastern Airport Ring Road) that includes:
 - the measures identified in the EA (Mod 3 and 4);
 - a vegetation strategy utilising a diversity of local provenance tree species from the native vegetation community (or communities) that occur, or once occurred on the site, and would minimise wildlife attraction;
 - a bund vegetation and maintenance schedule; and
 - procedures to notify, consult with and implement site-specific mitigation measures at affected privately-owned residences; and
 - (e) include a program to monitor and report on the implementation and effectiveness of the mitigation measures; and
 - (f) include a protocol to update the plan to include the requirements of condition 37A and 37B of this Schedule, once the Secretary has been advised of the confirmed Eastern Ring Road alignment, as required under condition 25C of this Schedule.

The **Applicant** must implement the Visual Impact Management Plan as approved by the Secretary.

WASTE

38. The **Applicant** must:
- (a) manage on-site sewage treatment and disposal to the satisfaction of Council;
 - (b) minimise the waste generated by the **development**;
 - (c) ensure that the waste generated by the **development** is appropriately stored, handled, and disposed of; and
 - (d) report on waste management and minimisation, including management of non-recyclable materials in the Annual Review, to the satisfaction of the Secretary.

Note: Approval pursuant to Section 68 of the Local Government Act 1993 is required from Council for onsite sewage management systems.

39. Except as expressly permitted in an EPL and/or the conditions of this **consent**, the **Applicant** must not receive waste on the site for storage, treatment, processing, reprocessing or disposal.

Fill Management Plan

- 39A. Prior to the import of **Fill** to the site, the **Applicant** must prepare a **Fill** Management Plan for the **development** to the satisfaction of the Secretary. This plan must:
- (a) identify the quantities of **Fill** to be imported to site;
 - (b) describe:
 - the procedures for monitoring **Fill** imported to the site to ensure that it meets relevant quality specifications for VENM or ENM;
 - a protocol to prevent materials that fail to meet the requirements of the ENM Exemption and ENM Order from being accepted;
 - the management of reject materials;
 - management measures for the emplacement and temporary stockpiling of **Fill**;
 - the process for handling **Fill** for use in rehabilitation;
 - measures for the on-site use of water captured in sediment basins to ensure that the water does not present a contamination risk; and
 - processes for assessing, recording, handling and managing any contamination found on the site; and

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- (c) provide an indicative schedule of Fill material to be imported to the site for each Phase of the development, in order to achieve the conceptual final landform.

The Applicant must implement the Fill Management Plan as approved by the Secretary.

LIQUID STORAGE

- 40. The Applicant must ensure that all tanks and similar storage facilities (other than for water) are protected by appropriate bunding or other containment, in accordance with the relevant Australian Standards.

DANGEROUS GOODS

- 41. The Applicant must ensure that the storage, handling, and transport of dangerous goods is done in accordance with the relevant Australian Standards, particularly AS1940 and AS1596, and the *Dangerous Goods Code*.

FIRE SAFETY

- 42. The Applicant must:
 - (a) ensure that the development is suitably equipped to respond to any fires on site;
 - (b) assist the emergency services to the extent practicable if there is a fire in the vicinity of the site; and
 - (c) ensure that the development provides for asset protection in accordance with the relevant requirements in *Planning for Bushfire Protection 2019* (NSW RFS 2019).

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SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. As soon as practicable, and no longer than 7 days, after obtaining monitoring results showing:
 - (a) an exceedance of any criteria in Schedule 3, the **Applicant** must notify the affected landowners in writing of the exceedance, and provide regular monitoring results, at least every 3 months, to each affected landowner until the **development** is again complying with the relevant criteria; and
 - (b) an exceedance of any air quality criteria in Schedule 3, the **Applicant** must send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and current tenants of the land (including the tenants of land which is not privately-owned).

INDEPENDENT REVIEW

2. If a landowner considers the **development** to be exceeding the relevant criteria in Schedule 3, they may ask the Secretary in writing for an independent review of the impacts of the **development** on their land.

If the Secretary is not satisfied that an independent review is warranted, the Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 21 days of the request for a review.

If the Secretary is satisfied that an independent review is warranted, within 3 months, or as otherwise agreed by the Secretary and the landowner, 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; and
 - if the **development** is not complying with these criteria, then identify measures that could be implemented to ensure compliance with the relevant criteria;
 - (b) give the Secretary and landowner a copy of the independent review; and
 - (c) comply with any written requests made by the Secretary to implement any findings of the review.
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SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. 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 determination of **Modification 3 and 4**, unless otherwise agreed by the Secretary;
 - (b) provide the strategic framework for environmental management of the **development**;
 - (c) identify the statutory approvals that apply to the **development**;
 - (d) **set out** the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the **development**;
 - (e) **set out** the procedures to be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the **development**;
 - receive, record, handle and respond to complaints;
 - resolve any disputes that may arise during the course of the **development**;
 - respond to any non-compliance **and any incident**; and
 - respond to emergencies; and
 - (f) include:
 - references to any strategies, plans and programs approved under the conditions of this **consent**; and
 - a clear plan depicting all the monitoring to be carried out under the conditions of this **consent**.

The **Applicant** must implement any Environmental Management Strategy as approved by the Secretary.

Evidence of Consultation

2. Where the conditions of this **consent** require consultation with an identified party, the **Applicant** must:
 - (a) consult with the relevant party prior to submitting the subject document to the Secretary for approval; and
 - (b) provide details of the consultation undertaken, including:
 - the outcome of that consultation, matters resolved and unresolved; and
 - details of any disagreement remaining between the party consulted and the **Applicant** and how the **Applicant** has addressed any unresolved matters.

However, if the Secretary agrees, a strategy, plan or program may be prepared without consultation being undertaken with an identified party required under a condition of this **consent**.

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) a summary of relevant background or 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 to 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 and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
 - (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:

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- incidents;
 - complaints; and
 - non-compliances with statutory requirements;
- (h) a protocol for periodic review of the plan; and
- (i) a document control table that includes version numbers, dates when the management plan was prepared and reviewed, names and positions of the person/s who prepared and reviewed the management plan, a description of any revisions made and the date of the Secretary's approval.

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

Application of Existing Strategies, Plans and Programs

4. The **Applicant** must continue to apply existing management plans, strategies or monitoring programs approved prior to the approval of **Modification 3 and 4**, until the approval of a similar plan, strategy or program following the approval of **Modification 3 and 4**.

Revision of Strategies, Plans & Programs

5. Within 3 months of:
- (a) the submission of an incident report under condition 10 below;
 - (b) the submission of an Annual Review under condition 12 below;
 - (c) the submission of an Independent Environmental Audit report under condition 14 below; and
 - (d) the approval any modifications to this **consent**,
- the **Applicant** must review the suitability of all 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 6 weeks of the review the revised document must be submitted for the approval of the Secretary.

Notes:

- 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**.
- In the event of an inconsistency between condition 5(d) above and any condition in Schedule 3 of this **consent**, the latter prevails.

Updating and Staging of Strategies, Plans or Programs

6. With the approval of the Secretary, the **Applicant** may:
- (a) prepare and submit any strategy, plan or program required by this **consent** on a staged basis (if a clear description is provided as to the specific stage and scope of the **development** to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);
 - (b) combine any strategy, plan or program required by this **consent** (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and
 - (c) update any strategy, plan or program required by this **consent** (to ensure the strategies, plans and programs required under this **consent** are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the **development**).

Adaptive Management

7. 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 as soon as becoming aware of any exceedance:

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not reoccur;
 - (b) consider all reasonable and feasible options for remediation (where relevant);
 - (c) within 14 days of the exceedance occurring, submit a report to the Secretary describing these remediation options and any preferred remediation measures or other course of action; and
 - (d) implement remediation measures as directed by the Secretary;
- to the satisfaction of the Secretary.

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COMMUNITY CONSULTATIVE COMMITTEE

8. The **Applicant** must establish and operate a Community Consultative Committee (CCC) for the **development** to the satisfaction of the Secretary. The CCC must be established prior to recommencing quarrying operations and be operated in general accordance with the Department's *Community Consultative Committee Guidelines, November 2016* (or later version).

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 guidelines, the Committee should comprise an independent chair and appropriate representation from the **Applicant**, Council and the local community.
- The **Applicant** may, with the approval of the Secretary, combine the function of this CCC with the functions of other CCCs in the area.

REPORTING AND AUDITING

Incident Notification

9. The **Applicant** must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be made in writing through the Department's Major Projects Website and identify the **development** (including the development application number and name) and set out the location and nature of the incident.

Non-Compliance Notification

10. Within seven days of becoming aware of a non-compliance, the **Applicant** must notify the Department of the non-compliance. The notification must be made in writing through the Department's Major Projects website and identify the **development** (including the development application number and name), set out the condition of this **consent** that the **development** is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.

Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

Regular Reporting

11. 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**.

Annual Review

12. Prior to recommencing quarrying operations or **Fill import**, and annually thereafter, the **Applicant** must submit a review to the Department reviewing the environmental performance of the **development** to the satisfaction of the Secretary. This review must:
- (a) describe the **development** (including any progressive rehabilitation) that was carried out in the previous calendar year, and the **development** that is proposed to be carried out over the current calendar year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the **development** over the previous calendar year, which includes a comparison of these results against the:
 - relevant statutory requirements, limits or performance measures/criteria;
 - requirements of any plan or program required under this **consent**;
 - monitoring results of previous years; and
 - relevant predictions in the documents listed in condition 3 of Schedule 2;
 - (c) evaluate and report on:
 - the effectiveness of the air quality and noise management systems; and
 - compliance with the performance measures, criteria and operating conditions in this **consent**.
 - (d) identify any non-compliance over the past calendar year, and describe what actions were (or are being) taken to **rectify the non-compliance and avoid reoccurrence**;
 - (e) identify any trends in the monitoring data over the life of the **development**;
 - (f) identify any discrepancies between the predicted and actual impacts of the **development**, and analyse the potential cause of any significant discrepancies; and

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- (g) describe what measures will be implemented over the current calendar year to improve the environmental performance of the **development**.

The **Applicant** must ensure that copies of the Annual Review are submitted to Council and are available to the Community Consultative Committee (see condition 8 of Schedule 5) and any interested person upon request.

INDEPENDENT ENVIRONMENTAL AUDIT

13. Within 12 months of **the commencement of Phase 1**, and every 3 years thereafter, unless the Secretary directs otherwise, the **Applicant** must commission, commence and pay the full cost of an Independent Environmental Audit of the **development**. This audit must:
- (a) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies and the CCC;
 - (c) assess the environmental performance of the **development** and whether it is complying with the relevant requirements in this **consent** and any relevant EPL or necessary water licences for the **development** (including any assessment, strategy, plan or program required under these approvals);
 - (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals;
 - (e) recommend appropriate measures or actions to improve the environmental performance of the **development**, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and
 - (f) be conducted and reported to the satisfaction of the Secretary.
14. Within 12 weeks of commencing this audit, or as otherwise agreed by the Secretary, the **Applicant** must submit a copy of the audit report to the Secretary and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of these recommendations as required. The **Applicant** must implement these recommendations, to the satisfaction of the Secretary.
- 14A. Any condition of this **consent** that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit.

Note: For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the development to provide data on compliance with the **consent** or on the environmental impact of the **development**, and an "environmental audit" is a periodic or particular documented evaluation of the **development** to provide information on compliance with the **consent** or the environmental management or impact of the **development**.

ACCESS TO INFORMATION

15. Within 3 months of the determination of **Modification 3 and 4**, until the completion of all works, including rehabilitation and remediation the **Applicant** must:
- (a) make the following information publicly available on its website:
 - the documents listed in condition 3 of Schedule 2;
 - current statutory approvals for the **development**;
 - all approved strategies, plans and programs required under the conditions of this **consent**;
 - regular reporting on the environmental performance of the **development** in accordance with the reporting arrangements in any plans or programs approved 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;
 - summary of the current stage and progress of the **development**;
 - contact details to enquire about the **development** or to make a complaint;
 - a complaints register, updated at least monthly;
 - the Annual Reviews of the **development**;
 - any Independent Environmental Audit as described in condition 13 above, and the **Applicant's** response to the recommendations in any audit; and
 - any other matter required by the Secretary; and
 - (b) keep this information up-to-date,
- to the satisfaction of the Secretary.

APPENDIX 1 SCHEDULE OF LAND



APPENDIX 2 LAND OWNERSHIP SURROUNDING THE DEVELOPMENT



Figure 1: Receiver ID

CONSOLIDATED CONSENT

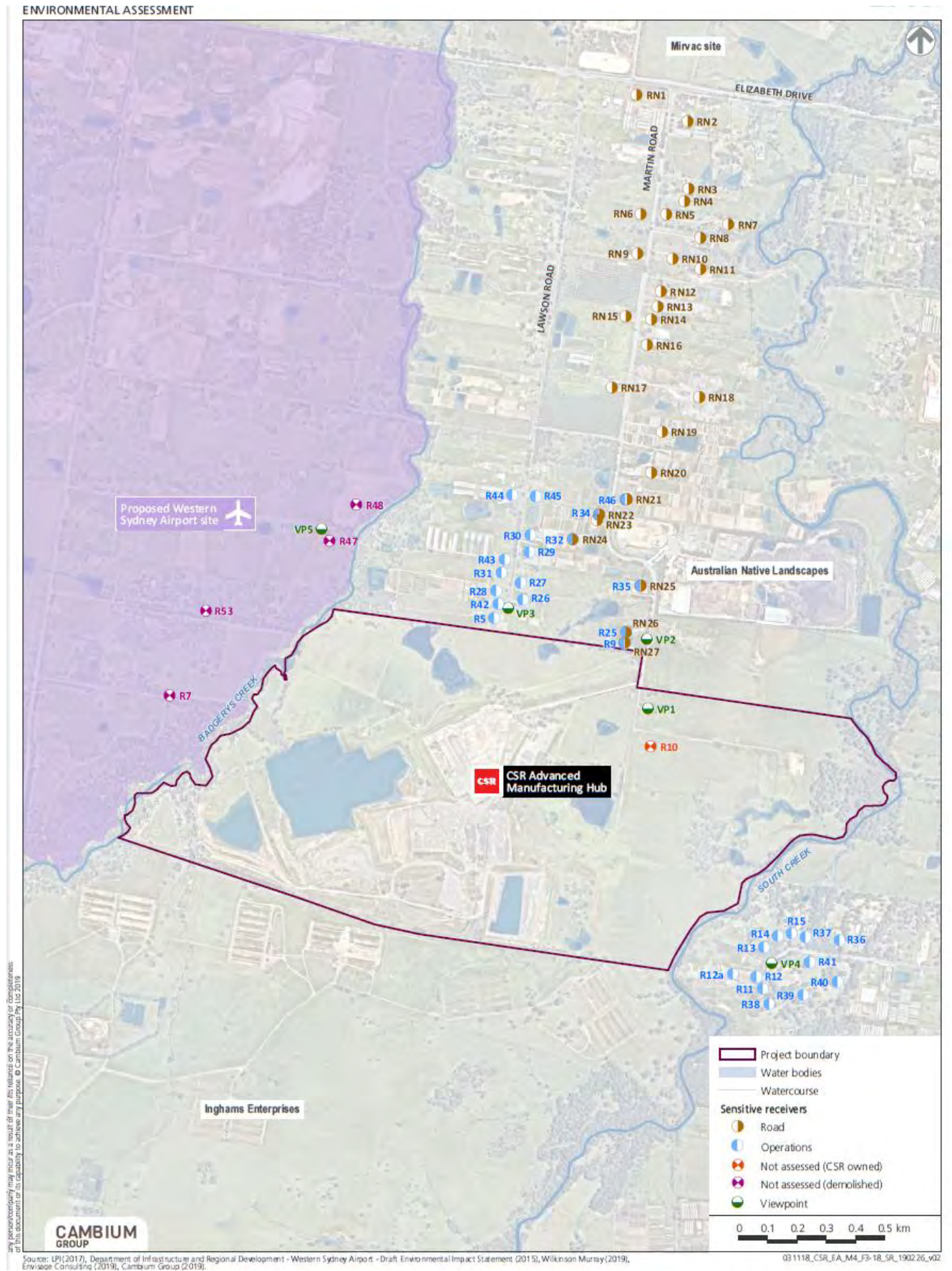


Figure 2: Road Noise Receiver ID

APPENDIX 3 DEVELOPMENT LAYOUT PLANS



Figure 1: Development Layout Overview



Figure 2: Phase 1 Development Layout



Figure 3: Phase 2 Development Layout



Figure 4: Phase 3 Development Layout



Figure 5: Phase 4 Development Layout

APPENDIX 4 REHABILITATION PLAN

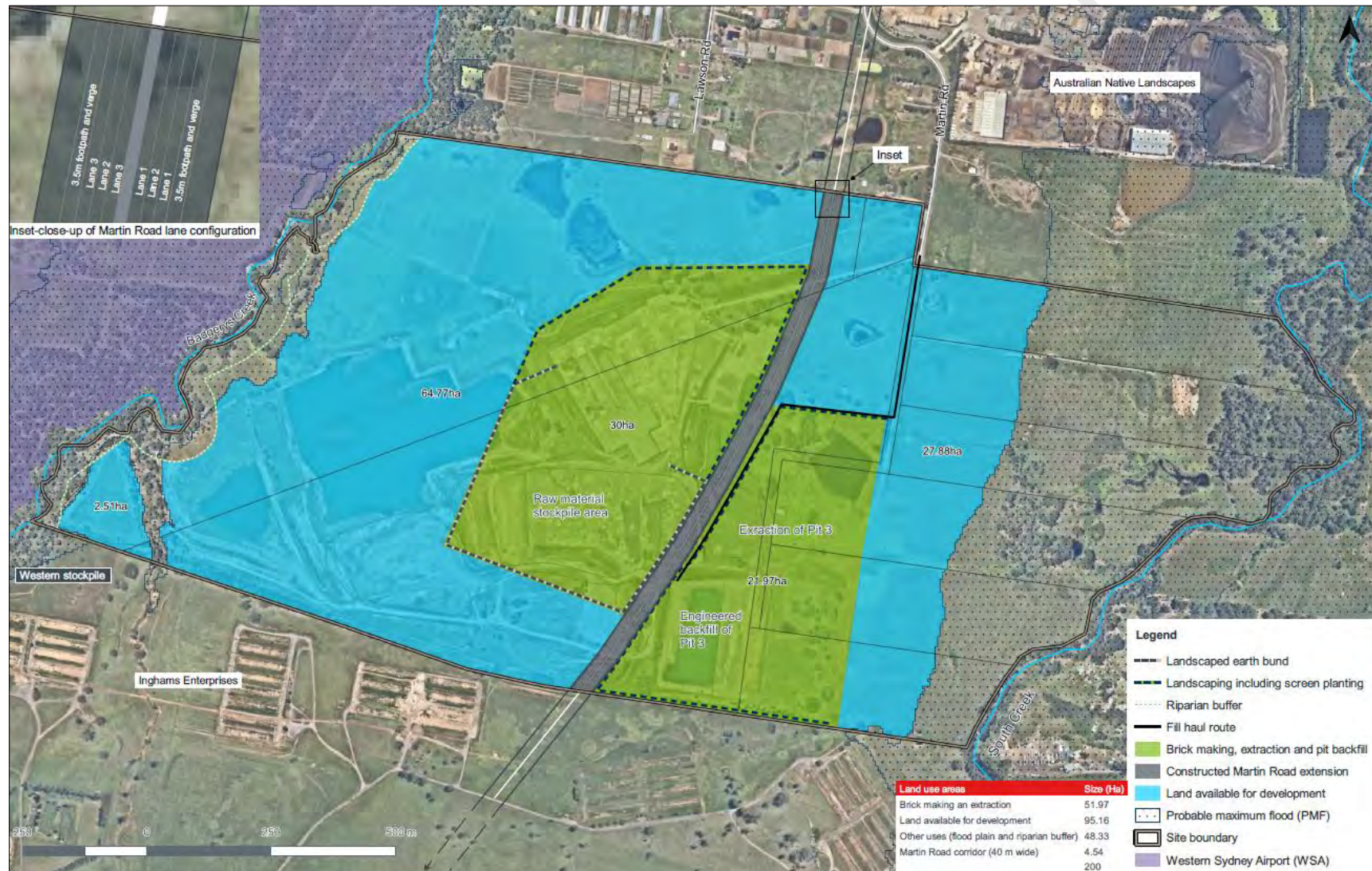


Figure 1: Phase 2 Rehabilitation

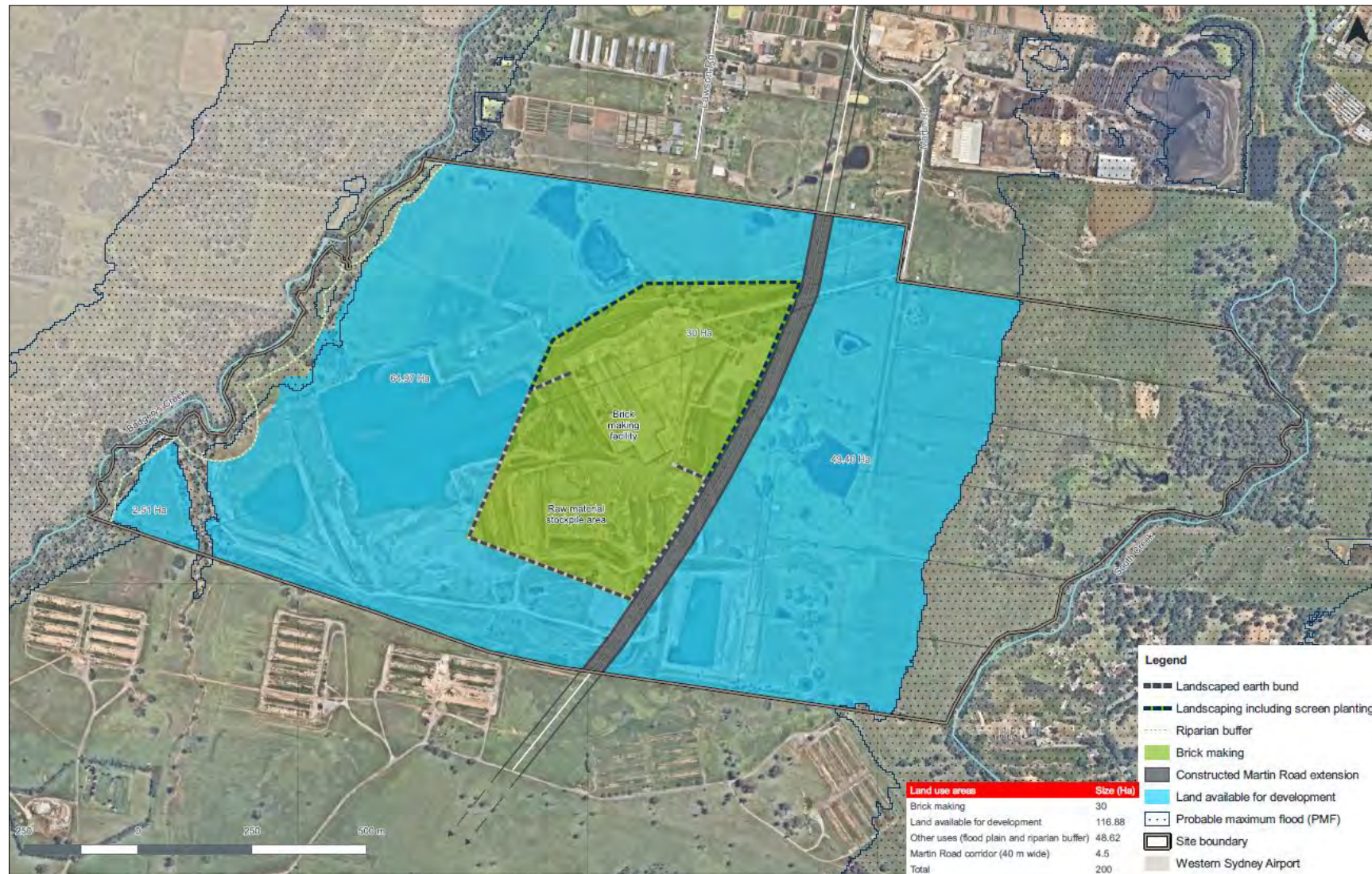


Figure 2: Phase 4 Rehabilitation

APPENDIX 5 ARCHAEOLOGICAL DEPOSIT AVOIDANCE ZONE



APPENDIX 6 STATEMENT OF COMMITMENTS

Issue	Commitment
General	<ol style="list-style-type: none"> 1. The Applicant shall implement all practicable measures to prevent or minimise harm to the environment that may result from the construction, operation or rehabilitation of the development. 2. CSR will apply to amend EPL 684 to reflect the development. 3. The environmental management strategy and sub plans will be amended to reflect the development.
Air Quality	<ol style="list-style-type: none"> 4. The Applicant will prepare an Air Quality and Green House Gas Management Plan (AQGHGMP) for the development to the satisfaction of the Secretary. The AQGHGMP will outline the purpose, methodology and expected outcomes of the dust monitoring, and will include the following content: <ul style="list-style-type: none"> ▪ Dust fraction to be measured, i.e. TSP, PM₁₀, PM_{2.5} etc.; ▪ Equipment to be used to measure selected dust fraction; ▪ Frequency of the monitoring, i.e. sample collection schedule; ▪ Duration of the monitoring program; ▪ Location of the monitoring station/s; ▪ Standards/guidelines that are to be followed for location/construction of the monitoring station, equipment calibration, collection of samples and analysis of samples; ▪ Calibration methodology and schedule; ▪ Reporting procedure; ▪ Regulatory guidelines and compliance criteria; ▪ Action levels and contingency measures in the event that pollutant concentrations approach or are likely to exceed the relevant compliance criteria; and ▪ A consultation program that involves nearby agricultural producers and residents, in order to determine if the dust mitigation measures are being effective. 5. The AQGHGMP will detail measures to control dust and emissions from the Project Site including the following measures: <ul style="list-style-type: none"> ▪ Haul roads should be watered using water carts such that the road surface has sufficient moisture to minimise visible on-road dust generation but not so much as to cause pooling and mud/dirt track out to occur ▪ Unloading of trucks containing raw or unusable extracted material to be controlled using water sprays/dust suppression when generating excessive visible dust. ▪ Dust from existing stockpiles of unusable material and open pits to be controlled using water sprays with chemical additives (surfactants); ▪ Completed pits to be revegetated as soon as practicable after completion of quarrying activities. ▪ Disturbed soil surfaces to be revegetated in accordance with the RMP for the Project Site. ▪ Operational practices to be reviewed to ensure 'best practice' techniques are being employed and that operational equipment is working efficiently. 6. The existing HVAS will be moved to as close to the northern boundary of the property and the closest sensitive receiver as possible. 7. The existing deposited dust gauges will be relocated to appropriate positions as close to the property boundaries and nearest sensitive receivers as possible. 8. If HVAS and deposited dust air quality monitoring identifies ongoing exceedances of the relevant air quality criteria then the reactive dust management program may need to be reinstated at the site.
Noise	<ol style="list-style-type: none"> 9. The Applicant will implement all practicable measures to undertake the development in a way that minimises the noise generated. The Applicant has made the following commitments in relation to operation noise management: 10. The Applicant will conduct quarrying activities at the Project Site only between the following hours: <ul style="list-style-type: none"> ▪ 7.00 am to 6.00 pm Monday to Saturday. 11. The Applicant will remove overburden only between the following hours: <ul style="list-style-type: none"> ▪ 7.00 am to 6.00 pm Monday to Saturday. 12. The Applicant will operate the Brick making facility and storage yard at the Project Site 24 hours a day, Monday to Sunday. 13. The Applicant will receive and dispatch finished building products only between the following hours: <ul style="list-style-type: none"> ▪ 5.00 am to 10.00 pm Monday to Friday. ▪ 6.00 am to 6.00pm Saturday. 14. The Applicant will receive and dispatch raw material only between the following hours: <ul style="list-style-type: none"> ▪ 6.00 am to 10.00 pm Monday to Friday. ▪ 6.00 am to 6.00pm Saturday. 15. The Applicant will conduct cash sales only between the following hours: <ul style="list-style-type: none"> ▪ 6.00 am to 6.00 pm Monday to Saturday.

Issue	Commitment
	<p>16. The Applicant will operate the sales selection/customer display centre only between the following hours:</p> <ul style="list-style-type: none"> 8.00 am to 5.00 pm Monday to Sunday. <p>17. Construction works shall be limited to 7am to 6pm Monday to Friday and 8am to 1pm on Saturdays.</p> <p>18. A CNVMP will be prepared and implemented during development construction.</p> <p>19. The construction noise mitigation measures described in Chapter 5.5 of the preferred development noise impact assessment report (appended to the RTS) shall be implemented.</p> <p>20. Vibration during construction will be managed through the CNVMP to ensure that vibration impacts comply with the limits prescribed in British Standard BS 7385 for structural damage and in Assessing Vibration: a technical guide (DECCW, 2006) for human response.</p> <p>21. The Applicant and/or its appointed contractors will select and maintain bulk earthwork machinery as specified in the preferred development noise impact assessment report (appended to the RTS).</p> <p>22. Broadband reversing alarms or other non-tonal vehicle movement and warning alarms shall be fitted to all machinery on site. The potential noise impact associated with reversing alarms shall be managed and minimised via a combination of proactive driver/operator training and operational procedures.</p> <p>23. The Applicant shall implement a noise monitoring programme which would involve quarterly attended noise monitoring at a number of nearby identified receiver locations for 12 months after all Modification 3 and 4 activities are in full operation. If there are no exceedances of the project noise trigger levels during quarterly noise monitoring during the first year of monitoring then noise monitoring will cease. Additional noise monitoring would be undertaken in response to any noise complaints.</p> <p>23. The Applicant shall undertake consultation with identified Martin Road residential receivers predicted to exceed the RNP criteria and conduct further investigation of their residences (as detailed in Section 2.3.3 and 4.1 of the RTS) to determine whether they qualify for and require the 'Type 1' treatment package from RMS's (2015) <i>At-receiver Treatment Guideline</i>.</p> <p>24. Further investigations of the six residences potentially affected by road noise will be undertaken prior to increasing heavy vehicle movements along Martin Road above the approved heavy vehicle numbers and no greater than 180 truck movements in the daytime period. The investigation will determine whether the residences require the 'Type 1' treatment package from RMS's (2015) <i>At-receiver Treatment Guideline</i>.</p> <p>25. Prior to construction of the Martin Road-Elizabeth Drive intersection, existing road noise levels would be qualified to determine if architectural treatment should be offered to receivers along Elizabeth Drive raising complaints about increased road noise levels.</p> <p>26. The Applicant will maintain a noise complaint register.</p>
Surface Water	<p>Stormwater management</p> <p>27. The Applicant shall manage surface water on the Project Site in accordance with the WMP prepared for the Project Site and revised for the development, including surface water management measures include in the Modification 3 and 4 EA and the RTS.</p> <p>28. If during the operational phase of the quarry or on completion of the quarry operations, the Applicant wishes to make use of the water from the pits/dams in the brick making process or for reuse at other premises offsite etc, a licence will be obtained from DPIE.</p> <p>29. Sediment basins 4, 5 and 6 and the new basins at the raw material stockpile area and Pit 3 will be sized and operated in accordance with Landcom's (2004) <i>Managing Urban Stormwater: Soils & Construction</i>. If any of these basins are to be modified to perform additional stormwater treatment functions in future (other than sediment capture), then appropriate modelling and design of the basins will be required at that time. In this case monitoring of discharges from the basin at Pit 3 to South Creek will be required.</p> <p>30. The site WMP will be revised prior to commencement of the modification to include the revised surface water management approach, and monitoring of any water discharged from the site.</p> <p>Monitoring</p> <p>31. Electrical conductivity, pH, total nitrogen, total suspended solids, turbidity, total alkalinity, arsenic and copper will be monitored at the discharge points to Badgerys Creek and South Creek. Discharges will be monitored daily during the first month of continuous discharge, then weekly if the first month of data does not exceed concentration limits. Monitoring will revert to daily if any limits are exceeded and/or concentrations are reduced below limits.</p>

Issue	Commitment
	<p>32. Total dissolved solids, total phosphorus, arsenic, cadmium, chromium, lead, nickel, zinc and mercury will be sampled weekly during the first two months, which will reduce to monthly if there are no exceedances.</p> <p>33. The analytes previously sampled in Pit 1 will be monitored at three depth levels from the surface to 6 m at two locations near the discharge point to Badgerys Creek. Water will be monitored weekly for three weeks prior to discharge, then monthly. This monitoring will continue for the life of the development, and in the perched treatment basin described above.</p> <p>34. Similar sampling is also required for the new basin at Pit 3 if the basin is being used to treat Pit 3 water (other than sediment capture). The list of analytes may be able to be reduced according to the future quality of stormwater collected in Pit 3.</p> <p>Licensing and approvals</p> <p>35. CSR will apply to the EPA to amend the EPL to incorporate the discharge rates and concentration limits for relevant physical and chemical stressors, and toxicants, at the discharge point to Badgerys Creek.</p> <p>36. CSR will apply to the EPA to amend the EPL, if and when required, to incorporate appropriate discharge rates and concentration limits for discharges from the basin at Pit 3, for which time the basin provides additional water treatment other than sediment capture.</p> <p>37. CSR will consult DPIE Water on the need for water licenses associated with the modification.</p> <p>38. The EPA will be engaged, post approval, to determine whether the pit water must be classified in terms of the Protection of the Environment Operations Act 1997 (POEO Act) and to include the discharge point in the EPL.</p> <p>Erosion and sediment control</p> <p>39. Erosion and sediment controls will be implemented at the pit areas once they are filled with Fill and rehabilitation has commenced. These measures will remain in place until surfaces are fully stabilised.</p> <p>40. Erosion and sediment controls will be implemented along the unsealed Fill haul road, which will direct runoff to the pits or local sediment traps.</p>
Groundwater	<p>41. The Applicant shall prepare and implement a Groundwater Monitoring Program for the Project Site generally in accordance with the methodology provided in Chapter 11 of the 2011 EA, subject to consultation with the DPIE (water, lands and primary industry) and the satisfaction of the Director-General of the DP&I.</p> <p>42. The WMP will be updated to include the groundwater monitoring network and a TARP for exceedances of groundwater criteria, which will be developed based on the baseline groundwater data.</p> <p>43. The Applicant shall report the results of the Groundwater Monitoring Program to the Secretary of the DPIE on an annual basis.</p> <p>44. The Applicant shall implement appropriate management measures in relation to groundwater as indicated by the Monitoring Program and agreed with the Secretary.</p> <p>45. A licence to authorise any groundwater monitoring installation, required as part of this development, shall be obtained from the DPIE Water prior to any drilling commencing.</p> <p>46. The Applicant shall implement an alluvial aquifer mapping and assessment program to inform:</p> <ul style="list-style-type: none"> ▪ The definition of the boundaries of the alluvial system. ▪ Adjustment to the extent of proposed pits to avoid impacts to the alluvial aquifer. ▪ The establishment of further mitigation measures (if required) to minimise potential impacts upon the alluvial aquifer. ▪ This program will commence within 12 months of recommencing quarrying operations and the results will be reported to the Secretary of the DPIE.
Rehabilitation	<p>47. The site will be progressively rehabilitated in accordance with the approved rehabilitation strategy and rehabilitation management plan.</p> <p>48. The rehabilitation strategy and rehabilitation management plan will be revised to incorporate the development, and any additional management strategies to ensure temporary stabilisation of exposed surfaces, permanent stabilisation strategies and progressive rehabilitation with groundcover vegetation.</p> <p>49. The rehabilitation management plan will be revised to exclude plant species that are known to attract wildlife and grow to a size which will penetrate the OLS.</p> <p>50. The Applicant shall carry out rehabilitation works at the Project Site in accordance with the RMP prepared for the Project Site.</p> <p>51. The Applicant will prepare a Final Landform Rehabilitation Plan in consultation with the DPIE two years prior to the completion of all approved quarrying activities.</p>
Traffic and Transport	<p>52. The Applicant shall manage traffic movements to and from the Project Site generally in accordance with the following:</p>

Issue	Commitment
	<ul style="list-style-type: none"> ▪ Personnel operating trucks and vehicles to and from the Project Site would be required to undertake a site-specific health and safety induction, specifying operating hours and vehicle speed limits on Martin Road. ▪ A heavy vehicle protocol would be developed for the Project Site and distributed to relevant staff and contractors during induction procedures. The protocol would deal with such issues as timing of vehicle movements, idling of vehicles, speed limits and parking. ▪ Unnecessary vehicle movements would be minimised where possible. ▪ Deliveries would be scheduled on larger capacity 'Truck and Trailer' vehicles rather than 'Truck Only' vehicles where possible to minimise truck movements. ▪ A construction traffic management plan will be prepared and implemented to manage impacts on the road network, including the intersection, from construction vehicles. ▪ Traffic signals and road upgrades will be constructed at the Martin Road-Elizabeth Drive intersection prior to increasing heavy vehicle movements from the development above the approved heavy vehicle numbers. ▪ CSR will contribute to the upgrade and ongoing maintenance of Martin Road in accordance with the deed of agreement with LCC.
Cultural Heritage	<p>53. The Applicant shall adopt the following measures in relation to the management of cultural heritage on the Project Site:</p> <ul style="list-style-type: none"> ▪ The heat retainer hearth will continue to be protected by a fenced 10m exclusion zone. ▪ All Aboriginal heritage items collected during survey and test excavations will be reburied with the hearth in consultation with the RAPs. ▪ Should Aboriginal heritage items be uncovered during the course of the approved works, works shall cease. In cases where historical items have been uncovered, Heritage NSW is to be advised or should indigenous items be uncovered the National Parks and Wildlife Service shall be advised. ▪ Workers/contractors shall be informed of their obligations under the NPW Act 1974, namely that it is illegal to disturb, damage or destroy an Aboriginal object without the prior approval of the Secretary of DPC. ▪ Should human remains be found in, on, or under the land during construction, the responsible party shall: <ul style="list-style-type: none"> - Contact the local police. - Not disturb or excavate the remains. - Immediately cease all work at the particular location. - Notify the Heritage NSW (DPC) office as soon as practicable and provide any available details of the remains and their location. - Not recommence any work at the particular location until authorised in writing by the Heritage NSW. <p>54. The AHMP will be updated with the findings of the Modification 4 ACHA.</p>
Ecology	<p>55. The Applicant shall adopt the following measures in relation to the removal of any trees on the Project Site:</p> <ul style="list-style-type: none"> ▪ The canopy of the trees to be visually inspected prior to clearing to assess for the presence of fauna. Where bird species are detected the tree is to be nudged prior to felling to encourage the fauna to vacate the tree prior to felling. Trees to be left in situ until the birds leave the canopy. ▪ Felled trees are to be left in-situ for at least 24 hours to allow fauna species to relocate. Qualified personnel are to be on hand to check for wildlife and relocate them. ▪ Felled wood is to be relocated to the remnant woodland (and not placed in piles) or chipped and used in rehabilitation areas. ▪ Should any wildlife be inadvertently injured during the proposed works, WIRES or an accredited veterinarian shall be contacted. ▪ A 60 m buffer area shall be provided along Badgerys Creek and the Badgerys Creek tributary, except where Pit 2 extends into these buffers. Rehabilitation works are to be undertaken in this area in accordance with the RMP. ▪ Five local native trees shall be planted for each mature native tree that is removed. The replacement trees shall consist of a diversity of local provenance tree species from the native vegetation community (or communities) that occur, or once occurred on the site. The plantings shall be located adjacent to the riparian vegetation along South Creek, Badgerys Creek and its tributary.
Aquatic biodiversity	<p>56. A 40 m vegetated riparian zone will be maintained around the wetland adjacent to South Creek and 20 m zone will be maintained around the tributary to Badgerys Creek (except over Pit 2).</p> <p>57. As the hydraulic modelling for the surface water assessment was indicative, geomorphology will be assessed in greater detail to validate the bed and bank materials of Badgerys Creek prior to finalisation of the pit dewatering strategy. This</p>

Issue	Commitment
	<p>will include quantification of bed and bank material and particle size and calculation of critical shear stress for the bed and bank to determine its sensitivity to erosion.</p> <p>58. If the bed and bank materials are demonstrated to be sensitive to erosion, the optimum flow rate that can be achieved without impacting the creek bed and banks will be determined in a sediment transport model.</p> <p>59. It will be necessary to gain further water quality and flow data to determine the impact of discharges on Badgerys Creek. Water quality will be monitored every month at the four Badgerys Creek and South Creek monitoring locations as described in Section 6.3.2 of the EA. This will include nitrogen speciation to determine which portion of nitrogen is bioavailable and could impact aquatic ecosystems.</p> <p>60. A biological monitoring program will be developed to detect if the macroinvertebrate community is changed by exposure to discharge water. An in-stream vegetation monitoring program will be prepared and implemented to detect if the discharge is impacting vegetation community composition and mortality.</p> <p>61. Monitoring for changes to instream vegetation and macroinvertebrates will be incorporated into a pit dewatering plan as a sub-plan to the existing water management plan.</p> <p>62. CSR will compile a fauna relocation plan. This plan will develop strategies for aspects such as transferring aquatic fauna, acclimatising aquatic fauna to different water conditions and managing pest species. DPIE will be consulted during the development of this strategy.</p>
Contamination	<p>63. The potential presence of asbestos in the eastern edge of Pit 1 will be added to the site Asbestos Register.</p> <p>64. A materials management plan will be prepared to ensure that surface water, backfilled material and imported soils are handled appropriately, do not pose a risk to human health or the environment and will be suitable for the proposed land use. The plan will provide procedures to appropriately quantify, classify, dispose of and report on potential contaminants.</p> <p>65. A UFP will be prepared, providing guidance in the event that future below ground excavations identify contaminated materials (e.g. asbestos, staining, odours). The UFP will outline procedures for handling, assessing and managing any contamination that may be identified as part of Modification 4 works. If previously unidentified contaminated materials are encountered during construction and operation of the proposed modification, relevant statutory requirements, including potential soil testing and waste classification, will need to be complied with, and the material managed and disposed of appropriately.</p> <p>66. Stored/stockpiled materials within the proposed disturbance footprints will be inspected and they will be recycled or disposed at facilities which can legally receive such materials.</p> <p>67. Soil materials within the vicinity of the Modification 3 works will be assessed in accordance with NSW EPA (2014) <i>Waste Classification Guidelines</i> and either re-use them on site where suitable or dispose of them offsite to a landfill which can legally receive such materials.</p> <p>68. Conduct a hazardous material survey on existing site structures prior to demolition/alteration activities.</p>
Waste	<p>69. The Applicant shall manage waste in relation to the development in accordance with the existing WMP for the Project Site.</p> <p>68. (Deleted).</p> <p>70. All waste generated on site will be managed in accordance with the site's waste management plan that will follow the waste hierarchy of avoid, reduce, re-use, recycle and will be updated to include development works.</p>
Visual amenity	<p>71. Proposed lighting at the site will still comply with Australian Standard AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting.</p>
Mineral Resources	<p>72. The Applicant will provide annual production data to the water, lands and primary industries division of the Department of Planning, Industry and Environment, as and when requested.</p>
Environmental Management	<p>73. The Applicant shall prepare an EMS for the Project Site to provide environmental management practices and procedures to be followed during the operation of the development. The EMS shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> ▪ identification of statutory and other obligations that the Applicant is required to fulfil in relation to operation of the development; ▪ a description of the roles and responsibilities for all key personnel involved in environmental management of the development; ▪ the environmental policies and principles to be applied to the operation of the development; and ▪ describe in general terms how the environmental performance of the development would be monitored and managed.

Appendix B: Mining Lease 1771

Instrument of Variation

Mining Lease 1771 (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 1771 (1992)** as described in Schedule A.

The conditions of **ML 1771 (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

SPECIAL CONDITIONS

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: <ul style="list-style-type: none">• 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 **\$2,258,000**.

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 1771 (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



Environment Protection Licence

Licence - 684

Licence Details	
Number:	684
Anniversary Date:	18-November

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

Premises
PGH BRICKS & PAVERS BADGERYS CREEK
235 MARTIN ROAD
BRADFELD NSW 2556

Scheduled Activity
Ceramic works
Mining for minerals

Fee Based Activity	Scale
Ceramics production	0-15000 T annual production capacity
Mining for minerals	0-30000 T annual production capacity

Contact Us
NSW EPA
6 Parramatta Square
10 Darcy Street
PARRAMATTA NSW 2150
Phone: 131 555
Email: info@epa.nsw.gov.au
Locked Bag 5022
PARRAMATTA NSW 2124



Environment Protection Licence

Licence - 684

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Environment Protection Licence

Licence - 684

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Environment Protection Licence

Licence - 684

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

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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.



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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	0 - 15000 T annual production capacity
Mining for minerals	Mining for minerals	0 - 30000 T annual production capacity

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
PGH BRICKS & PAVERS BADGERYS CREEK
235 MARTIN ROAD
BRADFIELD
NSW 2556
LOT 1 DP 1278780, LOT 2 DP 1278780, LOT 3 DP 1278780

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; 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



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P1 Location of monitoring/discharge points and areas

- P1.1 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.
- P1.2 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.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
3	Discharge to waters and water quality monitoring	Discharge to waters and water quality monitoring	Outlet from Sediment Basin B as described in 'Water Pollution Impact Assessment for Discharge of Stormwater Runoff from Disturbed Areas at PGH Badgerys Creek (Version 2)', PGH Bricks, 04/02/2021

- P1.3 The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.

Noise/Weather

EPA identification no.	Type of monitoring point	Location description
4	Noise monitoring	255 LAWSON ROAD, BADGERYS CREEK, 2555
5	Noise monitoring	217 MARTIN ROAD, BADGERYS CREEK, 2555
6	Noise monitoring	50 VICTOR AVENUE, KEMPS CREEK, 2178

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 Concentration limits

- L2.1 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



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concentration limits specified for that pollutant in the table.

- L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table's.
- L2.4 Water and/or Land Concentration Limits

POINT 3

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH				6.5-8.5
Turbidity	nephelometric turbidity units				50

L3 Waste

- L3.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.
Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.
Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.
This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	Excavated natural material	As defined in the Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment (Waste) Regulation 2014 – The excavated natural material order 2014	-	Only for the purpose of quarry rehabilitation

- L3.2 The licensee must not cause, permit, or allow any waste generated outside the licensed premises to be received at the licensed premises except virgin excavated maerial (VENM), or as expressly permitted by a condition of this licence or a resource recovery order and resource recovery exemptionunder the Protection of



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the Environment Operations (Waste) Regulation 2014.

- L3.3 The licensee must have in place and implement procedures to identify and prevent the acceptance of any waste not permitted by Condition L3.1 to be accepted at the premises.
- L3.4 No asbestos waste is to be accepted at the premises.

L4 Noise limits

- L4.1 Noise from the premises (excluding mobile plant) must not exceed:
 - a) an LA10(15 minute) noise emission criterion of 55 dB(A) (0700 to 2200) Monday to Saturday and (0800 to 2200) Sundays and Public Holidays; and
 - b) an LA10(15 minute) noise emission criterion of 40 dB(A) at all other times, except as expressly provided by this licence.
- L4.2 Noise from the operation of mobile plant must not exceed:
 - a) an LA10(15 minute) noise emission criterion of 50 dB(A) (0700 to 2200) Monday to Saturday and (0800 to 2200) Sundays and Public Holidays; and
 - b) an LA10(15 minute) noise emission criterion of 40 dB(A) at all other times, except as expressly provided by this licence.
- L4.3 Noise from the premises is to be measured or computed at the most affected point on or within the residential property boundary or, if that is more than 30 metres from the residence, at the most affected point within 30 metres of the residence to determine compliance with condition L4.1. 5 dB(A) must be added if the noise is tonal or impulsive in character.
- L4.4 Noise generated at the premises that is measured at each noise monitoring point established under this licence must not exceed the noise levels specified in Column 4 of the table below for that point during the corresponding time periods specified in Column 1 when measured using the corresponding measurement parameters listed in Column 2.

POINT 4

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Morning-Shoulder	L _{Aeq} (15 minute)	-	42
Day	L _{Aeq} (15 minute)	-	42
Evening	L _{Aeq} (15 minute)	-	41
Night	L _{Aeq} (15 minute)	-	38
Night	L _{AFmax}	-	52

POINT 5



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Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Morning-Shoulder	LAeq (15 minute)	-	43
Day	LAeq (15 minute)	-	45
Evening	LAeq (15 minute)	-	40
Night	LAeq (15 minute)	-	38
Night	LAFmax	-	52

POINT 6

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Morning-Shoulder	LAeq (15 minute)	-	43
Day	LAeq (15 minute)	-	43
Evening	LAeq (15 minute)	-	43
Night	LAeq (15 minute)	-	38
Night	LAFmax	-	52

L4.5 For the purposes of the condition above:

- a) Morning shoulder means the period from 5am to 7am Monday to Saturday and the period from 5am to 8am Sunday and public holidays.
- b) Day means the period from 7am to 6pm Monday to Saturday and the period from 8am to 6pm Sunday and public holidays.
- c) Evening means the period from 6pm to 10pm.
- d) Night means the period from 10pm to 5am Monday to Saturday and the period from 10 pm to 5am Sunday and public holidays.

L5 Potentially offensive odour

- L5.1 No condition in this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.
- Note: Section 129 of the Protection of the Environment Operations Act 1997 provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

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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.

O3.2 All activities occurring in or on the premises must be carried out in a manner that prevents or minimises the emission of dust.

O3.3 Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.

O3.4 The licensee must ensure that no material, including sediment, is tracked from the premises.

O4 Processes and management

O4.1 The licensee must implement all feasible and reasonable erosion and sediment controls as may be necessary throughout the life of construction works and activities to minimise sediment leaving the premises.

O4.2 The licensee must ensure that all erosion and sediment control measures installed at the premises are inspected and works undertaken to repair and/or maintain these controls as soon as is reasonable and feasible to ensure the proper and efficient operation of these controls. The licensee must record all such inspections including observations and works undertaken to repair and/or maintain erosion and sediment controls and provide these records to an authorised officer upon request.

O4.3 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5 Other operating conditions

O5.1 Water from pits 1, 2 or 3 must not be transferred to Sediment Basin A or Sediment Basin B, or discharged to

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waterways.

Filling of pits

- O5.2 The filling of the pits must be done in accordance with the Fill Management Plan, version 1.0, Project No. 0606483_S011411, dated 1 August 2023 (or any subsequent version approved in writing by the Department of Planning and NSW EPA).

Importation of VENM/ENM

- O5.3 The licensee must ensure that VENM brought onto the premises meets the definition of VENM as per the EPA's Waste Classification Guidelines (2014).
- O5.4 The licensee must not cause, permit or allow any waste generated outside the licensed premises to be received at the licensed premises except virgin excavated material (VENM), or as expressly permitted by a condition of this licence or a resource recovery order and resource recovery exemption under the Protection of the Environment Operations (Waste) Regulation 2014.
- O5.5 The licensee must ensure that all ENM brought onto the premises meets the definition of ENM as per EPA Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 - The excavated natural material order 2014.
- O5.6 The licensee must ensure there is a dedicated waste quarantine area on the premises for any material found not to be VENM/ENM. This area must be clearly signposted.
- O5.7 All non-conforming waste received at the premises must be disposed of at a facility that can lawfully receive that type of waste as soon as practicable.
- O5.8 The licensee is responsible for ensuring all security provision are taken to prevent illegal dumping of waste at the premises.

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.



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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 Water and/ or Land Monitoring Requirements

POINT 3

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium (dissolved)	milligrams per litre	Monthly during discharge	Grab sample
Electrical conductivity	microsiemens per centimetre	Continuous during discharge	In line instrumentation
pH	pH	Continuous during discharge	In line instrumentation
Turbidity	nephelometric turbidity units	Continuous during discharge	In line instrumentation

- M2.3 For the purpose of the above table, if monitoring results for aluminium (dissolved) exceed ANZG (2018) default guideline values (55µg/L for fresh water, pH >6.5), the licensee must notify the EPA within 7 days.

M3 Testing methods - concentration limits

- M3.1 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 Recording of pollution complaints

- M4.1 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.
- M4.2 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

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f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

M5.1 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.

M5.2 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.

M5.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

M6 Other monitoring and recording conditions

Ambient Dust Monitoring

M6.1 The licensee must operate and maintain a minimum of four ambient dust monitors capable of continuously monitoring and recording particulate emissions (including PM10) from the premises.

M6.2 The continuous dust monitors must be placed at locations where they are sufficiently capable of monitoring and recording dust coming onto the premises, and dust being generated at the premises.

Weather Monitoring

M6.3 The licensee must monitor and record temperature, humidity, wind direction, wind velocity and rainfall at either the project weather station, or through analysis of equivalent weather information obtained from the Australian Bureau of Meteorology.

Monitoring must:

a) be representative of each catchment;

b) commence prior to any works that may cause sediment or dust to leave the premises; and

c) continue to be operated until soil disturbance activities cease at the premises and the site has been stabilised.

6 Reporting Conditions

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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
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.

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.

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 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.

R1.7 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.

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.

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

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R2 Notification of environmental harm

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 they became aware of the incident.

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.



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- 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
Stormwater management plan	Prepare stormwater management plan for site that includes fuel storage; sewage irrigation.	22-October-2002
Trial Use of Recycled Wastewater	Trial use of recycled wastewater in brick manufacturing. Reduce use of water by using recycled wastewater.	01-December-2008



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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

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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> .



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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
Wellhead	Has the same meaning as in Schedule 1 to the Protection of the Environment Operations (General) Regulation 2021.

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition: 01-March-2000



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End Notes	
1	Licence varied by notice 1009191, issued on 27-Jun-2002, which came into effect on 22-Jul-2002.
2	Licence varied by change to legislation, issued on 05-Jul-2007, which came into effect on 05-Jul-2007.
3	Licence varied by notice 1076261, issued on 19-Sep-2007, which came into effect on 19-Sep-2007.
4	Licence varied by notice 1079904, issued on 28-Nov-2007, which came into effect on 28-Nov-2007.
5	Licence varied by notice 1082805, issued on 06-Mar-2008, which came into effect on 06-Mar-2008.
6	Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
7	Licence varied by notice 1093859, issued on 18-Nov-2008, which came into effect on 18-Nov-2008.
8	Licence varied by change to FBA for summer pollutants, issued on 16-Jan-2009, which came into effect on 16-Jan-2009.
9	Licence varied by notice 1097146, issued on 20-Apr-2009, which came into effect on 20-Apr-2009.
10	Licence varied by notice 1524840 issued on 08-Sep-2014
11	Licence varied by notice 1528953 issued on 19-Mar-2015
12	Licence transferred through application 1530237 approved on 04-May-2015 , which came into effect on 04-May-2015
13	Licence varied by notice 1601711 issued on 23-Mar-2021
14	Licence varied by notice 1630870 issued on 18-Oct-2023

Appendix D: 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 Access Licence (WAL) Number

WAL 24346

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 Land and Property Information.

☐ Approval issued under the Water Management Act 2000

Find out if a Water Act 1912 licence has been converted

☐ Water licence conversion status

<< Previous Search

Print Export

Search Results

Category [Subcategory]	Status	Water Source	Tenure Type	Management Zone	Share Components (units or ML)
Aquifer	Current	Sydney Basin Central Groundwater Source	Continuing		25.00

Extraction Times or Rates

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

Nominated Work Approval(s)

10WA109463

- Conditions

Plan Conditions

Water sharing plan

Greater Metropolitan Region Groundwater Sources

Take of water

MW0929-00001

From 1 July 2018, if the water supply work nominated on this access licence is located at or less than 40 m from the top of the high bank of a river then:

- A. water must not be taken in this groundwater source when flows are in the Very Low Flow Class for an unregulated river access licence in that river.
- B. This restriction will only apply when the system that confirms when water can be taken is available on the relevant licensor website.
- C. the relevant licensor will inform the licence holder in writing of the applicable restrictions and how to access the information on its website when this system becomes operative.

MW0919-00001

A maximum water allocation of 0.1 ML/unit share may be carried over in the account for this access licence from one water year to the next water year if a water meter is installed on each water supply work nominated on this licence and each meter is maintained in working order.

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.

MW0547-00001

The total volume of water taken under this licence in any water year must not exceed a volume equal to:

- A. the sum of water in the account from the available water determination for the current year, plus
- B. the water carried over in the account from the previous water year, plus
- C. the net amount of water assigned to or from the account under a water allocation assignment, plus
- D. any water re-credited by the Minister to the account.

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.

MW0606-00001

The volume of water taken in the water year must be recorded in the logbook at the end of each water year. The maximum volume of water permitted to be taken in that water year must also be 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

Disclaimer: The NSW Office of Water does not warrant the data is current nor does it warrant that the data or the data capturing processes are free from corruption or error.

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@dpi.nsw.gov.au or contact 1800 353 104.



Approval details

Approval number	10WA109463
Status	CURRENT*
Approval kind	Water Supply Works
Water sharing plan	GREATER METROPOLITAN REGION GROUNDWATER SOURCES 2011
Date of effect	01/Jul/2011
Expiry date	08/Nov/2025
Approval holder(s)	Schedule 1
Water supply works	Schedule 2
Conditions	Schedule 3

Contact for service of documents

Name	PGH Bricks & Pavers Pty Ltd
Address	59-67 Cecil Road CECIL PARK NSW 2178

* Note: An approval has effect for such period as is specified in the approval, or if the period is extended under section 105, that extended period. If an application for extension of an approval is lodged before the approval expires, the term of the expiring approval is extended until either the date of the final decision on the application, or a date fixed by the Minister for the approval, whichever is the later date. An approval which has expired can be the subject of an application to extend it but it needs to be accompanied by a statutory declaration of the reasons for the delay in making the application. If the Minister accepts these reasons the term of the approval is taken to have been extended, and the application may be dealt with, as if the application had been made before the approval expired.

It is an offence under the Water Management Act 2000 to breach a term or condition of the approval or to construct and use works to which the approval does not relate. It is also an offence to use works the subject of an approval if the approval has expired, been surrendered or cancelled.

Schedule 1 - Approval holders

The holders of this approval are:

Approval holder(s)	ACN (if applicable)
PGH Bricks & Pavers Pty Ltd	168 794 821

Important notice - change of landholder or contact

Please advise the Office in the event of any of the following, as soon as practicable:

- If there is a change in the ownership or occupation of the land benefited by this approval (see Schedule 2). Under the Water Management Act 2000, an approval is typically held by the owner or lawful occupier of the benefited land. Consequently, a change in occupation may cause a change in your legal obligations as an approval holder.*
- If there is a change to the contact person. You will be required to lodge a written statement signed by all the holders.*
- If there is a change to the mailing address for the nominated contact person. This should be done by the contact person in writing.

* An updated Statement of Approval will be issued free of charge

Schedule 2 - Water supply works

Part A: Authorised water supply works

Subject to the conditions of this approval, in relation to each numbered work in the table, the holders of this approval are authorised to construct and use a water supply work of the type shown at the location specified:

Work 1

Specified work	EXCAVATION - GROUNDWATER	
Specified location	1//373863	Whole Lot
	1//1035249	Whole Lot
Management zone (if applicable)		
Water source	SYDNEY BASIN CENTRAL GROUNDWATER SOURCE	
Water sharing plan	GREATER METROPOLITAN REGION GROUNDWATER SOURCES 2011	

Schedule 3 - Conditions

The approval is subject to the following conditions:

Plan conditions

Water sharing plan

Greater Metropolitan Region Groundwater 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.

Water management works

MW0097-00001

If contaminated water is found above the production aquifer during the construction of the water supply work authorised by this approval, the licensed driller must:

- A. notify the relevant licensor in writing within 48 hours of becoming aware of the contaminated water, and
- B. adhere to the Minimum Construction Requirements for Water Bores in Australia (2012), as amended or replaced from time to time.

MW0487-00001

The water supply work authorised by this approval must be constructed within three (3) years from the date this approval is granted.

MW0044-00001

A. When a water supply work authorised by this approval is to be abandoned or replaced, the approval holder must contact the relevant licensor in writing to verify whether the work must be decommissioned.

B. The work is to be decommissioned, unless the approval holder receives notice from the Minister not to do so.

C. When decommissioning the work the approval holder must:

- i. comply with the minimum requirements for decommissioning bores prescribed in the Minimum Construction Requirements for Water Bores in Australia (2012), as amended or replaced from time to time, and
- ii. notify the relevant licensor in writing within sixty (60) days of decommissioning that the work has been decommissioned.

Monitoring and recording

MW0484-00001

Before water is taken through the water supply work authorised by this approval, confirmation must be recorded in the logbook that cease to take conditions do not apply and water may be taken.

The method of confirming that water may be taken, such as visual inspection, internet search, must also be recorded in the logbook.

If water may be taken, the:

- A. date, and
 - B. time of the confirmation, and
 - C. flow rate or water level at the reference point in the water source
- must be recorded in the logbook.

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.

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.

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

MW0051-00001

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.

Other conditions**Water management works**

DK1198-00001

The approval holder must allow the relevant licensor 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.

DK1208-00001

The approval holder must not construct or install works used for the purpose of conveying, distributing or storing water from the works authorised by this approval, that obstruct the reasonable passage of floodwaters flowing in, to, or from a river or lake.

Glossary

cease to take - Cease to take conditions means any condition on this approval, or on the access licence under which water is proposed to be taken, that prohibits the taking of water in a particular circumstance.

domestic consumption - Domestic consumption is the use of water for normal household purposes in domestic premises situated on the land.

licensor - WaterNSW or DPI Water, depending on which organisation administers your licences and/or approvals

logbook - A logbook is a document, electronic or hard copy, that records specific required information.

metered water supply work - A metered water supply work is a water supply work fitted with a data logger and a water meter that complies with Australian Standard AS 4747: Meters for non-urban water supply.

stock watering - Stock watering is the use of water for stock animals being raised on the land. It does not include the use of water for the raising of stock animals on an intensive commercial basis (kept in feedlots or buildings for all, or a substantial part, of the period during which the stock animals are being raised).

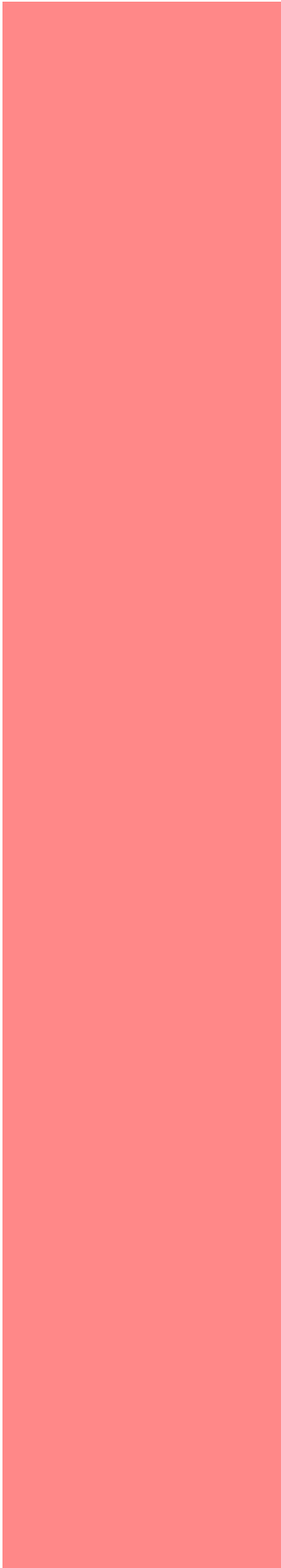
water meter - A water meter is a device that measures the volume of water extracted over a known period of time. Examples of a water meter include a mechanical meter, electromagnetic meter, channel meter with mobile phone, or an authorised meter equivalent.

General Notes

All conditions on an approval require compliance. An appeal to the Land and Environment Court against a decision to impose certain conditions on an approval can be made within 28 days after the date the decision is made. Conditions identified with the first letter "D" are those that can be appealed during the appeal period.

The words in this approval have the same meaning as in the *Water Management Act 2000*

Note: The words in this approval have the same meaning as in the WMA



END OF STATEMENT

Appendix E: Compliance Status

Project Approval - Mod 5	10_0014	Schedule 2	1	OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT In Addition to meeting the specific performance measures and criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.	Complaint
Project Approval - Mod 5	10_0014	Schedule 2	2	TERMS OF APPROVAL The Applicant , in acting on this consent, must carry out the development: (a) in compliance with the conditions of this consent; (b) in accordance with all written directions of the Secretary; and (c) in accordance with the development layout.	Non-Complaint
Project Approval - Mod 5	10_0014	Schedule 2	3	The Applicant, in acting on this consent, must carry out the development: (a) generally in accordance with the EA; (b) generally in accordance with EA (Mod 1); (c) generally in accordance with EA (Mod 2); (d) generally in accordance with EA (Mod 3 and 4); (e) generally in accordance with Modification Report (Mod 5); and (f) generally in accordance with the Statement of Commitments.	Complaint
Project Approval - Mod 5	10_0014	Schedule 2	4	The conditions of this consent and directions of the Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document referenced in condition 3 of this Schedule. In the event of an inconsistency, ambiguity or conflict between any of the documents referenced in condition 3 of this Schedule, the most recent document prevails. <i>Note: For the purposes of this condition, there will be an inconsistency between documents if it is not possible to comply with both documents, or in the case of a condition of consent or direction of the Secretary, and a document, if it is not possible to comply with both the condition or direction, and the document.</i>	Complaint
Project Approval - Mod 5	10_0014	Schedule 2	5	Consistent with the requirements of this consent, the Secretary may make written directions to the Applicant in relation to: (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Secretary; and (b) the implementation of any actions or measures contained in any such document referred to in (a) above. <i>Note: For the purposes of this condition, there will be an inconsistency between documents if it is not possible to comply with both documents, or in the case of a condition of consent or direction of the Secretary, and a document, if it is not possible to comply with both the condition or direction, and the document.</i>	Complaint
Project Approval - Mod 5	10_0014	Schedule 2	5A	The development as modified by EA Mod 3 and 4, must be undertaken sequentially in the following stages: (a) Phase 1; (b) Phase 2; (c) Phase 3; and (d) Phase 4. Note: Each of these phases is listed in the definitions and shown in Appendix 3.	Complaint
Project Approval - Mod 5	10_0014	Schedule 2	5B	The development must notify the Department in writing, at least two weeks before the date of: (a)the commencement of each Phase of the development; (b)the completion of extraction in Pit 3; (c)cessation of Brickmaking Activities; and (d)decommissioning.	Complaint
Project Approval - Mod 5	10_0014	Schedule 2	6	COMPLIANCE: The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.	Complaint

Project Approval - Mod 5	10_0014	Schedule 2	7	APPLICABILITY OF GUIDELINES References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, standards or policies in the form they are in as at the date of this consent. However, consistent with the conditions of this consent and without altering any limits or criteria in this approval, the Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, standard or policy, or a replacement of them.	Complaint																											
Project Approval - Mod 5	10_0014	Schedule 2	8	LIMITS OF CONSENT The Applicant may carry out quarrying operations on the site until 27 September 2031 . <i>Note: Under this consent, the Applicant is required to decommission and rehabilitate the site and carry out additional requirements. Consequently, this consent will continue to apply in all respects other than to permit the carrying out of development, until the rehabilitation of the site and those requirements and undertakings have been carried out to the required standard.</i>	Complaint																											
Project Approval - Mod 5	10_0014	Schedule 2	9A	The Applicant may receive, store, and dispatch finished building products at the site until brick making at the site commences.	Complaint																											
Project Approval - Mod 5	10_0014	Schedule 2	10	<p>The Applicant may receive, store, and dispatch finished building products at the site until brick making at the site commences.</p> <p><i>Table 1: Limits on extraction, production, receipt and dispatch volumes per calendar year</i></p> <table><tr><th>Activity</th><th>Project Phase</th><th>Total Volume (tonnes per calendar year)</th></tr><tr><td>Extraction from Pit 3</td><td>Phase 1 and 2</td><td>420,000</td></tr><tr><td rowspan="2">Receive raw materials for brickmaking</td><td>Phase 1 and 2</td><td>215,000</td></tr><tr><td>Phase 3 onwards</td><td>360,000</td></tr><tr><td>Dispatch raw materials</td><td>Phase 1,2 and 3</td><td>275,000</td></tr><tr><td>Brick production</td><td>All Phases</td><td>300,000</td></tr><tr><td>Dispatch finished building products</td><td>All Phases</td><td>330,000</td></tr></table> <p><i>Note: The Total Volume limits in Table 1 do not apply to the import of VENM for the purpose of backfilling voids. The import of VENM is separately managed under the restrictions on truck movements contained in Condition 12 of this Schedule.</i></p>	Activity	Project Phase	Total Volume (tonnes per calendar year)	Extraction from Pit 3	Phase 1 and 2	420,000	Receive raw materials for brickmaking	Phase 1 and 2	215,000	Phase 3 onwards	360,000	Dispatch raw materials	Phase 1,2 and 3	275,000	Brick production	All Phases	300,000	Dispatch finished building products	All Phases	330,000	Complaint							
Activity	Project Phase	Total Volume (tonnes per calendar year)																														
Extraction from Pit 3	Phase 1 and 2	420,000																														
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Brick production	All Phases	300,000																														
Dispatch finished building products	All Phases	330,000																														
Project Approval - Mod 5	10_0014	Schedule 2	11	The Applicant must not transport bricks or quarry products to or from the site, other than by road.	Complaint																											
Project Approval - Mod 5	10_0014	Schedule 2	12	<p>The Proponent must not exceed the total truck movements detailed in Table 2.</p> <p><i>Table 2: Total Truck Movements</i></p> <table><tr><th>Transport Route Stage</th><th>Project Phases</th><th>Day</th><th>Total truck movements^a</th></tr><tr><td rowspan="3">Prior to the upgrade of the Martin Road-Elizabeth Drive Intersection</td><td rowspan="3">1,2 and 3</td><td>Monday to Friday</td><td>120</td></tr><tr><td>Saturday</td><td>40</td></tr><tr><td>Sundays</td><td>40</td></tr><tr><td rowspan="6">Following completion of the Martin Road-Elizabeth Drive Intersection upgrade</td><td rowspan="3">1,2 and 3</td><td>Monday to Friday</td><td>800</td></tr><tr><td>Saturday</td><td>358</td></tr><tr><td>Sundays</td><td>200</td></tr><tr><td rowspan="3">4</td><td>Monday to Friday</td><td>366</td></tr><tr><td>Saturday</td><td>98</td></tr><tr><td>Sunday</td><td>0</td></tr></table> <p>^a Note: each truck entering or exiting the site is counted as a separate movement.</p>	Transport Route Stage	Project Phases	Day	Total truck movements ^a	Prior to the upgrade of the Martin Road-Elizabeth Drive Intersection	1,2 and 3	Monday to Friday	120	Saturday	40	Sundays	40	Following completion of the Martin Road-Elizabeth Drive Intersection upgrade	1,2 and 3	Monday to Friday	800	Saturday	358	Sundays	200	4	Monday to Friday	366	Saturday	98	Sunday	0	Non-Complaint
Transport Route Stage	Project Phases	Day	Total truck movements ^a																													
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	4	Monday to Friday	366																													
		Saturday	98																													
		Sunday	0																													

Project Approval - Mod 5	10_0014	Schedule 2	12A	Truck movements entering or exiting the site on Sundays are restricted to the importation of Fill for the purpose of backfilling quarry pits and rehabilitation activities. Note: Truck movements are also controlled further by the limits in condition 10 of this Schedule and operating hours in condition 1 of Schedule 3.	Complaint
Project Approval - Mod 5	10_0014	Schedule 2	13	STRUCTURAL ADEQUACY All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the project, must be constructed in accordance with the BCA. <i>Notes:</i> • <i>Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for any proposed building works;</i> • <i>Part 8 of the EP&A Regulation sets out the requirements for the certification of the project</i>	Not Triggered
Project Approval - Mod 5	10_0014	Schedule 2	13A	BRICK KILN STACKS The brick kiln stacks must not exceed 41 m above natural ground level.	Not Triggered
Project Approval - Mod 5	10_0014	Schedule 2	14	DEMOLITION All demolition work must be carried out in accordance with the Australian Standard AS 2601-2001: The Demolition of Structures (Standards Australia, 2001).	Complaint
Project Approval - Mod 5	10_0014	Schedule 2	15	PROTECTION OF PUBLIC INFRASTRUCTURE Unless the Applicant and the applicable authority agree otherwise the Applicant must: (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; and (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project. <i>Note: This condition does not apply to damage to roads caused as a result of general road usage or otherwise addressed by contributions required by condition 25 of Schedule 3.</i>	Complaint
Project Approval - Mod 5	10_0014	Schedule 2	16	OPERATION OF PLANT AND EQUIPMENT All plant and equipment used on the site, or to monitor the performance of the project, must be: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	Complaint
Project Approval - Mod 5	10_0014	Schedule 2	16A	The external walls of all buildings including additions to existing buildings must comply with the relevant requirements of the BCA. Before the issue of a Construction Certificate and an Occupation Certificate, the Applicant must provide the Certifying Authority with documented evidence that the products and systems proposed for use or used in the construction of external walls, including finishes and claddings such as synthetic or aluminium composite panels, comply with the requirements of the BCA. The Applicant must provide a copy of the documentation given to the Certifying Authority to the Secretary within seven days after the Certifying Authority accepts it.	Not Triggered
Project Approval - Mod 5	10_0014	Schedule 2	17	PRODUCTION DATA The Applicant must: (a) provide calendar year annual quarry production data to MEG using the standard form for that purpose; and (b) include a copy of this data in the Annual Review.	Complaint
Project Approval - Mod 5	10_0014	Schedule 2	18	LIMIT OF EXTRACTION Identification of Approved Extraction Limits Within 3 months of the determination of Modification 3 and 4, the Applicant must: (a) engage a registered surveyor to mark out the boundary of the approved area of extraction within Pit 3; and (b) provide the Secretary with a survey plan of the boundary. The boundary of the approved area of extraction within Pit 3 must be clearly marked in a manner that allows them to be easily identified at all times during the carrying out of quarrying operations.	Not Triggered
Project Approval - Mod 5	10_0014	Schedule 2	19	Maximum Extraction Depth The Applicant must not extract any extractive materials or carry out any work in the extraction area below 35 m below the pre-existing natural surface of the ground, other than construction of bores approved by DPIE Water or in-pit sumps approved by the Secretary.	Not Triggered

Project Approval - Mod 5	10_0014	Schedule 3	1	<div>NOISE hours of Operation</div> <div><div>1. The Proponent must comply with the operating hours set out in Table 1.</div><table><tr><th>Activity</th><th>Permissible Hours</th></tr><tr><td>Quarrying operations (excluding truck arrival, loading and dispatch)</td><td>7:00 am to 6:00 pm Monday to Saturday</td></tr><tr><td>Brickmaking Activities</td><td>At no time on Sundays or public holidays</td></tr><tr><td>Truck arrival and dispatch (raw materials only)</td><td>24 hours per day, 7 days per week</td></tr><tr><td>Truck arrival and dispatch (finished building products only)</td><td>6:00 am to 10:00 pm Monday to Friday</td></tr><tr><td>Truck arrival and dispatch (waste import only)</td><td>6:00 am to 6:00 pm Saturday</td></tr><tr><td>Cash sales</td><td>At no time on Sundays or public holidays</td></tr><tr><td>Sales collection/Customer Display Centre</td><td>6:00 am to 10:00 pm Monday to Friday</td></tr><tr><td>Maintenance</td><td>6:00 am to 6:00 pm Saturday</td></tr><tr><td></td><td>At no time on Sundays or public holidays</td></tr><tr><td></td><td>At no time on public holidays</td></tr><tr><td></td><td>At no time on Sundays or public holidays</td></tr><tr><td></td><td>6:00 am to 6:00 pm Monday to Saturday</td></tr><tr><td></td><td>At no time on Sundays or public holidays</td></tr><tr><td></td><td>At no time on public holidays</td></tr><tr><td></td><td>At no time on Sundays or public holidays</td></tr><tr><td></td><td>At any time, provided that these activities are not audible at any privately-owned residence outside of permissible hours for quarrying operations</td></tr></table></div>	Activity	Permissible Hours	Quarrying operations (excluding truck arrival, loading and dispatch)	7:00 am to 6:00 pm Monday to Saturday	Brickmaking Activities	At no time on Sundays or public holidays	Truck arrival and dispatch (raw materials only)	24 hours per day, 7 days per week	Truck arrival and dispatch (finished building products only)	6:00 am to 10:00 pm Monday to Friday	Truck arrival and dispatch (waste import only)	6:00 am to 6:00 pm Saturday	Cash sales	At no time on Sundays or public holidays	Sales collection/Customer Display Centre	6:00 am to 10:00 pm Monday to Friday	Maintenance	6:00 am to 6:00 pm Saturday		At no time on Sundays or public holidays		At no time on public holidays		At no time on Sundays or public holidays		6:00 am to 6:00 pm Monday to Saturday		At no time on Sundays or public holidays		At no time on public holidays		At no time on Sundays or public holidays		At any time, provided that these activities are not audible at any privately-owned residence outside of permissible hours for quarrying operations	Complaint		
Activity	Permissible Hours																																								
Quarrying operations (excluding truck arrival, loading and dispatch)	7:00 am to 6:00 pm Monday to Saturday																																								
Brickmaking Activities	At no time on Sundays or public holidays																																								
Truck arrival and dispatch (raw materials only)	24 hours per day, 7 days per week																																								
Truck arrival and dispatch (finished building products only)	6:00 am to 10:00 pm Monday to Friday																																								
Truck arrival and dispatch (waste import only)	6:00 am to 6:00 pm Saturday																																								
Cash sales	At no time on Sundays or public holidays																																								
Sales collection/Customer Display Centre	6:00 am to 10:00 pm Monday to Friday																																								
Maintenance	6:00 am to 6:00 pm Saturday																																								
	At no time on Sundays or public holidays																																								
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	At no time on Sundays or public holidays																																								
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	At any time, provided that these activities are not audible at any privately-owned residence outside of permissible hours for quarrying operations																																								
Project Approval - Mod 5	10_0014	Schedule 3	1A	With the written agreement of the Secretary, the Applicant may undertake limited campaign trucking (within the limits imposed under conditions 10 and 12 of Schedule 2) for the import of Fill outside of the operating hours prescribed in condition 1 of this Schedule.	Complaint																																				
Project Approval - Mod 5	10_0014	Schedule 3	2	<div>The following activities may be carried out outside the hours specified in condition 1 of this Schedule:</div> <div>(a)activities that are inaudible at residences on privately-owned land;</div> <div>(b)the delivery or dispatch of materials as requested by the NSW Police Force or other public authorities for safety reasons; or</div> <div>(c)emergency work to avoid the loss of life, property or to prevent material harm to the environment.</div> <div>In such circumstances, the Applicant must notify the Department and affected residents prior to undertaking the activities, or as soon as is practical thereafter.</div>	Complaint																																				
Project Approval - Mod 5	10_0014	Schedule 3	3	<div>Construction Noise</div> <div>Approved construction works must only be undertaken during standard construction hours (7 am to 6 pm, Monday to Friday and 8 am to 1 pm on Saturdays), unless the Secretary agrees otherwise.</div>	Complaint																																				
Project Approval - Mod 5	10_0014	Schedule 3	5	<div>Operational Noise Criteria</div> <div>The Applicant must ensure that operational noise generated by the project (including construction activities) does not exceed the criteria in Table 2 at any residence on privately-owned land.</div> <div><div>Table 2: Operational noise criteria dB(A)</div><table><tr><th>Receiver ID</th><th>Morning Shoulder</th><th>Day</th><th>Evening</th><th>Night</th><th></th></tr><tr><td></td><th>L_{ASR} (15 min)</th><th>L_{ASR} (15 min)</th><th>L_{ASR} (15 min)</th><th>L_{ASR} (15 min)</th><th>L_{AEBRUK}</th></tr><tr><td>R9, R25, R35</td><td>43</td><td>45</td><td>40</td><td>38</td><td>52</td></tr><tr><td>R5, R26, R27, R28, R29, R30, R31, R32, R34, R42, R43, R44, R45, R46</td><td>42</td><td>42</td><td>41</td><td>38</td><td>52</td></tr><tr><td>R11, R12, R13, R14, R15</td><td>43</td><td>43</td><td>43</td><td>38</td><td>52</td></tr><tr><td>All other residences</td><td>-</td><td>40</td><td>35</td><td>35</td><td>52</td></tr></table><div>Noise generated by the project must be monitored and measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the NSW Noise Policy for Industry (NSW EPA 2017).</div><div>However, the noise criteria in Table 2 do not apply if the Proponent has an agreement with the relevant landowner to exceed the noise criteria, and the Proponent has advised the Department in writing of the terms of this agreement.</div><div>Note: Should an agreement with a landowner be terminated for any reason, the Proponent must comply with the noise criteria in Table 2.</div></div>	Receiver ID	Morning Shoulder	Day	Evening	Night			L _{ASR} (15 min)	L _{ASR} (15 min)	L _{ASR} (15 min)	L _{ASR} (15 min)	L _{AEBRUK}	R9, R25, R35	43	45	40	38	52	R5, R26, R27, R28, R29, R30, R31, R32, R34, R42, R43, R44, R45, R46	42	42	41	38	52	R11, R12, R13, R14, R15	43	43	43	38	52	All other residences	-	40	35	35	52	Complaint
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Project Approval - Mod 5	10_0014	Schedule 3	6	Road Traffic Noise Criteria The Applicant must ensure that the road traffic noise generated by the project does not exceed the criteria in Table 3 at any privately-owned residence.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	6A	Upon receiving a written request from the owner of residences RN5, RN9, RN14, RN16, RN21 or RN22, the Applicant must implement noise mitigation treatment packages as described in the EA (Mod 3 and 4) and as set out in the RMS Draft At-Receiver Treatment Packages. If within 3 months of receiving this request from the owner, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	7	Noise Operating Conditions The Applicant must: (a)take all reasonable steps to minimise the construction, operational, low frequency and road transportation noise of the project; (b)take all reasonable steps to minimise the noise impacts of the project during noise enhancing meteorological conditions; (c)operate a noise management system to guide the day to day planning of quarrying operations and the implementation of noise mitigation measures to ensure compliance with the relevant conditions of this approval; (d)carry out regular noise monitoring to determine whether the project is complying with the relevant conditions of this approval; and (e)modify or stop operations on the site to comply with the relevant conditions of this approval. <i>Note: Monitoring under this approval is not required at all residences and the use of representative monitoring locations can be used to demonstrate compliance with criteria, if agreed to by the Secretary.</i>	Complaint

Project Approval - Mod 5	10_0014	Schedule 3	8	<p>Noise Management Plan</p> <p>The Applicant must prepare a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a)be submitted to the Secretary for approval prior to commencing Modification 3 and 4, unless otherwise agreed by the Secretary;</p> <p>(b)describe the measures to be implemented to ensure:</p> <ul style="list-style-type: none">•compliance with the noise criteria and operating conditions of this approval;•best practice management is being employed;•residences listed in condition 6A of this Schedule are notified of their rights to request road noise mitigation measures;•vibration impacts are minimised; and•the construction and operational noise impacts of the project are minimised during noise enhancing meteorological conditions; <p>(c)describe measures to ensure that all the commitments in the EA (Mod 3 and 4) in relation to noise are implemented;</p> <p>(d)include a consultation plan detailing:</p> <ul style="list-style-type: none">•procedures for notifying and consulting nearby residents prior to the recommencement of quarrying and brick making activities;•procedures for notifying and consulting nearby residents prior to the commencement of construction activities;•details of a telephone complaints line (operated at all hours) and relevant site persons responsible for following up complaints;•procedures for handling and monitoring all complaints received; and•contingency measures that would be implemented where complaints are received; <p>(e)describe the proposed noise management system; and</p> <p>(f)include a noise monitoring program that:</p> <ul style="list-style-type: none">•is capable of evaluating the performance of the project;•includes a protocol for determining any exceedances of the relevant conditions of this approval; and•effectively supports the noise management system. <p>The Applicant must implement the Noise Management Plan as approved by the Secretary.</p>	Complaint																					
Project Approval - Mod 5	10_0014	Schedule 3	9	<p>Air Quality Impact Assessment Criteria</p> <p>The Applicant must ensure that particulate matter emissions generated by the project do not cause exceedances of the criteria in Table 4 at any residence on privately-owned land.</p> <p><i>Table 4: Air quality criteria</i></p> <table><tr><th><i>Pollutant</i></th><th><i>Averaging Period</i></th><th><i>Criterion</i></th></tr><tr><td>Particulate matter < 2.5 µm (PM_{2.5})</td><td>Annual</td><td><u>a,d</u> 8 µg/m³</td></tr><tr><td>Particulate matter < 2.5 µm (PM_{2.5})</td><td>24 hour</td><td><u>b</u> 25 µg/m³</td></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>Annual</td><td><u>a,d</u> 25 µg/m³</td></tr></table> <table><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>24 hour</td><td><u>b</u> 50 µg/m³</td></tr><tr><td>Total suspended particulates (TSP)</td><td>Annual</td><td><u>a,d</u> 60 µg/m³</td></tr><tr><td>^c Deposited dust</td><td>Annual</td><td><u>b</u> 2 g/m²/month <u>a,d</u> 4 g/m²/month</td></tr></table>	<i>Pollutant</i>	<i>Averaging Period</i>	<i>Criterion</i>	Particulate matter < 2.5 µm (PM _{2.5})	Annual	<u>a,d</u> 8 µg/m ³	Particulate matter < 2.5 µm (PM _{2.5})	24 hour	<u>b</u> 25 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	Annual	<u>a,d</u> 25 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	24 hour	<u>b</u> 50 µg/m ³	Total suspended particulates (TSP)	Annual	<u>a,d</u> 60 µg/m ³	^c Deposited dust	Annual	<u>b</u> 2 g/m ² /month <u>a,d</u> 4 g/m ² /month	Complaint
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Project Approval - Mod 5	10_0014	Schedule 3	10	Operating Conditions The Applicant must: (a)implement best practice management to minimise the dust emissions of the project; (b)implement all air quality management and mitigation measures that were committed to in the EA (Mod 3 and 4); (c)implement real-time monitoring of 24-hour average PM10 and meteorological conditions; (d)regularly assess meteorological and air quality monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the air quality criteria in this approval; (e)minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see note d under Table 4); (f)monitor and report on compliance with the relevant air quality conditions in this approval; and (g)minimise the area of surface disturbance and undertake progressive rehabilitation of the site, to the satisfaction of the Secretary.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	10A	During Phase 4, the Applicant may request the Secretary's agreement to reduce or waive certain air quality monitoring requirements if the Applicant can demonstrate that they are no longer necessary.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	11	The Applicant must ensure compliance with stack emission limits and gaseous pollutant load limits included in any EPL applicable to the site.	Not Triggered
Project Approval - Mod 5	10_0014	Schedule 3	12	Within 14 months of commencement of increased production of bricks to 300,000 tonnes per year, or as otherwise required by the EPA, the Applicant must submit an Air Quality Verification Assessment to the EPA, and must provide a copy of this assessment to the Secretary. The Air Quality Verification Assessment must be completed in accordance with the requirements of the EPL for the premises.	Not Triggered
Project Approval - Mod 5	10_0014	Schedule 3	13	Air Quality Management Plan The Applicant must prepare an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with relevant WSA authorities; (b) be submitted to the Secretary for approval prior to commencing Phase 1, unless otherwise agreed by the Secretary; (c) describe the proposed air quality management system; (d) describe the measures to be implemented to ensure: <ul style="list-style-type: none"> •compliance with the air quality criteria and operating conditions of this approval; •best practice management is being employed; and •the air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events; (e) describe measures to ensure that all the commitments in the EA (Mod 3 and 4) in relation to air quality are implemented; (f) include a program to ensure surface disturbance associated with quarrying operations is minimised; (g) include an air quality monitoring program that: <ul style="list-style-type: none"> •is capable of evaluating the performance of the project and informing day to day operational decisions; •includes a protocol for determining any exceedances of the relevant conditions of this approval; and •effectively supports the air quality management system; and (h) include a program to: <ul style="list-style-type: none"> •notify affected landowners of the potential health-related impacts associated with dust; •respond effectively to enquiries or complaints. The Applicant must implement the Air Quality Management Plan as approved by the Secretary.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	14	Meteorological Monitoring For the life of the project, the Applicant must ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements in the Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales guideline and is capable of measuring meteorological conditions in accordance with the NSW Noise Policy for Industry (EPA, 2017).	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	15	Odour The Applicant must ensure that no offensive odours, as defined by the POEO Act, are emitted from the site.	Complaint

Project Approval - Mod 5	10_0014	Schedule 3	16	Greenhouse Gas Emissions The Applicant must implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	16	SOIL AND WATER <i>Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain all necessary approvals and/or water licences for the project.</i>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	17	The Applicant must ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of operations under the approval to match its available water supply, to the satisfaction of the Secretary.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	17A	The Applicant must report on water extracted from the site each year (direct and indirect) in the Annual Review, including water taken under each water licence.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	18	Water Discharges The Applicant must ensure that all quarry water from the site is contained wholly within the site except where otherwise authorised by condition 19 and 19A of this Schedule.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	19	The Applicant must ensure that all surface water discharges from the site comply with the limits (both volume and quality) set in any EPL applicable to the site.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	19A	Dewatering of Pits 1, 2 and 3 All water that is dewatered from Pit 1 (including any water transferred into Pit 1 from Pit 2 and Pit 3) must be transferred from the site in accordance with the Dewatering Management Plan required under Condition 23A of this Schedule.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	19B	All dewatering activities from Pit 1 must be completed within Phase 1 unless otherwise agreed by the Secretary.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	20	Riparian Buffer Distance The Applicant must maintain a minimum setback width of 60 metres (measured from the top of bank) between extraction areas and both Badgerys Creek and Badgerys Creek tributary. <i>Note: This condition does not prohibit overburden emplacement or rehabilitation works in accordance with the Project Layout Plan.</i>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	21	Alluvial Aquifers The Applicant must ensure that the project has no impact on alluvial aquifers associated with South Creek, Badgerys Creek or their tributaries	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	23	Soil and Water Management Plan The Applicant must prepare a Soil and Water Management Plan for the project to the satisfaction of the Secretary. This plan must: (a) be prepared by a suitably qualified and experienced person/s approved by the Secretary; (b) be prepared in consultation with Council and DPIE-Water; (c) be submitted to the Secretary for approval prior to commencing Phase 1, unless otherwise agreed by the Secretary; and	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	23	(d) include a: (i) Site Water Balance that includes: • details of: * sources and security of water supply; * water use and management on site; * adequacy of water storage facilities to contain all surface water runoff; * all existing Water Access Licences and potential Water Access Licences, including information on the relevant Water Sharing Plan and Water Sources; * any off-site water transfers, including those described in condition 23A of this Schedule; and * reporting procedures; and • measures to be implemented to minimise clean water use on site:	Complaint

Project Approval - Mod 5	10_0014	Schedule 3	23	<p>(ii)Surface Water Management Plan, that includes:</p> <ul style="list-style-type: none"> •a program for obtaining detailed baseline data on surface water flows and quality in water bodies that could potentially be affected by the project; •a detailed description of the surface water management system on site including the: <ul style="list-style-type: none"> *clean water diversion system; *erosion and sediment controls; *dirty water management system; and *water storages, including the area, depth and capacity of any in-pit sumps; •detailed plans, including design objectives and performance criteria, for: •reinstatement of drainage lines on the rehabilitated areas of the site; and •control of any potential water pollution from rehabilitated areas of the site; •performance criteria for the following, including trigger levels for investigating any potentially adverse impacts on: <ul style="list-style-type: none"> *the water management system; *surface water quality in creeks and other water bodies that could potentially affected by the project (including Badgerys Creek and Badgerys Creek tributary); and *the stream health, vegetation health and channel stability of water bodies that could potentially affected by the project; •a program to monitor and report on: <ul style="list-style-type: none"> *any surface water discharges; *the effectiveness of the water management system; *the quality of water discharged from the site to the environment; *surface water flows and quality in local watercourses; and *the stream health, riparian vegetation health and channel stability of creeks and other water bodies that could potentially be affected by the project; and •a plan to respond to any exceedances of the performance criteria, and mitigate and/or offset any adverse surface water impacts of the project; and 	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	23	<p>(iii)Groundwater Management Plan that includes:</p> <ul style="list-style-type: none"> •measures to ensure that the maximum extraction depth is not exceeded (see condition 19 of Schedule 2); •a protocol to obtain appropriate water licence(s) to cover the volume of any unforeseen groundwater inflows into the quarry from the quarry face or floor; •groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts; and •a monitoring program to manage potential impacts, if any, on any alluvium and associated surface water source near the proposed extraction area that includes: <ul style="list-style-type: none"> *monitoring of boreholes within the alluvial sediments adjacent to Badgerys and South Creeks and their tributaries, and in the Bringelly Shale bedrock aquifer; *monitoring of groundwater inflows into the quarry from the quarry face or floor, or into any in-pit sumps; *monitoring the impacts of the project on baseflows to Badgerys and South Creeks and their tributaries; *identification of a methodology for determining exceedances of the assessment criteria; *a plan to respond to any exceedances of the performance criteria; and *a program to regularly report on monitoring. <p>The Applicant must implement the Soil and Water Management Plan as approved by the Secretary</p>	Non-Complaint

Project Approval - Mod 5	10_0014	Schedule 3	23 A	<p>Dewatering Infrastructure Plan</p> <p>Prior to carrying out any construction activities associated with the dewatering activities on the site, the Applicant must prepare a Dewatering Infrastructure Plan for the project to the satisfaction of the Secretary. This plan must include:</p> <p>(a) detailed designs for:</p> <ul style="list-style-type: none"> • any pipeline infrastructure used for dewatering activities; and • the method to be used to cross Badgerys Creek; <p>(b) a flooding assessment which:</p> <ul style="list-style-type: none"> • considers the impacts of any structures (including overland pipelines) to flood flow within the floodplain up to the PMF; and • describes the measures that will be implemented to minimise those impacts; and <p>(c) a description of the measures to be implemented for:</p> <ul style="list-style-type: none"> • managing construction and operation of minor surface infrastructure; • avoiding significant impacts and minimisation of impacts generally; • controlling any potential water pollution from construction; • minimising and managing erosion and sedimentation; • decommissioning of pipeline infrastructure; and • rehabilitating disturbed areas. <p>The Applicant must implement the Dewatering Infrastructure Plan as approved by the Secretary.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	23 B	<p>Dewatering Management Plan</p> <p>23B. The Applicant must prepare a Dewatering Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with DPIE-Water and NRAR;</p> <p>(b) be submitted to the Secretary for approval prior to dewatering activities from Pit 1, unless otherwise agreed by the Secretary;</p> <p>and</p> <p>(c) include:</p> <ul style="list-style-type: none"> • details of: <ul style="list-style-type: none"> * off-site water transfer or discharge arrangements; and * procedures for monitoring on volumes transferred off-site and reporting on this as part of annual review; • a Fauna Relocation Plan regarding the transfer of aquatic fauna from Pits 1, 2 and 3 prepared by a suitably qualified ecologist which includes details on: <ul style="list-style-type: none"> * native fauna species known to inhabit and/or use the pits which require transfer from the pits; * methodology proposed to transfer the fauna; * location and suitability of the proposed relocation sites; * any potential impacts of relocating the fauna to the relocation sites and proposed mitigation measures; and * details of ecologists to monitor dewatering activities; • a Geotechnical Monitoring Program, prepared by a suitably qualified and experienced geotechnical engineer, to examine and monitor the faces and high walls of the quarry pits to determine potential geotechnical hazards and evaluate risks of potential failures; • a program to monitor and report on dewatering that involves any discharge from the site, including: <ul style="list-style-type: none"> * the quality of any water discharged from the site; * surface water flows and quality in local watercourses; and * the stream health, riparian vegetation health and channel stability of creeks and other water bodies that could potentially be affected by the discharges; and • a plan to respond to any exceedances of the performance criteria and mitigate and/or offset any adverse surface water impacts of the discharges. <p>The Proponent must implement the Dewatering Management Plan as approved by the Secretary.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	23 C	<p>Flooding</p> <p>The Applicant must prepare and implement an Evacuation Plan for the site. This Evacuation Plan must be prepared in consultation with the State Emergency Services and include details of the site evacuation and sheltering procedures during flood events.</p>	Complaint

Project Approval - Mod 5	10_0014	Schedule 3	24	<p>TRANSPORT</p> <p>Transport - Road Haulage</p> <p>Prior to commencing Phase 1, the Applicant must:</p> <p>(a) erect signage on Elizabeth Drive advising of “trucks turning”;</p> <p>(b) install a wheel wash on the quarry access road and Fill haul road to prevent material being deposited on Martin Road; and</p> <p>(c) ensure the access driveway from Martin Road is capable of catering for all heavy vehicles associated with the project in accordance with AS2890.2, to the satisfaction of Council.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	25	<p>Road Upgrade and Maintenance Contribution</p> <p>Prior to the recommencement of quarrying operations, the Applicant must enter into a formal agreement with Council for:</p> <p>(a) the repair of historical impacts of trucking from the project on Martin Road; and</p> <p>(b) annual road maintenance contributions to be paid to Council, based on the weight of all laden truck movements to and from the site, for the duration that Martin Road is vested in the Council as the roads authority.</p> <p>The Applicant must provide evidence to the Secretary that the agreement has been executed and implemented to the satisfaction of Council.</p> <p>If there is any dispute between the Proponent and Council, then either of the parties may refer the matter to the Secretary for resolution</p>	Not Triggered
Project Approval - Mod 5	10_0014	Schedule 3	25 A	<p>Prior to increasing truck movement limits as specified in condition 12 of Schedule 2, the Applicant must complete an interim upgrade of the Martin Road and Elizabeth Drive Intersection. The final design of intersection must be to the satisfaction of the relevant roads authority/s and must:</p> <p>(a) be designed and constructed in accordance with Austroads Guidelines, Australian Standards and any requirements of the relevant road authority/s;</p> <p>(b) include, at a minimum, a three phase signal operation including a right turn green light and pedestrian crossings on one Martin Road and one Elizabeth Drive approach;</p> <p>(c) be subject to a Works Authorisation Deed (WAD) with TfNSW; and</p> <p>(d) be funded by the Applicant, unless otherwise agreed with TfNSW.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	25 B	<p>With the written agreement of the Secretary, the requirements of condition 25A of this Schedule may be waived if the Applicant can demonstrate that the Martin Road-Elizabeth Drive Intersection has been upgraded to achieve service, capacity and safety standards equivalent to or greater than those required under condition 25A of this Schedule.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	25 C	<p>The Applicant must provide an area for a potential transport corridor associated with an extension of Martin Road through the site (as conceptually shown in Appendix 3). The final design and location of the transport corridor and any associated commercial arrangements must be determined in consultation with TfNSW.</p> <p>The Applicant must advise the Secretary in writing of the final design and location of the transport corridor as agreed with TfNSW, and update relevant management plans, strategies or programs for the project to reflect the transport corridor.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	26	<p>Monitoring of Product Transport</p> <p style="text-align: right;">The</p> <p>Applicant must keep accurate records of:</p> <p>(a) all truck movements to and from the site (including time of arrival and dispatch and nature of material transported);</p> <p>(b) the weight of all bricks, Fill and quarry products transported to and from the site; and</p> <p>(c) publish a summary of these records on its website every 6 months.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	27	<p>Operating Conditions</p> <p>The Applicant must:</p> <p>(a) ensure that all laden trucks carrying quarry products, raw materials or Fill have their loads covered when arriving at or leaving the site;</p> <p>(b) ensure that all trucks are cleaned of material that may fall from vehicles, before leaving the site;</p> <p>(c) use its best endeavours to ensure that appropriate signage is displayed on trucks used to transport finished building materials, quarry products or raw materials to or from the project so they can be easily identified by road users; and</p> <p>(d)continue to engage with TfNSW regarding the detailed planning and design for the Eastern Airport Ring Road.</p>	Complaint

Project Approval - Mod 5	10_0014	Schedule 3	28	<p>The Applicant must prepare a Traffic Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with TfNSW, WSA and Council; (b) be submitted to the Secretary for approval prior to commencing Phase 1 operations, unless otherwise agreed by the Secretary; (c) describe the processes in place to control the arrival and dispatch of trucks; (d) include a Drivers' Code of Conduct that details the safe and quiet driving practices that must be used by drivers travelling to and from the site; (e) describe the measures to be put in place to ensure compliance with the Drivers' Code of Conduct; (f) propose measures to minimise the transmission of dust and tracking of material onto the surface of the public road from vehicles leaving the quarry; (g) describe the measures to manage construction and cumulative traffic impacts on the surrounding road network; and (h) be updated as necessary to reflect the operational phases and truck movement limits specified in condition 12 of Schedule 2 and prior to the commencement of any construction works for the upgrade of the Martin Road – Elizabeth Drive Intersection or the Eastern Airport Ring Road. <p>The Applicant must implement the Traffic Management Plan as approved by the Secretary.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	29	<p>ABORIGINAL HERITAGE</p> <p>The Applicant must ensure that:</p> <ul style="list-style-type: none"> (a) archaeological salvage of site BC-01-09 is undertaken in accordance with Recommendation 1, Section 6.0 of the Aboriginal Heritage Assessment – Addendum in the EA; (b) regeneration works, dewatering activities and water discharges in the area of the archaeological deposit identified adjacent to Badgerys Creek (see Appendix 5) are either avoided, or else undertaken in a manner that will minimise harm to Aboriginal objects, to the satisfaction of the Secretary; and (c) measures are implemented prior to the commencement of Phase 1, to conserve and protect the hearth feature within site BCBW18 AS 02 02 (AHIMS ID 45-5-5164). 	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	30	<p>The Applicant must prepare an Aboriginal Heritage Management Plan for the project to the satisfaction of the Secretary. The plan must:</p> <ul style="list-style-type: none"> (a) be prepared by suitably qualified and experienced persons; (b) be prepared in consultation with Registered Aboriginal Parties and Heritage NSW; (c) be submitted to the Secretary for approval within 6 months of the determination of Modification 3 and 4, unless otherwise agreed by the Secretary; (d) include a description of the measures that would be implemented to: <ul style="list-style-type: none"> (i) protect, monitor and manage identified Aboriginal objects and Aboriginal places on the site (including any proposed archaeological investigations and salvage measures), including specific measures to ensure that the archaeological deposit adjacent to Badgerys Creek (see Appendix 5) is not impacted during regeneration operations; (ii) conserve the entire extent of the hearth feature within site BCBW18 AS 02 (AHIMS ID 45-5-5164); (iii) manage the discovery of previously unidentified Aboriginal objects or Aboriginal places on the site; and (iv) facilitate ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site; and (e) include a protocol to be implemented in the event that skeletal remains are discovered during the project. <p>The Applicant must implement the Aboriginal Heritage Management Plan as approved by the Secretary.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	31	<p>If human remains are discovered on the site, then all work in the area surrounding the discovery must cease, and the area must be secured. The Applicant must immediately notify NSW Police Force and Heritage NSW, and work must not recommence in the area until authorised by NSW Police Force and Heritage NSW.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	32	<p>If any potential Aboriginal object or Aboriginal place is identified on the site, or suspected to be on the site:</p> <ul style="list-style-type: none"> (a) all work in the immediate vicinity of the object or place must cease immediately; (b) a 10 m buffer area around the object or place must be cordoned off; and (c) Heritage NSW must be contacted immediately. 	Complaint

Project Approval - Mod 5	10_0014	Schedule 3	33	<p>Work in the immediate vicinity of a site identified in condition 32 of this Schedule may only recommence if:</p> <p>(a) the object or place is confirmed by Heritage NSW upon consultation with the Registered Aboriginal Parties not to be an Aboriginal object or Aboriginal Place;</p> <p>(b) the Aboriginal Cultural Heritage Management Plan is revised to include the object or place and appropriate measures in respect of it; or</p> <p>(c) the Secretary is satisfied with the measures to be implemented in respect of the object or place and makes a written direction in that regard.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	34	<p>Rehabilitation Objectives</p> <p>The Applicant must rehabilitate the site in accordance with the conditions imposed on the mining lease(s) associated with the project under the Mining Act 1992. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EA (Mod 3 and 4) and shown in Appendix 4, and must comply with the objectives in Table 5.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	35	<p>Progressive Rehabilitation</p> <p>The Applicant must rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable 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.</p> <p><i>Note: It is accepted that parts of the site that are progressively rehabilitated may be subject to future re-disturbance.</i></p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	35 A	The Applicant must complete the backfilling of Pits 1 and 2 within 6 years of commencement of Phase 1, or as otherwise agreed by the Secretary.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	35 B	The Applicant must complete the backfilling of Pit 3 within 2 years of the date of completion of extraction activities in Pit 3, or as otherwise agreed by the Secretary.	Not Triggered
Project Approval - Mod 5	10_0014	Schedule 3	36	<p>Rehabilitation Management Plan</p> <p>The Applicant must prepare a Rehabilitation Management Plan for the project, in accordance with the conditions imposed on the mining lease(s) associated with the project under the Mining Act 1992. This plan must:</p> <p>(a) be prepared in consultation with the Department, DPIE Water, BCD, TfNSW, relevant WSA authorities and Council;</p> <p>(b) build upon the Rehabilitation Objectives in Table 5 and the proposed rehabilitation strategy described in the EA (Mod 3 and 4) and shown in Appendix 4;</p> <p>(c) investigate options for the future use of disturbed areas following the completion of backfilling operations, having regards to the strategic planning associated with the draft Western Sydney Aerotropolis Plan (or subsequently adopted NSW Government strategic plans);</p> <p>(d) describe and justify the proposed rehabilitation strategy for the site, including the landform and use of the site following the completion of quarry operations;</p> <p>(e) include details of the planting of replacement trees in riparian areas consistent with the Statement of Commitments and with vegetation requirements for WSA to minimise wildlife impacts.</p>	Complaint

Project Approval - Mod 5	10_0014	Schedule 3	36	<p>(f) describe how the rehabilitation of the site would achieve the objectives identified in Table 5 and the requirements of conditions 35A and 35B of this Schedule;</p> <p>(g) include detailed Rehabilitation Objectives, Rehabilitation Completion Criteria and the Final Landform and Rehabilitation Plan for evaluating the performance of the rehabilitation of the site;</p> <p>(h) include procedures for the use of interim stabilisation and temporary vegetation strategies, where reasonable to minimise the area exposed for dust generation;</p> <p>(i) to the maximum extent practicable, build on and integrate with the other management plans required under this consent;</p> <p>(j) include a life of mine rehabilitation and mining schedule and a protocol for progressive reviews of key progressive rehabilitation milestones from the commencement of operations through to decommissioning and mine closure;</p> <p>(k) include an overview of the identified risks to achieving successful rehabilitation and strategies to be implemented to address these risks;</p> <p>(l) include a program to monitor, audit and report on the progress against the Rehabilitation Objectives and Rehabilitation Completion Criteria and the Final Landform and Rehabilitation Plan; and</p> <p>(m) describe the measures to be implemented to ensure compliance with the relevant conditions of this approval, including intervention and adaptive management techniques that may be required to ensure rehabilitation remains on a trajectory of achieving the Rehabilitation Objectives, Rehabilitation Completion Criteria and the Final Landform and Rehabilitation Plan as soon as reasonably practical.</p> <p><i>Note: The Rehabilitation Management Plan may be combined with a Mining Operations Plan, or similar plan, required under the mining lease granted for the development.</i></p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	37	<p>VISUAL</p> <p>The Applicant must implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the project to the satisfaction of the Secretary.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	37A	Within 3 months of commencing quarrying operations in Pit 3, the Applicant must construct landscaped earthen bunds and plant vegetation screens (as shown conceptually in Appendix 3), to minimise the visual impacts of the project. The landscaped earthen bunds and plant vegetation screens must be maintained until the Pit 3 area has been fully rehabilitated.	Not Triggered
Project Approval - Mod 5	10_0014	Schedule 3	37 B	Within 6 months of the Secretary being advised of the confirmed Eastern Airport Ring Road alignment, as required under condition 25C of this Schedule, the Applicant must construct landscaped earthen bunds and plant vegetation screens around the brickmaking facility and raw material stockpile (as shown conceptually in Appendix 3), to minimise the visual impacts of the project. The landscaped earthen bunds and plant vegetation screens must be maintained for the life of the project.	Not Triggered
Project Approval - Mod 5	10_0014	Schedule 3	37 C	<p>The Applicant must ensure that all outdoor and external lighting at the site:</p> <p>(a) complies with AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting; and</p> <p>(b) is designed in accordance with any Civil Aviation Safety Authority requirements for the WSA and is mounted, screened and directed in such a manner that it does not cause distraction or confusion to pilots due to light spill above the horizontal plane.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	37 D	<p>Visual Impact Management Plan</p> <p>Within 6 months of approval of Modification 3 and 4, the Applicant must prepare a Visual Impact Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared by a suitably qualified and experienced person/s;</p> <p>(b) be prepared in consultation with Council, TfNSW and relevant WSA authorities;</p> <p>(c) describe the measures to be implemented to minimise the visual, landscaping and off-site lighting impacts of the project to the WSA and surrounding community;</p> <p>(d) include a landscaping strategy to shield public views of the project (including views from the Eastern Airport Ring Road) that includes:</p> <ul style="list-style-type: none"> the measures identified in the EA (Mod 3 and 4); a vegetation strategy utilising a diversity of local provenance tree species from the native vegetation community (or communities) that occur or once occurred on the site, and would minimise wildlife attraction; a bund vegetation and maintenance schedule; and 	Complaint

Project Approval - Mod 5	10_0014	Schedule 3	37 D	<ul style="list-style-type: none"> procedures to notify, consult with and implement site-specific mitigation measures at affected privately-owned residences; (e) include a program to monitor and report on the implementation and effectiveness of the mitigation measures; and (f) include a protocol to update the plan to include the requirements of condition 37A and 37B of this Schedule, once the Secretary has been advised of the confirmed Eastern Airport Ring Road alignment, as required under condition 25C of this Schedule. <p>The Applicant must implement the Visual Impact Management Plan as approved by the Secretary.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	38	<p>Waste</p> <p>The Applicant must:</p> <ul style="list-style-type: none"> (a) manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Council; (b) minimise the waste generated by the project; (c) ensure that the waste generated by the project is appropriately stored, handled, and disposed of; and (d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary. <p>Note: Approval pursuant to Section 68 of the Local Government Act 1993 is required from Council for onsite sewage management systems</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	39	Except as expressly permitted in an EPL and/or the conditions of this approval, the Applicant must not receive waste on the site for storage, treatment, processing, reprocessing or disposal.	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	39 A	<p>Fill Management Plan</p> <p>39A. Prior to the import of Fill to the site, the Applicant must prepare a Fill Management Plan for the development to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> (a) identify the quantities of Fill to be imported to site; (b) describe: <ul style="list-style-type: none"> the procedures for monitoring Fill imported to the site to ensure that it meets relevant quality specifications for VENM or ENM; a protocol to prevent materials that fail to meet the requirements of the ENM Exemption and ENM Order from being accepted; the management of reject materials; management measures for the emplacement and temporary stockpiling of Fill; the process for handling Fill for use in rehabilitation; measures for the on-site use of water captured in sediment basins to ensure that the water does not present a contamination risk; and processes for assessing, recording, handling and managing any contamination found on the site; and (c) provide an indicative schedule of Fill material to be imported to the site for each Phase of the development, in order to achieve the conceptual final landform. <p>The Applicant must implement the Fill Management Plan as approved by the Secretary.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	40	<p>LIQUID STORAGE</p> <p>The Applicant must ensure that all tanks and similar storage facilities (other than for water) are protected by appropriate bunding or other containment, in accordance with the relevant Australian Standards.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	41	<p>DANGEROUS GOODS</p> <p>The Applicant must ensure that the storage, handling, and transport of dangerous goods is done in accordance with the relevant Australian Standards, particularly AS1940 and AS1596, and the Dangerous Goods Code.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 3	42	<p>FIRE SAFETY</p> <p>42. The Applicant must:</p> <ul style="list-style-type: none"> (a) ensure that the project is suitably equipped to respond to any fires on site; (b) assist the emergency services to the extent practicable if there is a fire in the vicinity of the site; and (c) ensure that the project provides for asset protection in accordance with the relevant requirements in Planning for Bushfire Protection 2019 (NSW RFS 2019). 	Complaint

Project Approval - Mod 5	10_0014	Schedule 4	1	<p>NOTIFICATION OF LANDOWNERS</p> <p>As soon as practicable, and no longer than 7 days, after obtaining monitoring results showing:</p> <p>(a)</p> <p>an exceedance of any criteria in Schedule 3, the Applicant must notify the affected landowners in writing of the exceedance, and provide regular monitoring results, at least every 3 months, to each affected landowner until the project is again complying with the relevant criteria; and</p> <p>(b) an exceedance of any air quality criteria in Schedule 3, the Proponent must send a copy of the NSW Health fact sheet entitled “Mine Dust and You” (as may be updated from time to time) to the affected landowners and current tenants of the land (including the tenants of land which is not privately-owned).</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 4	2	<p>INDEPENDENT REVIEW</p> <p>If a landowner considers the project to be exceeding the relevant criteria in Schedule 3, they may ask the Secretary in writing for an independent review of the impacts of the project on their land. If the Secretary is not satisfied that an independent review is warranted, the Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 21 days of the request for a review.</p> <p>If the Secretary is satisfied that an independent review is warranted, within 3 months, or as otherwise agreed by the Secretary and the landowner, of the Secretary’s decision, the Applicant must:</p> <p>(a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:</p> <ul style="list-style-type: none"> • consult with the landowner to determine his/her concerns; • conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 3; and • if the project is not complying with these criteria, then identify measures that could be implemented to ensure compliance with the relevant criteria; <p>(b) give the Secretary and landowner a copy of the independent review; and</p> <p>(c) comply with any written requests made by the Secretary to implement any findings of the review.</p>	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	1	<p>ENVIRONMENTAL MANAGEMENT</p> <p>Environmental Management Strategy</p> <p>The Applicant must prepare an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must:</p> <p>(a) be submitted to the Secretary for approval within 6 months of the determination of Modification 3 and 4, unless otherwise agreed by the Secretary;</p> <p>(b) provide the strategic framework for environmental management of the project;</p> <p>(c) identify the statutory approvals that apply to the project;</p> <p>(d) set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;</p> <p>(e) set out the procedures to be implemented to:</p> <ul style="list-style-type: none"> • keep the local community and relevant agencies informed about the operation and environmental performance of the project; • receive, record, handle and respond to complaints; • resolve any disputes that may arise during the course of the project; • respond to any non-compliance and any incident; and • respond to emergencies; and <p>(f) include:</p> <ul style="list-style-type: none"> • references to any strategies, plans and programs approved under the conditions of this approval; and • a clear plan depicting all the monitoring to be carried out under the conditions of this approval. <p>The Applicant must implement any Environmental Management Strategy as approved by the Secretary.</p>	Complaint

Project Approval - Mod 5	10_0014	Schedule 5	2	Evidence of Consultation Where the conditions of this approval require consultation with an identified party, the Applicant must: (a) consult with the relevant party prior to submitting the subject document to the Secretary for approval; and (b) provide details of the consultation undertaken, including: <ul style="list-style-type: none"> the outcome of that consultation, matters resolved and unresolved; and details of any disagreement remaining between the party consulted and the Proponent and how the Proponent has addressed any unresolved matters. However, if the Secretary agrees, a strategy, plan or program may be prepared without consultation being undertaken with an identified party required under a condition of this approval.	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	3	Management Plan Requirements The Applicant must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include: (a) a summary of relevant background or baseline data; (b) a description of: <ul style="list-style-type: none"> 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 project or any management measures; (c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; (d) a program to monitor and report on the: <ul style="list-style-type: none"> impacts and environmental performance of the project; and effectiveness of any management measures (see (c) above); (e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible; (f) a program to investigate and implement ways to improve the environmental performance of the project over time; (g) a protocol for managing and reporting any: <ul style="list-style-type: none"> incidents; complaints; and non-compliances with statutory requirements; (h) a protocol for periodic review of the plan; and (i) a document control table that includes version numbers, dates when the management plan was prepared and reviewed, names and positions of the person/s who prepared and reviewed the management plan, a description of any revisions made and the date of the Secretary's approval. <i>Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</i>	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	4	Application of Existing Strategies, Plans and Programs The Applicant must continue to apply existing management plans, strategies or monitoring programs approved prior to the approval of Modification 3 and 4, until the approval of a similar plan, strategy or program following the approval of Modification 3 and 4.	Complaint

Project Approval - Mod 5	10_0014	Schedule 5	5	Revision of Strategies, Plans & Programs Within 3 months of: (a) the submission of an incident report under condition 10 below; (b) the submission of an Annual Review under condition 12 below; (c) the submission of an Independent Environmental Audit report under condition 14 below; and (d) the approval any modifications to this approval, the Applicant must review the suitability of all strategies, plans and programs required under this approval, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 6 weeks of the review the revised document must be submitted for the approval of the Secretary. <i>Notes:</i> • <i>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 project.</i> • <i>In the event of an inconsistency between condition 5(d) above and any condition in Schedule 3 of this approval, the latter prevails.</i>	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	6	Updating and Staging of Strategies, Plans or Programs With the approval of the Secretary, the Applicant may: (a) prepare and submit any strategy, plan or program required by this approval on a staged basis (if a clear description is provided as to the specific stage and scope of the project to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program); (b) combine any strategy, plan or program required by this approval (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and (c) update any strategy, plan or program required by this approval (to ensure the strategies, plans and programs required under this approval are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the project)	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	7	Adaptive Management The Applicant must assess and manage project-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 approval 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 as soon as becoming aware of any exceedance: (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not reoccur; (b) consider all reasonable and feasible options for remediation (where relevant); (c) within 14 days of the exceedance occurring, submit a report to the Secretary describing these remediation options and any preferred remediation measures or other course of action; and (d) implement remediation measures as directed by the Secretary to the satisfaction of the Secretary.	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	8	Community Consultative Committee The Applicant must establish and operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary. The CCC must be established prior to recommencing quarrying operations and be operated in general accordance with the Department's Community Consultative Committee Guidelines, November 2016 (or later version). <i>Notes:</i> • <i>The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval.</i> • <i>In accordance with the guidelines, the Committee should comprise an independent chair and appropriate representation from the Proponent, Council and the local community.</i> • <i>The Applicant may, with the approval of the Secretary, combine the function of this CCC with the functions of other CCCs in the area.</i>	Complaint

Project Approval - Mod 5	10_0014	Schedule 5	9	REPORTING AND AUDITING Incident Notification The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be made in writing through the Department's Major Projects Website and identify the project (including the development application number and name) and set out the location and nature of the incident.	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	10	Non-Compliance Notification Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be made in writing through the Department's Major Projects website and identify the project (including the development application number and name), set out the condition of this approval that the project is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance. <i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.</i>	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	11	Regular Reporting The Applicant must provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	12	Annual Review Prior to recommencing quarrying operations or Fill import, and annually thereafter, the Applicant must submit a review to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary. This review must: (a)describe the development (including any progressive rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year; (b)include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against the: •relevant statutory requirements, limits or performance measures/criteria; •requirements of any plan or program required under this consent ; •monitoring results of previous years; and •relevant predictions in the documents listed in condition 3 of Schedule 2; (c)evaluate and report on: •the effectiveness of the air quality and noise management systems; and •compliance with the performance measures, criteria and operating conditions in this consent. (d)identify any non-compliance over the past calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence; (e)identify any trends in the monitoring data over the life of the development; (f)identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and (g)describe what measures will be implemented over the current calendar year to improve the environmental performance of the development. The Applicant must ensure that copies of the Annual Review are submitted to Council and are available to the Community Consultative Committee (see condition 8 of Schedule 5) and any interested person upon request.	Complaint

Project Approval - Mod 5	10_0014	Schedule 5	13	INDEPENDENT ENVIRONMENTAL AUDIT Within 12 months of the commencement of Phase 1, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission, commence and pay the full cost of an Independent Environmental Audit of the project. This audit must: <ul style="list-style-type: none"> (a) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; (b) include consultation with the relevant agencies and the CCC; (c) assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL or necessary water licences for the project (including any assessment, strategy, plan or program required under these approvals); (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; (e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and (f) be conducted and reported to the satisfaction of the Secretary. 	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	14	Within 12 weeks of commencing this audit, or as otherwise agreed by the Secretary, the Applicant must submit a copy of the audit report to the Secretary and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of these recommendations as required. The Applicant must implement these recommendations, to the satisfaction of the Secretary.	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	14A	Any condition of this approval that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit. <i>Note: For the purposes of this condition, as set out in the EP&A Act, “monitoring” is monitoring of the development to provide data on compliance with the approval or on the environmental impact of the project, and an “environmental audit” is a periodic or particular documented evaluation of the project to provide information on compliance with the approval or the environmental management or impact of the project</i>	Complaint
Project Approval - Mod 5	10_0014	Schedule 5	15	ACCESS TO INFORMATION Within 3 months of the determination of Modification 3 and 4, until the completion of all works, including rehabilitation and remediation the Applicant must: <ul style="list-style-type: none"> (a) make the following information publicly available on its website: <ul style="list-style-type: none"> •the documents listed in condition 3 of Schedule 2; •current statutory approvals for the project; •all approved strategies, plans and programs required under the conditions of this approval; •regular reporting on the environmental performance of the project in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval; •a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs; •summary of the current stage and progress of the project; •contact details to enquire about the project or to make a complaint; •a complaints register, updated at least monthly; •the Annual Reviews of the project; •any Independent Environmental Audit as described in condition 13 above, and the Proponent’s response to the recommendations in any audit; and •any other matter required by the Secretary; and (b) keep this information up to date, to the satisfaction of the Secretary. 	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	1	The Applicant shall implement all practicable measures to prevent or minimise harm to the environment that may result from the construction, operation or rehabilitation of the project.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	2	CSR will apply to amend EPL 684 to reflect the project.	Complaint

Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	3	The environmental management strategy and sub plans will be amended to reflect the project.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	4	Air Quality The Applicant will prepare an Air Quality and Green House Gas Management Plan (AQGHGMP) for the project to the satisfaction of the Director-General. The AQGHGMP will outline the purpose, methodology and expected outcomes of the dust monitoring, and will include the following content: * Dust fraction to be measured, i.e. TSP, PM10 , PM2.5 etc.; * Equipment to be used to measure selected dust fraction; * Frequency of the monitoring, i.e. sample collection schedule; * Duration of the monitoring program; * Location of the monitoring station/s; * Standards/guidelines that are to be followed for location/construction of the monitoring station, equipment calibration, collection of samples and analysis of samples; * Calibration methodology and schedule; * Reporting procedure; * Regulatory guidelines and compliance criteria; * Action levels and contingency measures in the event that pollutant concentrations approach or are likely to exceed the relevant compliance criteria; and * A consultation program that involves nearby agricultural producers and residents, in order to determine if the dust mitigation measures are being effective	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	5	The AQGHGMP will detail measures to control dust and emissions from the Project Site including the following measures: * Haul roads should be watered using water carts such that the road surface has sufficient moisture to minimise visible on-road dust generation but not so much as to cause pooling and mud/dirt track out to occur * Unloading of trucks containing raw or unusable extracted material to be controlled using water sprays/dust suppression when generating excessive visible dust. * Dust from existing stockpiles of unusable material and open pits to be controlled using water sprays with chemical additives (surfactants); * Completed pits to be revegetated as soon as practicable after completion of quarrying activities. * Disturbed soil surfaces to be revegetated in accordance with the RMP for the Project Site. * Operational practices to be reviewed to ensure 'best practice' techniques are being employed and that operational equipment is working efficiently	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	6	The existing HVAS will be moved to as close to the northern boundary of the property and the closest sensitive receiver as possible.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	7	The existing deposited dust gauges will be relocated to appropriate positions as close to the property boundaries and nearest sensitive receivers as possible.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	8	If HVAS and deposited dust air quality monitoring identifies ongoing exceedances of the relevant air quality criteria then the reactive dust management program may need to be reinstated at the site.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	16	The Applicant will operate the sales selection/customer display centre only between the following hours: *8.00 am to 5.00 pm Monday to Sunday.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	17	17.Construction works shall be limited to 7am to 6pm Monday to Friday and 8am to 1pm on Saturdays.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	18	18.A CNVMP will be prepared and implemented during project construction. 18.The construction noise mitigation measures described in Chapter 5.5 of the preferred project noise impact assessment report (appended to the RTS) shall be implemented.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	19	19.Vibration during construction will be managed through the CNVMP to ensure that vibration impacts comply with the limits prescribed in British Standard BS 7385 for structural damage and in Assessing Vibration: a technical guide (DECCW , 2006) for human response.	Complaint

Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	20	20.The Applicant and/or its appointed contractors will select and maintain bulk earthwork machinery as specified in the preferred project noise impact assessment report (appended to the RTS).	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	21	21.Broadband reversing alarms or other non-tonal vehicle movement and warning alarms shall be fitted to all machinery on site. The potential noise impact associated with reversing alarms shall be managed and minimised via a combination of proactive driver/operator training and operational procedures.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	22	22.The Applicant shall implement a noise monitoring programme which would involve quarterly attended noise monitoring at a number of nearby identified receiver locations for 12 months after all Modification 3 and 4 activities are in full operation. If there are no exceedances of the project noise trigger levels during quarterly noise monitoring during the first year of monitoring then noise monitoring will cease. Additional noise monitoring would be undertaken in response to any noise complaints	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	23	23.The Applicant shall undertake consultation with identified Martin Road residential receivers predicted to exceed the RNP criteria and conduct further investigation of their residences (as detailed in Section 2.3.3 and 4.1 of the RTS) to determine whether they qualify for and require the 'Type 1' treatment package from RMS's (2015) At-receiver Treatment Guideline. 23.Further investigations of the six residences potentially affected by road noise will be undertaken prior to increasing heavy vehicle movements along Martin Road above the approved heavy vehicle numbers and no greater than 180 truck movements in the daytime period. The investigation will determine whether the residences require the 'Type 1' treatment package from RMS's (2015) At-receiver Treatment Guideline.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	24	24.Prior to construction of the Martin Road-Elizabeth Drive intersection, existing road noise levels would be qualified to determine if architectural treatment should be offered to receivers along Elizabeth Drive raising complaints about increased road noise levels. 24.The Applicant will maintain a noise complaint register.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	25	Surface Water Stormwater management 25.The Applicant shall manage surface water on the Project Site in accordance with the WMP prepared for the Project Site and revised for the project, including surface water management measures include in the Modification 3 and 4 EA and the RTS.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	26	26.If during the operational phase of the quarry or on completion of the quarry operations, the Applicant wishes to make use of the water from the pits/dams in the brick making process or for reuse at other premises offsite etc, a licence will be obtained from DPIE.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	27	27.Sediment basins 4, 5 and 6 and the new basins at the raw material stockpile area and Pit 3 will be sized and operated in accordance with Landcom's (2004) Managing Urban Stormwater: Soils & Construction. If any of these basins are to be modified to perform additional stormwater treatment functions in future (other than sediment capture), then appropriate modelling and design of the basins will be required at that time. In this case monitoring of discharges from the basin at Pit 3 to South Creek will be required.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	28	28.The site WMP will be revised prior to commencement of the modification to include the revised surface water management approach, and monitoring of any water discharged from the site.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	29	Monitoring 29.Electrical conductivity, pH, total nitrogen, total suspended solids, turbidity, total alkalinity, arsenic and copper will be monitored at the discharge points to Badgerys Creek and South Creek. Discharges will be monitored daily during the first month of continuous discharge, then weekly if the first month of data does not exceed concentration limits. Monitoring will revert to daily if any limits are exceeded and/or concentrations are reduced below limits.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	30	30. Total dissolved solids, total phosphorus, arsenic, cadmium, chromium, lead, nickel, zinc and mercury will be sampled weekly during the first two months, which will reduce to monthly if there are no exceedances.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	31	31. The analytes previously sampled in Pit 1 will be monitored at three depth levels from the surface to 6 m at two locations near the discharge point to Badgerys Creek. Water will be monitored weekly for three weeks prior to discharge, then monthly. This monitoring will continue for the life of the project, and in the perched treatment basin described above.	Complaint

Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	32	32. Similar sampling is also required for the new basin at Pit 3 if the basin is being used to treat Pit 3 water (other than sediment capture). The list of analytes may be able to be reduced according to the future quality of stormwater collected in Pit 3.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	33	Licensing and approvals 33.CSR will apply to the EPA to amend the EPL to incorporate the discharge rates and concentration limits for relevant physical and chemical stressors, and toxicants, at the discharge point to Badgerys Creek.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	34	34.CSR will apply to the EPA to amend the EPL, if and when required, to incorporate appropriate discharge rates and concentration limits for discharges from the basin at Pit 3, for which time the basin provides additional water treatment other than sediment capture.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	35	35.CSR will consult DPIE Water on the need for water licenses associated with the modification.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	36	36.The EPA will be engaged, post approval, to determine whether the pit water must be classified in terms of the Protection of the Environment Operations Act 1997 (POEO Act) and to include the discharge point in the EPL.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	37	Erosion and sediment control 37.Erosion and sediment controls will be implemented at the pit areas once they are filled with Fill and rehabilitation has commenced. These measures will remain in place until surfaces are fully stabilised.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	38	38.Erosion and sediment controls will be implemented along the unsealed Fill haul road, which will direct runoff to the pits or local sediment traps.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	39	Groundwater 39.The Applicant shall prepare and implement a Groundwater Monitoring Program for the Project Site generally in accordance with the methodology provided in Chapter 11 of the 2011 EA, subject to consultation with the DPIE (water, lands and primary industry) and the satisfaction of the Director-General of the DP&I.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	40	40.The WMP will be updated to include the groundwater monitoring network and a TARP for exceedances of groundwater criteria, which will be developed based on the baseline groundwater data.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	41	41.The Applicant shall report the results of the Groundwater Monitoring Program to the Secretary of the DPIE on an annual basis.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	42	42.The Applicant shall implement appropriate management measures in relation to groundwater as indicated by the Monitoring Program and agreed with the Secretary.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	43	43.A licence to authorise any groundwater monitoring installation, required as part of this project, shall be obtained from the DPIE Water prior to any drilling commencing.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	44	44.The Applicant shall implement an alluvial aquifer mapping and assessment program to inform: * The definition of the boundaries of the alluvial system. * Adjustment to the extent of proposed pits to avoid impacts to the alluvial aquifer. * The establishment of further mitigation measures (if required) to minimise potential impacts upon the alluvial aquifer. * This program will commence within 12 months of recommencing quarrying operations and the results will be reported to the Secretary of the DPIE.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	45	Rehabilitation 45.The site will be progressively rehabilitated in accordance with the approved rehabilitation strategy and rehabilitation management plan.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	46	46.The rehabilitation strategy and rehabilitation management plan will be revised to incorporate the project, and any additional management strategies to ensure temporary stabilisation of exposed surfaces, permanent stabilisation strategies and progressive rehabilitation with groundcover vegetation.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	47	47.The rehabilitation management plan will be revised to exclude plant species that are known to attract wildlife and grow to a size which will penetrate the OLS.	Complaint

Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	48	48.The Applicant shall carry out rehabilitation works at the Project Site in accordance with the RMP prepared for the Project Site.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	49	49.The Applicant will prepare a Final Landform Rehabilitation Plan in consultation with the DPIE two years prior to the completion of all approved quarrying activities.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	50	Traffic and Transport 50. The Applicant shall manage traffic movements to and from the Project Site generally in accordance with the following: * Personnel operating trucks and vehicles to and from the Project Site would be required to undertake a site-specific health and safety induction, specifying operating hours and vehicle speed limits on Martin Road. * A heavy vehicle protocol would be developed for the Project Site and distributed to relevant staff and contractors during induction procedures. The protocol would deal with such issues as timing of vehicle movements, idling of vehicles, speed limits and parking. * Unnecessary vehicle movements would be minimised where possible. * Deliveries would be scheduled on larger capacity 'Truck and Trailer' vehicles rather than 'Truck Only' vehicles where possible to minimise truck movements. * A construction traffic management plan will be prepared and implemented to manage impacts on the road network, including the intersection, from construction vehicles. * Traffic signals and road upgrades will be constructed at the Martin Road-Elizabeth Drive intersection prior to increasing heavy vehicle movements from the project above the approved heavy vehicle numbers. * CSR will contribute to the upgrade and ongoing maintenance of Martin Road in accordance with the deed of agreement with LCC.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	51	Cultural Heritage 51. The Applicant shall adopt the following measures in relation to the management of cultural heritage on the Project Site: * The heat retainer hearth will continue to be protected by a fenced 10m exclusion zone. * All Aboriginal heritage items collected during survey and test excavations will be reburied with the hearth in consultation with the RAPs. * Should Aboriginal objects be uncovered during the course of the approved works, works shall cease. In cases where historical items have been uncovered, Heritage NSW is to be advised or should indigenous items be uncovered the National Parks and Wildlife Service shall be advised. * Workers/contractors shall be informed of their obligations under the NPW Act 1974, namely that it is illegal to disturb, damage or destroy an Aboriginal object without the prior approval of the Secretary of DPC. * Should human remains be found in, on, or under the land during construction, the responsible party shall: -Contact the local police. -Not disturb or excavate the remains. -Immediately cease all work at the particular location. -Notify the Heritage NSW (DPC) office as soon as practicable and provide any available details of the remains and their location. -Not recommence any work at the particular location until authorised in writing by the Heritage NSW.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	52	52. The AHMP will be updated with the findings of the Modification 4 ACHA.	Complaint

Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	53	Ecology 53. The Applicant shall adopt the following measures in relation to the removal of any trees on the Project Site: * The canopy of the trees to be visually inspected prior to clearing to assess for the presence of fauna. Where bird species are detected the tree is to be nudged prior to felling to encourage the fauna to vacate the tree prior to felling. Trees to be left in situ until the birds leave the canopy. * Felled trees are to be left in-situ for at least 24 hours to allow fauna species to relocate. Qualified personnel are to be on hand to check for wildlife and relocate them. * Felled wood is to be relocated to the remnant woodland (and not placed in piles) or chipped and used in rehabilitation areas. * Should any wildlife be inadvertently injured during the proposed works, WIRES or an accredited veterinarian shall be contacted. * A 60 m buffer area shall be provided along Badgerys Creek and the Badgerys Creek tributary, except where Pit 2 extends into these buffers. Rehabilitation works are to be undertaken in this area in accordance with the RMP. * Five local native trees shall be planted for each mature native tree that is removed. The replacement trees shall consist of a diversity of local provenance tree species from the native vegetation community (or communities) that occur, or once occurred on the site. The plantings shall be located adjacent to the riparian vegetation along South Creek, Badgerys Creek and its tributary.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	54	Aquatic biodiversity 54.A 40 m vegetated riparian zone will be maintained around the wetland adjacent to South Creek and 20 m zone will be maintained around the tributary to Badgerys Creek (except over Pit 2).	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	55	55.As the hydraulic modelling for the surface water assessment was indicative, geomorphology will be assessed in greater detail to validate the bed and bank materials of Badgerys Creek prior to finalisation of the pit dewatering strategy. This will include quantification of bed and bank material and particle size and calculation of critical shear stress for the bed and bank to determine its sensitivity to erosion.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	56	56.If the bed and bank materials are demonstrated to be sensitive to erosion, the optimum flow rate that can be achieved without impacting the creek bed and banks will be determined in a sediment transport model.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	57	57.It will be necessary to gain further water quality and flow data to determine the impact of discharges on Badgerys Creek. Water quality will be monitored every month at the four Badgerys Creek and South Creek monitoring locations as described in Section 6.3.2 of the EA. This will include nitrogen speciation to determine which portion of nitrogen is bioavailable and could impact aquatic ecosystems.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	58	58.A biological monitoring program will be developed to detect if the macroinvertebrate community is changed by exposure to discharge water. An in-stream vegetation monitoring program will be prepared and implemented to detect if the discharge is impacting vegetation community composition and mortality.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	59	59.Monitoring for changes to instream vegetation and macroinvertebrates will be incorporated into a pit dewatering plan as a sub-plan to the existing water management plan.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	60	60.CSR will compile a fauna relocation plan. This plan will develop strategies for aspects such as transferring aquatic fauna, acclimatising aquatic fauna to different water conditions and managing pest species. DPIE will be consulted during the development of this strategy..	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	61	Contamination 61.The potential presence of asbestos in the eastern edge of Pit 1 will be added to the site Asbestos Register.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	62	62.A materials management plan will be prepared to ensure that surface water, backfilled material and imported soils are handled appropriately, do not pose a risk to human health or the environment and will be suitable for the proposed land use. The plan will provide procedures to appropriately quantify, classify, dispose of and report on potential contaminants.	Complaint

Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	63	63.A UFP will be prepared, providing guidance in the event that future below ground excavations identify contaminated materials (e.g. asbestos, staining, odours). The UFP will outline procedures for handling, assessing and managing any contamination that may be identified as part of Modification 4 works. If previously unidentified contaminated materials are encountered during construction and operation of the proposed modification, relevant statutory requirements, including potential soil testing and waste classification, will need to be complied with, and the material managed and disposed of appropriately.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	64	64.Stored/stockpiled materials within the proposed disturbance footprints will be inspected and they will be recycled or disposed at facilities which can legally receive such materials.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	65	65.Soil materials within the vicinity of the Modification 3 works will be assessed in accordance with NSW EPA (2014) Waste Classification Guidelines and either re- use them on site where suitable or dispose of them offsite to a landfill which can legally receive such materials.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	66	66.Conduct a hazardous material survey on existing site structures prior to demolition/alteration activities.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	67	Waste 67.The Applicant shall manage waste in relation to the project in accordance with the existing WMP for the Project Site.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	68	68.The existing WMP will be updated to include the importation and handling of Fill.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	69	69.All waste generated on site will be managed in accordance with the site's waste management plan that will follow the waste hierarchy of avoid, reduce, re-use, recycle and will be updated to include project works.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	70	Visual amenity 70. . Proposed lighting at the site will still comply with Australian Standard AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	71	Mineral Resources 71. The Applicant will provide annual production data to the water, lands and primary industries division of the Department of Planning, Industry and Environment, as and when requested.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	72	Environmental Management 72. The Applicant shall prepare an EMS for the Project Site to provide environmental management practices and procedures to be followed during the operation of the project. The EMS shall include, but not necessarily be limited to: * identification of statutory and other obligations that the Proponent is required to fulfil in relation to operation of the project; * a description of the roles and responsibilities for all key personnel involved in environmental management of the project; * the environmental policies and principles to be applied to the operation of the project; and * describe in general terms how the environmental performance of the project would be monitored and managed.	Complaint
Project Approval - Mod 5	10_0014	STATEMENT OF COMMITMENTS	9,10,11,12,13,14,15	Noise 9.The Applicant will implement all practicable measures to undertake the development in a way that minimises the noise generated. The Applicant has made the following commitments in relation to operation noise management: 10.The Applicant will conduct quarrying activities at the Project Site only between the following hours: * 7.00 am to 6.00 pm Monday to Saturday. 11. The Applicant will remove overburden only between the following hours: * 7.00 am to 6.00 pm Monday to Saturday. 12.The Applicant will operate the Brick making facility and storage yard at the Project Site 24 hours a day, Monday to Sunday. 13.The Applicant will receive and dispatch finished building products only between the following hours: * 5.00 am to 10.00 pm Monday to Friday. * 6.00 am to 6.00pm Saturday. 14. The Applicant will receive and dispatch raw material only between the following hours: * 6.00 am to 10.00 pm Monday to Friday. * 6.00 am to 6.00pm Saturday. 15. The Applicant will conduct cash sales only between the following hours: 6.00 am to 6.00 pm Monday to Saturday. *	Complaint

EPL	EPL	684/23.03.2021	A1	<div>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.</div> <div>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.</div> <table><tr><th>Scheduled Activity</th><th>Fee Based Activity</th><th>Scale</th></tr><tr><td>Ceramic works</td><td>Ceramic production</td><td>0-15,000 T annual production capacity</td></tr><tr><td>Mining for minerals</td><td>Mining for minerals</td><td>0-30,000 T annual production capacity</td></tr></table>	Scheduled Activity	Fee Based Activity	Scale	Ceramic works	Ceramic production	0-15,000 T annual production capacity	Mining for minerals	Mining for minerals	0-30,000 T annual production capacity	Complaint						
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EPL	EPL	684/23.03.2021	A3.1	<div>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.</div> <div>In this condition the reference to "the licence application" includes a reference to:</div> <div>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</div> <div>b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.</div>	Complaint															
EPL	EPL	684/23.03.2021	2	<div>Discharges to Air and Water and Applications to Land</div> <div>Location of monitoring/discharge points and areas</div> <div>P1</div>	Complaint															
EPL	EPL	684/23.03.2021	P1.1	<div>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</div>	Complaint															
EPL	EPL	684/23.03.2021	P1.2	<div>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.</div> <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>3</td><td>Discharge to waters and water quality monitoring</td><td>Discharge to waters and water quality monitoring</td><td>Outlet from Sediment Basin B as described in 'Water Pollution Impact Assessment for Discharge of Stormwater Runoff from Disturbed Areas at PGH Badgerys Creek (Version 2)', PGH Bricks, 04/02/2021</td></tr></table>	Water and land				EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description	3	Discharge to waters and water quality monitoring	Discharge to waters and water quality monitoring	Outlet from Sediment Basin B as described in 'Water Pollution Impact Assessment for Discharge of Stormwater Runoff from Disturbed Areas at PGH Badgerys Creek (Version 2)', PGH Bricks, 04/02/2021	Complaint			
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EPL	EPL	684/23.03.2021	P1.3	<div>The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.</div> <table><tr><th colspan="3">Noise/Weather</th></tr><tr><th>EPA Identification no.</th><th>Type of monitoring point</th><th>Location description</th></tr><tr><td>4</td><td>Noise monitoring</td><td>255 LAWSON ROAD, BADGERYS CREEK, 2555</td></tr><tr><td>5</td><td>Noise monitoring</td><td>217 MARTIN ROAD, BADGERYS CREEK, 2555</td></tr><tr><td>6</td><td>Noise monitoring</td><td>50 VICTOR AVENUE, KEMPS CREEK, 2178</td></tr></table>	Noise/Weather			EPA Identification no.	Type of monitoring point	Location description	4	Noise monitoring	255 LAWSON ROAD, BADGERYS CREEK, 2555	5	Noise monitoring	217 MARTIN ROAD, BADGERYS CREEK, 2555	6	Noise monitoring	50 VICTOR AVENUE, KEMPS CREEK, 2178	Complaint
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EPL	EPL	684/23.03.2021	3	<div>LIMIT CONDITIONS</div> <div>Pollution of Waters</div>	Complaint															

EPL	EPL	684/23.03.2021	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.	Complaint																		
EPL	EPL	684/23.03.2021	L2.1	L2 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	Complaint																		
EPL	EPL	684/23.03.2021	L2.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges	Complaint																		
EPL	EPL	684/23.03.2021	L2.3	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.	Complaint																		
EPL	EPL	684/23.03.2021	L2.4	Water and/or Land Concentration Limits	Complaint																		
				<div>POINT 3</div> <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>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>50</td></tr></table>	Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	pH	pH				6.5-8.5	Turbidity	nephelometric turbidity units				50	Complaint
Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit																		
pH	pH				6.5-8.5																		
Turbidity	nephelometric turbidity units				50																		
EPL	EPL	684/23.03.2021	L3.1	L3 WASTE The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled “Waste” and meeting the definition, if any, in the column titled “Description” in the table below. Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled “Activity” in the table below. Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled “Other Limits” in the table below. This condition does not limit any other conditions in this licence <table><tr><th>Code</th><th>Waste</th><th>Description</th><th>Activity</th><th>Other Limits</th></tr><tr><td>NA</td><td>Excavated natural material</td><td>As defined in the Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment (Waste) Regulation 2014 – The excavated natural material order 2014</td><td>-</td><td>Only for the purpose of quarry rehabilitation</td></tr></table>	Code	Waste	Description	Activity	Other Limits	NA	Excavated natural material	As defined in the Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment (Waste) Regulation 2014 – The excavated natural material order 2014	-	Only for the purpose of quarry rehabilitation	Complaint								
Code	Waste	Description	Activity	Other Limits																			
NA	Excavated natural material	As defined in the Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment (Waste) Regulation 2014 – The excavated natural material order 2014	-	Only for the purpose of quarry rehabilitation																			
EPL	EPL	684/23.03.2021	L3.2	The licensee must not cause, permit, or allow any waste generated outside the licensed premises to be received at the licensed premises except virgin excavated maerial (VENM), or as expressly permitted by a condition of this licence or a resource recovery order and resource recovery exemptionunder the Protection of the Environment Operations (Waste) Regulation 2014.	Complaint																		
EPL	EPL	684/23.03.2021	L.3.3	The licensee must have in place and implement procedures to identify and prevent the acceptance of any waste not permitted by Condition L3.1 to be accepted at the premises.	Complaint																		
EPL	EPL	684/23.03.2021	L.3.4	No asbestos waste is to be accepted at the premises.	Complaint																		
EPL	EPL	684/23.03.2021	L4.1	Noise Limits Noise from the premises (excluding mobile plant) must not exceed: a) An LA10(15 minute) noise emission criterion of 55 dB(A)(0700 to 2200) Monday to Saturday and 0800 to 2200 Sundays and Public Holidays; and b) An LA10(15 minute) noise emission criterion of 40 dB(A) at all other times, except as expressly provided by this licence.	Complaint																		

EPL	EPL	684/23.03.2021	L4.2	Noise from the operation of the mobile plant must not exceed: a) An LA10(15 minute) noise emission criterion of 50 dB(A)>(0700 to 2200) Monday to Saturday and (0800 to 2200) Sundays and Public Holidays; and b) An LA10(15 minute) noise emission criterion of 40 dB(A) at all other times, except as expressly provided by this licence.	Complaint																								
EPL	EPL	684/23.03.2021	L4.3	Noise from the premises is to be measured or computed at the most affected point on or within the residential property boundary or, if that is more than 30 metres from the residence, at the most affected point within 30 metres of the residence to determine compliance with condition L4.1. 5dB(A) must be added if the noise is tonal or impulsive in character.	Complaint																								
EPL	EPL	684/23.03.2021	L4.4	Noise generated at the premises that is measured at each noise monitoring point established under this licence must not exceed the noise levels specified in Column 4 of the table below for that point during the corresponding time periods specified in Column 1 when measured using the corresponding measurement parameters listed in Column 2.	Complaint																								
EPL	EPL	684/23.03.2021	Point 4	<div>POINT 4</div> <table><tr><th>Time period</th><th>Measurement parameter</th><th>Measurement frequency</th><th>Noise level dB(A)</th></tr><tr><td>Morning-Shoulder</td><td>LAeq (15 minute)</td><td>-</td><td>42</td></tr><tr><td>Day</td><td>LAeq (15 minute)</td><td>-</td><td>42</td></tr><tr><td>Evening</td><td>LAeq (15 minute)</td><td>-</td><td>41</td></tr><tr><td>Night</td><td>LAeq (15 minute)</td><td>-</td><td>38</td></tr><tr><td>Night</td><td>LAFmax</td><td>-</td><td>52</td></tr></table>	Time period	Measurement parameter	Measurement frequency	Noise level dB(A)	Morning-Shoulder	LAeq (15 minute)	-	42	Day	LAeq (15 minute)	-	42	Evening	LAeq (15 minute)	-	41	Night	LAeq (15 minute)	-	38	Night	LAFmax	-	52	Complaint
Time period	Measurement parameter	Measurement frequency	Noise level dB(A)																										
Morning-Shoulder	LAeq (15 minute)	-	42																										
Day	LAeq (15 minute)	-	42																										
Evening	LAeq (15 minute)	-	41																										
Night	LAeq (15 minute)	-	38																										
Night	LAFmax	-	52																										
EPL	EPL	684/23.03.2021	Point 5	<table><tr><th>Time period</th><th>Measurement parameter</th><th>Measurement frequency</th><th>Noise level dB(A)</th></tr><tr><td>Morning-Shoulder</td><td>LAeq (15 minute)</td><td>-</td><td>43</td></tr><tr><td>Day</td><td>LAeq (15 minute)</td><td>-</td><td>45</td></tr><tr><td>Evening</td><td>LAeq (15 minute)</td><td>-</td><td>40</td></tr><tr><td>Night</td><td>LAeq (15 minute)</td><td>-</td><td>38</td></tr><tr><td>Night</td><td>LAFmax</td><td>-</td><td>52</td></tr></table>	Time period	Measurement parameter	Measurement frequency	Noise level dB(A)	Morning-Shoulder	LAeq (15 minute)	-	43	Day	LAeq (15 minute)	-	45	Evening	LAeq (15 minute)	-	40	Night	LAeq (15 minute)	-	38	Night	LAFmax	-	52	Complaint
Time period	Measurement parameter	Measurement frequency	Noise level dB(A)																										
Morning-Shoulder	LAeq (15 minute)	-	43																										
Day	LAeq (15 minute)	-	45																										
Evening	LAeq (15 minute)	-	40																										
Night	LAeq (15 minute)	-	38																										
Night	LAFmax	-	52																										
EPL	EPL	684/23.03.2021	Point 6	<div>POINT 6</div> <table><tr><th>Time period</th><th>Measurement parameter</th><th>Measurement frequency</th><th>Noise level dB(A)</th></tr><tr><td>Morning-Shoulder</td><td>LAeq (15 minute)</td><td>-</td><td>43</td></tr><tr><td>Day</td><td>LAeq (15 minute)</td><td>-</td><td>43</td></tr><tr><td>Evening</td><td>LAeq (15 minute)</td><td>-</td><td>43</td></tr><tr><td>Night</td><td>LAeq (15 minute)</td><td>-</td><td>38</td></tr><tr><td>Night</td><td>LAFmax</td><td>-</td><td>52</td></tr></table>	Time period	Measurement parameter	Measurement frequency	Noise level dB(A)	Morning-Shoulder	LAeq (15 minute)	-	43	Day	LAeq (15 minute)	-	43	Evening	LAeq (15 minute)	-	43	Night	LAeq (15 minute)	-	38	Night	LAFmax	-	52	Complaint
Time period	Measurement parameter	Measurement frequency	Noise level dB(A)																										
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Day	LAeq (15 minute)	-	43																										
Evening	LAeq (15 minute)	-	43																										
Night	LAeq (15 minute)	-	38																										
Night	LAFmax	-	52																										
EPL	EPL	684/23.03.2021	L4.5	For the purposes of the condition above: a) Morning shoulder means the period from 5am to 7am Monday to Saturday and the period from 5am to 8am Sunday and public holidays. b) Day means the period from 7am to 6pm Monday to Saturday and the period from 8am to 6pm Sunday and public holidays. c) Evening means the period from 6pm to 10pm. d) Night means the period from 10pm to 5am Monday to Saturday and the period from 10pm to 5am Sunday and public holidays.																									

EPL	EPL	684/23.03.2021	L5.1	L5 POTENTIALLY OFFENSIVE ODOUR condition in this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997. Note: Section 129 of the Protection of the Environment Operations Act 1997 provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.	No	Complaint
EPL	EPL	684/23.03.2021	4	OPERATING CONDITIONS		Complaint
EPL	EPL	684/23.03.2021	O1.1	O.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.		Complaint
EPL	EPL	684/23.03.2021	O2.1	O2 Maintenance of plant and equipment 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.	All	Complaint
EPL	EPL	684/23.03.2021	O3.1	O3 Dust premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	The	Complaint
EPL	EPL	684/23.03.2021	O3.2	All activities occurring in or on the premises must be carried out in a manner that prevents or minimises the emission of dust.		Complaint
EPL	EPL	684/23.03.2021	O3.3	Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.		Complaint
EPL	EPL	684/23.03.2021	O3.4	The licensee must ensure that no material, including sediment, is tracked from the premises.		Complaint
EPL	EPL	684/23.03.2021	O4.1	O4 Processes and management The licensee must implement all feasible and reasonable erosion and sediment controls as may be necessary throughout the life of construction works and activities to minimise sediment leaving the premises.	The	Complaint
EPL	EPL	684/23.03.2021	O4.2	The licensee must ensure that all erosion and sediment control measures installed at the premises are inspected and works undertaken to repair and/or maintain these controls as soon as is reasonable and feasible to ensure the proper and efficient operation of these controls. The licensee must record all such inspections including observations and works undertaken to repair and/or maintain erosion and sediment controls and provide these records to an authorised officer upon request.		Complaint
EPL	EPL	684/23.03.2021	O4.3	The licensee must ensure that waste identified for recycling is stored separately from other waste.		Complaint
EPL	EPL	684/23.03.2021	O5	Other operating conditions		Complaint
EPL	EPL	684/23.03.2021	5.01	Water from pits 1,2 or 3 must not be transferred to Sediment Basin A or Sediment Basin B, or discharged to waterways.		Complaint
				Filling of pits		Complaint
EPL	EPL	684/23.03.2021	5.02	The filling of the pits must be done in accordance with the Fill Management Plan, version 1.0, Project No. 0606483_S011411, dated 1 August 2023 (or any subsequent version approved in writing by the Department of Planning and NSW EPA).		Complaint
				Importation of VENM/ENM		Complaint
EPL	EPL	684/23.03.2021	5.03	The licensee must ensure that VENM brought onto the premises meets the definition of VENM as per the EPA's Waste Classification Guidelines (2014).		Complaint
EPL	EPL	684/23.03.2021	5.04	The licensee must not cause, permit or allow any waste generated outside the licensed premises to be received at the licensed premises except virgin excavated material (VENM), or as expressly permitted by a condition of this licence or a resource recovery order and resource recovery exemption under the Protection of the Environment Operations (Waste) Regulation 2014.		Complaint
EPL	EPL	684/23.03.2021	5.05	The licensee must ensure that all ENM brought onto the premises meets the definition of ENM as per EPA Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 - The excavated natural material order 2014.		Complaint
EPL	EPL	684/23.03.2021	5.06	The licensee must ensure there is a dedicated waste quarantine area on the premises for any material found not to be VENM/ENM. This area must be clearly signposted.		Complaint
EPL	EPL	684/23.03.2021	5.07	All non-conforming waste received at the premises must be disposed of at a facility that can lawfully receive that type of waste as soon as practicable.		Complaint
EPL	EPL	684/23.03.2021	5.08	The licensee is responsible for ensuring all security provision are taken to prevent illegal dumping of waste at the premises.		Complaint
EPL	EPL	684/23.03.2021	5	MONITORING AND RECORDING CONDITIONS		Complaint

EPL	EPL	684/23.03.2021	M1.1	M1 Monitoring records The results of any monitoring required to be conducted by the licence or a load calculation protocol must be recorded and retained as set out in this condition	Complaint																				
EPL	EPL	684/23.03.2021	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.	Complaint																				
EPL	EPL	684/23.03.2021	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.	Complaint																				
EPL	EPL	684/23.03.2021	M2.1	M2 REQUIREMENT TO MONITOR CONCENTRATION OF POLLUTANTS DISCHARGED 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:	Complaint																				
EPL	EPL	684/23.03.2021	M2.2	Water and/or Land Monitoring Requirements Point 3 <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Aluminium (dissolved)</td><td>milligrams per litre</td><td>Monthly during discharge</td><td>Grab sample</td></tr><tr><td>Electrical conductivity</td><td>microsiemens per centimetre</td><td>Continuous during discharge</td><td>In line instrumentation</td></tr><tr><td>pH</td><td>pH</td><td>Continuous during discharge</td><td>In line instrumentation</td></tr><tr><td>Turbidity</td><td>nephelometric turbidity units</td><td>Continuous during discharge</td><td>In line instrumentation</td></tr></table>	Pollutant	Units of measure	Frequency	Sampling Method	Aluminium (dissolved)	milligrams per litre	Monthly during discharge	Grab sample	Electrical conductivity	microsiemens per centimetre	Continuous during discharge	In line instrumentation	pH	pH	Continuous during discharge	In line instrumentation	Turbidity	nephelometric turbidity units	Continuous during discharge	In line instrumentation	Complaint
Pollutant	Units of measure	Frequency	Sampling Method																						
Aluminium (dissolved)	milligrams per litre	Monthly during discharge	Grab sample																						
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pH	pH	Continuous during discharge	In line instrumentation																						
Turbidity	nephelometric turbidity units	Continuous during discharge	In line instrumentation																						
EPL	EPL	684/23.03.2021	M2.5	For the purpose of the above table, if monitoring results for aluminium (dissolved) exceed ANZG (2018) default guideline values (55ug/L for fresh water, pH >6.5), the licensee must notify the EPA with 7 days	Complaint																				
EPL	EPL	684/23.03.2021	M3.1	M3 TESTING METHODS - CONCENTRATION LIMITS 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.	Complaint																				
EPL	EPL	684/23.03.2021	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 test are conducted.	Complaint																				
EPL	EPL	684/23.03.2021	M4	Recording of pollution complaints	Complaint																				
EPL	EPL	684/23.03.2021	M4.1	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.	Complaint																				
EPL	EPL	684/23.03.2021	M4.2	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.	Complaint																				
EPL	EPL	684/23.03.2021	M4.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	Complaint																				
EPL	EPL	684/23.03.2021	M4.4	The record must be produced to any authorised officer of the EPA who asks to see them.	Complaint																				
EPL	EPL	684/23.03.2021	M5	Telephone complaints line	Complaint																				
EPL	EPL	684/23.03.2021	M5.1	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.	Complaint																				

EPL	EPL	684/23.03.2021	M5.2	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.	Complaint
EPL	EPL	684/23.03.2021	M5.3	The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.	Complaint
EPL	EPL	684/23.03.2021	6	Other monitoring and recording conditions	Complaint
EPL	EPL	684/23.03.2021		Ambient Dust Monitoring	Complaint
EPL	EPL	684/23.03.2021	M6.1	The licensee must operate and maintain a minimum of four ambient dust monitors capable of continuously monitoring and recording particulate emissions (including PM10) from the premises	Complaint
EPL	EPL	684/23.03.2021	M6.2	The continuous dust monitors must be placed at locations where they are sufficiently capable of monitoring and recording dust coming onto the premises, and dust being generated at the premises.	Complaint
EPL	EPL	684/23.03.2021		Weather Monitoring	Complaint
EPL	EPL	684/23.03.2021	M6.3	The licensee must monitor and record temperature, humidity, wind direction, wind velocity and rainfall at either the project weather station, or through analysis of equivalent weather information obtained from the Australian Bureau of Meteorology. Monitoring must: a) be representative of each catchment; b) commence prior to any works that may cause sediment or dust to leave the premises; and c) continue to be operated until soil disturbance activities cease at the premises and the site has been stabilised.	Complaint
			6	Reporting Conditions	
EPL	EPL	684/23.03.2021	R1.1	R1 Annual return documents 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 base 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 7. a Statement of Compliance - Environmental Management Systems and Practices 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	Complaint
EPL	EPL	684/23.03.2021	R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below	Complaint
EPL	EPL	684/23.03.2021	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.	Complaint
EPL	EPL	684/23.03.2021	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.	Complaint
EPL	EPL	684/23.03.2021	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').	Complaint
EPL	EPL	684/23.03.2021	R1.6	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.	Complaint
EPL	EPL	684/23.03.2021	R1.7	Within the Annual Return, the Statement 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. 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.	Complaint
EPL	EPL	684/23.03.2021	R2.1	Notification of environmental harm Notifications must be made by telephoning the Environment Line service on 131 555	Complaint

EPL	EPL	684/23.03.2021	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.	Complaint
EPL	EPL	684/23.03.2021	R3.1	R3 Written report 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.	Where an Complaint
EPL	EPL	684/23.03.2021	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.	Complaint
EPL	EPL	684/23.03.2021	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.	Complaint
EPL	EPL	684/23.03.2021	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.	Complaint
EPL	EPL	684/23.03.2021	7	GENERAL CONDITIONS	Complaint
EPL	EPL	684/23.03.2021	G1.1	G1 Copy of licence kept at the premises or plant copy of this licence must be kept at the premises to which the licence applies	A Complaint

EPL	EPL	684/23.03.2021	G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	Complaint									
EPL	EPL	684/23.03.2021	G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.	Complaint									
EPL	EPL	684/23.03.2021	G2.1	G2 Other general conditions Complete programs <table><tr><th>Program</th><th>Description</th><th>Completed Date</th></tr><tr><td>Stormwater management plan</td><td>Prepare stormwater management plan for site that includes fuel storage; sewage irrigation.</td><td>22-October-2002</td></tr><tr><td>Trial Use of Recycled Wastewater</td><td>Trial use of recycled wastewater in brick manufacturing. Reduce use of water by using recycled wastewater.</td><td>01-December-2008</td></tr></table>	Program	Description	Completed Date	Stormwater management plan	Prepare stormwater management plan for site that includes fuel storage; sewage irrigation.	22-October-2002	Trial Use of Recycled Wastewater	Trial use of recycled wastewater in brick manufacturing. Reduce use of water by using recycled wastewater.	01-December-2008	Complaint
Program	Description	Completed Date												
Stormwater management plan	Prepare stormwater management plan for site that includes fuel storage; sewage irrigation.	22-October-2002												
Trial Use of Recycled Wastewater	Trial use of recycled wastewater in brick manufacturing. Reduce use of water by using recycled wastewater.	01-December-2008												
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	1	Notice to Landholders (a) Within a period of three months from the date of grant/renewal of this mining lease, the lease holder must serve on each landholder a notice in writing indicating that this mining lease has been granted/renewed and whether the lease includes the surface. A plan identifying each landholder and individual land parcel subject to the lease area, and a description of the lease area must accompany the notice. (b) If there are ten or more landholders, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this mining lease has been granted/renewed; state whether the lease includes the surface and must contain a plan and description of the lease area. If a notice is made under condition 1(b), compliance with condition 1(a) is not required.	Complaint									
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	2	Rehabilitation Any disturbance resulting from the activities carried out under this mining lease must be rehabilitated to the satisfaction of the Minister.	Complaint									
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	3	Mining Operations Plan and Annual Rehabilitation Report (a) The lease holder must comply with an approved Mining Operations Plan (MOP) in carrying out any significant surface disturbing activities, including mining operations, mining purposes and prospecting. The lease holder must apply to the Minister for approval of a MOP. An approved MOP must be in place prior to commencing any significant surface disturbing activities, including mining operations, mining purposes and prospecting.	Complaint									
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	3	(b) The MOP must identify the post mining land use and set out a detailed rehabilitation strategy which: (i) identifies areas that will be disturbed; (ii) details the staging of specific mining operations, mining purposes and prospecting; (iii) identifies how the mine will be managed and rehabilitated to achieve the post mining land use; (iv) identifies how mining operations, mining purposes and prospecting will be carried out in order to prevent and or minimise harm to the environment; and (v) reflects the conditions of approval under: • the Environmental Planning and Assessment Act 1979; • the Protection of the Environment Operations Act 1997; and • any other approvals relevant to the development including the conditions of this mining lease	Complaint									
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	3	(c) The MOP must be prepared in accordance with the ESG3: Mining Operations Plan (MOP) Guidelines September 2013 published on the Department's website at www.resourcesandenergy.nsw.gov.au/miners-and-explorers/rules-andforms/pgf/environmental-guidelines	Complaint									
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	3	(d) The lease holder may apply to the Minister to amend an approved MOP at any time.	Complaint									

Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	3	<p>(e) It is not a breach of this condition if:</p> <p>(i) the operations which, but for this condition 3(e) would be a breach of condition 3(a), were necessary to comply with a lawful order or direction given under the Environmental Planning and Assessment Act 1979, the Protection of the Environment Operations Act 1997, the Work Health and Safety (Mines and Petroleum Sites) Act 2013 and Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 or the Work Health and Safety Act 2011; and Work Health and Safety Regulation 2011</p> <p>(ii) the Minister had been notified in writing of the terms of the order or direction prior to the operations constituting the breach being carried out</p>	Complaint
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	3	<p>(f) The lease holder must prepare a Rehabilitation Report to the satisfaction of the Minister. The report must:</p> <p>(i) provide a detailed review of the progress of rehabilitation against the performance measures and criteria established in the approved MOP;</p> <p>(ii) be submitted annually on the grant anniversary date (or at such other times as agreed by the Minister); and</p> <p>(iii) be prepared in accordance with any relevant annual reporting guidelines published on the Department's website at www.resourcesandenergy.nsw.gov.au/miners-andexplorers/rules-and-forms/pgf/environmental-guidelines</p> <p><i>Note: The Rehabilitation Report replaces the Annual Environmental Management Report</i></p>	Complaint
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	4	<p>4. Non-Compliance Reporting</p> <p>(a) The lease holder must notify the Department upon becoming aware of any breaches of the conditions of this mining lease or breaches of the Mining Act or Regulations;</p> <p>(b) Notifications under condition 4(a) must be provided in the form specified on the Department's website within seven (7) days of the mining lease holder becoming aware of the breach.</p>	Complaint
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	5	<p>Environmental Incident Report</p> <p>The lease holder must provide environmental incident notifications and reports to the Secretary no later than seven (7) days after those environmental incident notifications and reports are provided to the relevant authorities under the Protection of the Environment Operations Act 1997.</p>	Complaint
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	6	<p>Resource Recovery</p> <p>The lease holder must optimise recovery of the minerals that are the subject of this mining lease to the extent economically feasible.</p>	Complaint
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	7	<p>Security</p> <p>The lease holder is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations of all or any kind under the mining lease, including obligations of all or any kind under the mining lease that may arise in the future.</p> <p>The amount of the security deposit to be provided has been assessed by the Minister at \$2,104,000.</p>	Complaint
Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	8	<p>Cooperation Agreement</p> <p>The lease holder must make every reasonable attempt, and be able to demonstrate its attempts, to enter into a cooperation agreement with the holder(s) of any overlapping title(s). The cooperation agreement should address but not be limited to issues such as:</p> <ul style="list-style-type: none"> • access arrangements • operational interaction procedures • dispute resolution • information exchange • well location • timing of drilling • potential resource extraction conflicts; and • rehabilitation issues 	Complaint

Mining Lease	Mining Lease Application No. 536 Mining Lease #1771	ML	-	Exploration Reporting Note: Exploration Reports (Geological and Geophysical) The lease holder must lodge reports to the satisfaction of the Minister in accordance with section 163C of the Mining Act 1992 and in accordance with clause 59 of the Mining Regulation 2016. Reports must be prepared in accordance with Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales.	Complaint

Appendix F: Quarry Production Data - MEG

Royalty online services

Welcome Joe Gauci

Logout

Confirmation

Client name:	BADGERYS CREEK QUARRY
Client ID:	149272310
RIMS ID:	323195
Reference number:	778204245964
Period:	1 July 2022 - 30 June 2023
Lodgement date:	20 July 2023
Return due date:	31 July 2023
Royalty amount due:	\$15,753.15

Payment options



Direct debit

No details supplied

\$ Schedule payment



BPAY

When making a BPAY payment, remember to include the Biller Code and Reference Number as shown below.

Biller code: 3384

Payment reference: 1768901983



▸ List of Clients

Royalty online services

Welcome Joe Gauci

Logout

Client details

Client ID: 149272310
Client name: BADGERYS CREEK QUARRY
RIMS ID: 323195

Return summary

Return type: Non-coal Mineral
Frequency: Annually
Period: 1 July 2022 - 30 June 2023
Due date: 31 July 2023
Revision: 1

Show 10 ▾ entries

🔍 Advanced search

Lease name	Mineral / Extraction	Royalty regime	Rate	Quantity	Value	Royalty	Edit	Nil
ML 1771 (1992)	CLAY SHALE	Quantum Royalty	\$0.35 per tonne	45,009	\$36,847.70	\$15,753.15	Edit	Nil
Totals					\$36,847.70	\$15,753.15		

Showing 1-1 of 1 entries

⏪ Previous

Next ⏩

Appendix G: Monitoring Results

Reference	Sample	Sample	Sampling Comments	Temperature	pH	Electrical Conductivity	Dissolved Oxygen	Turbidity	NOx as N	Total Nitrogen	Phosphate as P	Total Phosphorus	Date Tested - Ammonia	Ammonia as N
	Description	Date		°C	pH Units	µS/cm	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	--	mg/L
Units PQL Method				0.1 Temp	0.1 APHA 4500-H B	20 APHA 2510 B	0.1 4500-ORPHA 2130 I	0.5	0.005 EXT	0.1 EXT	0.005 EXT	0.05 EXT	4500-NH3 F	0.02 4500-NH3 F
14716/1	Badgerys Creek Confluence	21/06/2023 09:58	No flow, algae	7.7	7.8	2,140	14.1	40	<0.005	0.6	<0.005	0.08	29/06/2023	<0.02
14716/2	Badgerys Creek Upstream	21/06/2023 10:20	No flow, algae	7.1	7.8	2,160	14.8	27	<0.005	0.5	<0.005	0.07	29/06/2023	<0.02
14716/3	Badgerys Creek Downstream	21/06/2023 09:29	No flow	7	7.3	2,110	10.4	19	0.006	0.5	<0.005	<0.05	29/06/2023	<0.02
14716/4	South Creek Upstream	21/06/2023 10:59	No flow	8.2	7.2	1,040	7.5	14	6.2	6.3	0.42	0.5	29/06/2023	0.07
14716/5	South Creek Downstream	21/06/2023 11:24	No flow	9.4	7.3	1,010	8.9	12	1.8	1.9	0.11	0.1	29/06/2023	0.03
14716/6	Dup (Badgerys Creek Downstream)	21/06/2023 09:36	No flow	6.9	7.3	2,110	10.3	20	<0.005	0.5	<0.005	<0.05	29/06/2023	<0.02
14878/1	Badgerys Creek Confluence	19/07/2023 11:40	Clear, no flow.	11.7	7.3	2,820	9.5	17	0.4	1.1	<0.005	0.07	26/07/2023	0.08
14878/2	Badgerys Creek Upstream	19/07/2023 11:58	Clear, no flow.	10.7	7.4	2,740	9.8	21	0.4	1.1	<0.005	0.1	26/07/2023	0.11
14878/3	Badgerys Creek Downstream	19/07/2023 11:10	Clear, no flow.	10	7.4	3,040	10.3	28	0.3	1.5	<0.005	0.1	26/07/2023	0.08
14878/4	South Creek Upstream	19/07/2023 12:37	Clear, no flow.	11.1	7.3	1,390	8.6	14	1.2	1.5	0.18	0.3	26/07/2023	0.06
14878/5	South Creek Downstream	19/07/2023 13:02	Clear, no flow.	12.3	7.4	1,190	7.1	15	6.1	6.8	0.67	0.82	26/07/2023	0.03
14878/6	Dup (BC Downstream)	19/07/2023 11:16	Clear, no flow.	10	7.4	3,020	10	28	0.3	1.3	<0.005	0.1	26/07/2023	0.07
14961/1	Badgerys Creek Confluence	16/08/2023 12:18	No visible flow	12.7	7.4	2,610	10.4	17	<0.005	0.6	<0.005	<0.05	22/08/2023	<0.02
14961/2	Badgerys Creek Upstream	16/08/2023 12:36	No visible flow	12.2	7.4	2,620	10.2	22	0.03	0.6	<0.005	<0.05	22/08/2023	<0.02
14961/3	Badgerys Creek Downstream	16/08/2023 11:31	No visible flow	11.9	7.5	2,630	11.7	40	<0.005	0.6	0.005	0.09	22/08/2023	<0.02
14961/4	South Creek Upstream	16/08/2023 13:08	No visible flow, algae.	12	7.4	1,600	10.5	18	1.7	1.7	0.13	0.2	22/08/2023	<0.02
14961/5	South Creek Downstream	16/08/2023 13:30	No visible flow	13.1	7.4	1,570	9.3	17	6.1	6.9	0.63	0.82	22/08/2023	0.29
14961/6	(Dup) Badgerys Creek Downstream	16/08/2023 11:43	No visible flow	12.1	7.5	2,620	11.4	45	<0.005	0.6	0.006	0.09	22/08/2023	<0.02
15088/1	Badgerys Creek Confluence	25/09/2023 10:48	No flow.	16.1	7.6	2,420	8.7	50	0.01	0.7	<0.005	0.1	03/10/2023	<0.02
15088/2	Badgerys Creek Upstream	25/09/2023 11:10	No flow.	17.4	7.6	2,440	7.8	33	<0.005	0.8	<0.005	0.1	03/10/2023	<0.02
15088/3	Badgerys Creek Downstream	25/09/2023 10:21	No flow.	14.2	7.4	2,700	5.5	18	0.005	0.6	<0.005	<0.05	03/10/2023	<0.02
15088/4	South Creek Upstream	25/09/2023 11:38	No flow.	16.7	7.5	1,480	7.5	18	1.1	1.2	0.062	0.2	03/10/2023	0.02
15088/5	South Creek Downstream	25/09/2023 12:02	No flow.	16.1	7.6	1,500	7.4	13	0.4	0.7	0.083	0.1	03/10/2023	0.03
15088/6	(Dup) Badgerys Creek Downstream	25/09/2023 10:27	No flow.	14.3	7.4	2,690	5.4	18	<0.005	0.6	<0.005	<0.05	03/10/2023	<0.02
15208/1	Badgerys Creek Confluence	11/10/2023 10:39	No visible flow	19.3	7.5	2,530	5.8	65	<0.005	0.8	<0.005	0.1	18/10/2023	0.02
15208/2	Badgerys Creek Upstream	11/10/2023 10:58	Trickle flow	19.3	7.4	2,420	5.7	50	<0.005	0.8	<0.005	0.1	18/10/2023	0.02
15208/3	Badgerys Creek Downstream	11/10/2023 10:12	No visible flow	17.1	7.4	2,860	6.2	16	<0.005	0.7	<0.005	<0.05	18/10/2023	0.02
15208/4	South Creek Upstream	11/10/2023 11:36	No visible flow	18.9	7.5	941	7.8	28	5.2	5.1	0.73	0.73	18/10/2023	0.04
15208/5	South Creek Downstream	11/10/2023 12:04	No visible flow	18.1	7.4	1,190	6.8	19	1.4	1.5	0.09	0.1	18/10/2023	0.04
15208/6	(Dup) Badgerys Creek Downstream	11/10/2023 10:19	No visible flow	17.2	7.4	2,860	6.3	16	<0.005	0.7	<0.005	<0.05	18/10/2023	0.03
15307/1	Badgerys Creek Confluence	08/11/2023 11:28	Cloudy, no flow	21.1	7.5	2,460	5.6	55	0.04	0.8	<0.005	0.1	09/11/2023	0.02
15307/2	Badgerys Creek Upstream	08/11/2023 11:46	Cloudy, no flow	20.7	7.5	2,280	6.6	55	0.2	0.8	<0.005	0.1	09/11/2023	<0.02
15307/3	Badgerys Creek Downstream	08/11/2023 11:03	Cloudy, no flow	20.4	7.5	2,490	7	40	0.006	0.8	0.007	0.09	09/11/2023	0.02
15307/4	South Creek Upstream	08/11/2023 12:54	Fairly clear, no flow	21.5	7.4	897	7.2	6.6	18	19	0.85	1	09/11/2023	0.14
15307/5	South Creek Downstream	08/11/2023 13:20	Fairly clear, no flow	21.3	7.4	604	5.6	16	0.82	1.3	0.32	0.4	09/11/2023	0.04
15307/6	Dup (Badgerys Creek Downstream)	08/11/2023 11:10	Cloudy, no flow	20.6	7.6	2,490	6.9	40	0.006	0.7	0.008	0.09	09/11/2023	0.02
15432/1	Badgerys Creek Confluence	06/12/2023 10:35	Turbid. No flow	25.4	7.5	1,640	5	90	0.009	0.5	0.007	0.2	11/12/2023	<0.02
15432/2	Badgerys Creek Upstream	06/12/2023 10:51	Turbid. No flow	25.7	7.6	1,640	4.9	130	0.007	0.6	0.01	0.2	11/12/2023	0.02
15432/3	Badgerys Creek Downstream	06/12/2023 10:09	No flow	24	7.6	1,800	6.2	30	0.007	0.6	<0.005	0.1	11/12/2023	0.02
15432/4	South Creek Upstream	06/12/2023 11:39	Slight flow	24.8	7.3	785	4.5	55	0.5	0.7	0.076	0.2	11/12/2023	0.1
15432/5	South Creek Downstream	06/12/2023 12:03	Slight flow	24	7.3	557	5.7	70	0.51	0.7	0.081	0.2	11/12/2023	0.07
15432/6	Dup (Badgerys Creek U/S)	06/12/2023 10:57	Turbid. No flow	25.7	7.6	1,640	4.9	130	0.008	0.6	0.01	0.2	11/12/2023	0.03
15532/1	Badgerys Creek Confluence	03/01/2024 09:55	No visible flow	24.1	7.4	1,320	6.2	35	<0.005	0.7	<0.005	0.08	03/01/2024	<0.02
15532/2	Badgerys Creek Upstream	03/01/2024 10:16	No visible flow	23.2	7.4	1,410	6	30	<0.005	0.6	<0.005	0.08	03/01/2024	<0.02

Reference	Sample	Sample	Sampling Comments	Temperature	pH	Electrical Conductivity	Dissolved Oxygen	Turbidity	NOx as N	Total Nitrogen	Phosphate as P	Total Phosphorus	Date Tested - Ammonia	Ammonia as N
	Description	Date		°C	pH Units	µS/cm	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	--	mg/L
Units PQL Method				0.1 Temp	0.1 APHA 4500-H B	20 APHA 2510 B	0.1 4500-ORPHA 2130 I	0.5	0.005 EXT	0.1 EXT	0.005 EXT	0.05 EXT	4500-NH3 F	0.02 4500-NH3 F
15532/3	Badgerys Creek Downstream	03/01/2024 09:29	No visible flow	23.3	7.4	1,250	6.1	37	<0.005	0.5	<0.005	0.08	03/01/2024	<0.02
15532/4	South Creek Upstream	03/01/2024 10:51	No visible flow	23.6	7.4	814	5.9	30	1.4	1.8	0.25	0.4	03/01/2024	0.02
15532/5	South Creek Downstream	03/01/2024 11:21	No visible flow	23.4	7.5	839	6.2	27	2.1	2.5	0.26	0.4	03/01/2024	0.03
15532/6	Dup' (Badgerys Creek Downstream)	03/01/2024 09:36	No visible flow	23.3	7.4	1,250	6.1	37	<0.005	0.6	<0.005	0.08	03/01/2024	<0.02
15644/1	Badgerys Creek Confluence	31/01/2024 09:46	No flow, turbid	24.9	7.6	2,000	3.5	85	0.007	1.3	0.02	0.1	06/02/2024	0.03
15644/2	Badgerys Creek Upstream	31/01/2024 10:02	No flow, turbid	24.5	7.6	2,010	4.8	100	0.007	1.3	0.02	0.1	06/02/2024	0.02
15644/3	Badgerys Creek Downstream	31/01/2024 09:24	No flow, turbid	24.3	7.6	2,000	4.3	30	0.01	1.2	0.01	0.09	06/02/2024	0.03
15644/4	South Creek Upstream	31/01/2024 10:47	No flow	25.1	7.6	863	6	15	4	5	0.31	0.54	06/02/2024	0.03
15644/5	South Creek Downstream	31/01/2024 11:10	No flow	25.1	7.5	782	5.1	15	0.3	0.9	0.14	0.3	06/02/2024	0.03
15644/6	Dup' (Badgerys Creek Upstream)	31/01/2024 10:06	No flow, turbid	24.5	7.6	2,020	4.7	100	0.007	1.3	0.02	0.2	06/02/2024	0.02
15737/1	Badgerys Creek Confluence	28/02/2024 10:58	Turbid, no visible flow	23.4	7.4	1,270	4.2	160	0.1	1	0.02	0.2	05/03/2024	0.06
15737/2	Badgerys Creek Upstream	28/02/2024 11:20	Turbid, no visible flow	23.4	7.4	1,270	4.8	120	0.1	1	0.03	0.3	05/03/2024	0.06
15737/3	Badgerys Creek Downstream	28/02/2024 10:29	Turbid, no visible flow	23.6	7.4	1,290	4.6	85	0.2	1.1	0.02	0.2	05/03/2024	0.05
15737/4	South Creek Upstream	28/02/2024 11:53	No visible flow	23.8	7.5	894	5.2	33	0.54	0.9	0.19	0.3	05/03/2024	<0.02
15737/5	South Creek Downstream	28/02/2024 12:21	No visible flow	23.5	7.5	871	6.4	33	0.51	0.8	0.19	0.3	05/03/2024	0.03
15737/6	Dup' (D/S Badgerys Creek)	28/02/2024 10:35	Turbid, no visible flow	23.6	7.4	1,290	4.6	85	0.2	1	0.02	0.2	05/03/2024	0.04
15892/1	Badgerys Creek Confluence	27/03/2024 11:28	Trickle flow	21.1	7.5	2,060	5.3	50	0.006	1.2	0.02	0.2	03/04/2024	<0.02
15892/2	Badgerys Creek Upstream	27/03/2024 11:49	Trickle flow	20.6	7.6	1,950	5.6	26	<0.005	1.2	0.02	0.1	03/04/2024	<0.02
15892/3	Badgerys Creek Downstream	27/03/2024 10:57	Trickle flow	20.6	7.5	1,900	5.7	23	0.1	1.7	0.055	0.2	03/04/2024	0.03
15892/4	South Creek Upstream	27/03/2024 12:28	No visible flow	22.1	7.5	1,220	4.8	8.1	1.1	1.7	0.23	0.3	03/04/2024	0.02
15892/5	South Creek Downstream	27/03/2024 12:51	No visible flow	21.9	7.4	1,390	5.5	7.2	0.2	1.3	0.095	0.2	03/04/2024	0.13
15892/6	Dup' (Badgerys Creek Downstream)	27/03/2024 11:07	Trickle flow	20.8	7.5	1,900	5.7	20	0.1	1.3	0.055	0.2	03/04/2024	0.02
16016/1	Badgerys Creek Confluence	24/04/2024 11:46	No visible flow	17	7.3	1,200	5.9	50	<0.005	0.9	0.01	0.1	29/04/2024	<0.02
16016/2	Badgerys Creek Upstream	24/04/2024 12:01	No visible flow	16.4	7.3	1,230	6	45	<0.005	0.8	0.01	0.1	29/04/2024	<0.02
16016/3	Badgerys Creek Downstream	24/04/2024 11:19	No visible flow. Farm irrigation in progress.	17	7.4	1,510	6.3	21	0.09	1.1	0.06	0.4	29/04/2024	0.08
16016/4	South Creek Upstream	24/04/2024 12:34	No visible flow	18.1	7.2	1,010	4.6	29	1.2	2	0.2	0.4	29/04/2024	0.08
16016/5	South Creek Downstream	24/04/2024 13:01	Gentle flow. Farm irrigation in progress.	18.2	7.3	1,200	5.3	19	0.54	1.3	0.072	0.2	29/04/2024	0.06
16016/6	Dup' (Badgerys Creek Downstream)	24/04/2024 11:26	No visible flow	17.1	7.4	1,510	6.4	21	0.09	0.99	0.078	0.4	29/04/2024	0.08
16157/1	Badgerys Creek Confluence	22/05/2024 10:31	No visible flow	13.6	7.3	1,460	6.5	120	0.2	1	0.04	0.2	28/05/2024	0.1
16157/2	Badgerys Creek Upstream	22/05/2024 10:12	No visible flow	13.5	7.3	1,430	6.8	110	0.2	1.2	0.04	0.2	28/05/2024	0.07
16157/3	Badgerys Creek Downstream	22/05/2024 09:38	No visible flow	14.2	7.3	1,560	7.8	45	0.2	1.4	0.076	0.3	28/05/2024	0.09
16157/4	South Creek Upstream	22/05/2024 11:10	No visible flow	14.2	7.3	901	6.9	75	1.2	1.7	0.18	0.3	28/05/2024	0.1
16157/5	South Creek Downstream	22/05/2024 11:43	Gentle flow observed at shallow section	14.2	7.4	895	7.9	65	1	1.5	0.14	0.2	28/05/2024	0.07
16157/6	Dup' (Badgerys Creek Downstream)	22/05/2024 09:44	No visible flow	14.3	7.3	1,560	7.7	45	0.2	1.3	0.07	0.3	28/05/2024	0.09

Reference	Description	Sample Description	Sample Date	Date & Time On	Date & Time Sampled	Sampling Comments	General Comments/Non Compliance	Number of Days	Insoluble Solids	Ash	Combustible Matter	Calculated Rain	
Units								days	g/m2/mth	g/m2/mth	g/m2/mth	mm	
PQL									0.1	0.1	0.1	1	
Method								AS 3580.10.1	S 3580.10.1	S 3580.10.1	AS 3580.10.1	S 3580.10.1	
14711/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	20/06/2023	23/05/2023 11:20	20/06/2023 13:19	Very dark, seeds, etc. Owl pellet		28	0.3	0.3	<0.1	6	
14711/2	Badgerys Creek - Dusts	D2 Hay Shed	20/06/2023	23/05/2023 09:44	20/06/2023 12:09	funnel		28	1	0.2	0.8	6	
14711/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	20/06/2023	23/05/2023 10:25	20/06/2023 13:31	Algae, seeds in funnel		28	0.2	0.2	<0.1	4	
14711/4	Badgerys Creek - Dusts	D4 Old House	20/06/2023	23/05/2023 10:04	20/06/2023 12:53	Insects, algae		28	0.7	0.6	0.1	6	
14874/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	18/07/2023	20/06/2023 13:19	18/07/2023 12:17			28	0.4	0.2	0.2	19	
14874/2	Badgerys Creek - Dusts	D2 Hay Shed	18/07/2023	20/06/2023 12:09	18/07/2023 11:46			28	0.2	0.2	<0.1	19	
14874/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	18/07/2023	20/06/2023 13:31	18/07/2023 12:37			28	0.3	0.2	0.1	16	
14874/4	Badgerys Creek - Dusts	D4 Old House	18/07/2023	20/06/2023 12:53	18/07/2023 12:01	Algae		28	1.2	0.9	0.3	18	
14955/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	15/08/2023	18/07/2023 12:17	15/08/2023 11:48			28	0.5	0.4	0.1	23	
14955/2	Badgerys Creek - Dusts	D2 Hay Shed	15/08/2023	18/07/2023 11:46	15/08/2023 11:21			28	0.5	0.3	0.2	26	
14955/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	15/08/2023	18/07/2023 12:37	15/08/2023 12:31	Insects		28	0.4	0.2	0.2	24	
14955/4	Badgerys Creek - Dusts	D4 Old House	15/08/2023	18/07/2023 12:01	15/08/2023 12:01			28	1	0.3	0.7	27	
15083/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	12/09/2023	15/08/2023 11:48	12/09/2023 11:38			28	0.6	0.4	0.2	25	
15083/2	Badgerys Creek - Dusts	D2 Hay Shed	12/09/2023	15/08/2023 11:21	12/09/2023 11:19	Minor dust, algae, minor insects		28	2	0.8	1.2	25	
15083/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	12/09/2023	15/08/2023 12:31	12/09/2023 12:16			28	0.5	0.2	0.3	21	
15083/4	Badgerys Creek - Dusts	D4 Old House	12/09/2023	15/08/2023 12:01	12/09/2023 11:49	Minor vegetation		28	1.2	0.5	0.7	26	
15302/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	07/11/2023	10/10/2023 12:01	07/11/2023 11:54	Minor insects		28	0.5	0.4	0.1	36	
15302/2	Badgerys Creek - Dusts	D2 Hay Shed	07/11/2023	10/10/2023 11:29	07/11/2023 11:33	Insects		28	1.1	0.7	0.4	44	
15302/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	07/11/2023	10/10/2023 12:44	07/11/2023 12:39	Minor insects. Relocated gauge 292442E,6246570N		28	0.5	0.4	0.1	38	
15302/4	Badgerys Creek - Dusts	D4 Old House	07/11/2023	10/10/2023 12:13	07/11/2023 12:03	Minor insects		28	0.5	0.4	0.1	33	
15427/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	05/12/2023	07/11/2023 11:54	05/12/2023 12:58	Major insects		28	2.1	0.8	1.3	50	
15427/2	Badgerys Creek - Dusts	D2 Hay Shed	05/12/2023	07/11/2023 11:33	05/12/2023 12:34	Minor insects, algae		28	1.5	0.9	0.6	51	
15427/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	05/12/2023	07/11/2023 12:39	05/12/2023 13:43	Minor insects		28	1.1	0.7	0.4	48	
15427/4	Badgerys Creek - Dusts	D4 Old House	05/12/2023	07/11/2023 12:03	05/12/2023 13:12	Insects, algae		28	2.2	0.7	1.5	44	
15528/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	02/01/2024	05/12/2023 12:58	02/01/2024 12:27	Minor insects		28	0.5	0.3	0.2	75	
15528/2	Badgerys Creek - Dusts	D2 Hay Shed	02/01/2024	05/12/2023 12:34	02/01/2024 11:54	Insects, algae		28	1.3	0.6	0.7	90	
15528/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	02/01/2024	05/12/2023 13:43	02/01/2024 13:12	Insects, algae		28	3.2	2.2	1	85	
15528/4	Badgerys Creek - Dusts	D4 Old House	02/01/2024	05/12/2023 13:12	02/01/2024 12:47	Major beetles & algae		28	2.5	1.2	1.3	90	
15639/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	30/01/2024	02/01/2024 12:27	30/01/2024 12:16	Insects.	New bird deterrent fitted	28	2.1	0.9	1.2	72	
15639/2	Badgerys Creek - Dusts	D2 Hay Shed	30/01/2024	02/01/2024 11:54	30/01/2024 11:41		New bird deterrent fitted	28	1.2	0.6	0.6	67	
15639/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	30/01/2024	02/01/2024 13:12	30/01/2024 12:52	Insects	New bird deterrent fitted	28	4.5	2.8	1.7	79	
15639/4	Badgerys Creek - Dusts	D4 Old House	30/01/2024	02/01/2024 12:47	30/01/2024 12:26	Bird droppings, insects, algae.	New bird deterrent fitted	28	4.5	1.3	3.2	69	
15733/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	27/02/2024	30/01/2024 12:16	27/02/2024 11:53	Insects		28	1.5	1.1	0.4	55	
15733/2	Badgerys Creek - Dusts	D2 Hay Shed	27/02/2024	30/01/2024 11:41	27/02/2024 11:21	Insects		28	4.2	1.1	3.1	72	
15733/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	27/02/2024	30/01/2024 12:52	27/02/2024 12:28	Minor insects, minor algae		28	1.8	1.4	0.4	87	
15733/4	Badgerys Creek - Dusts	D4 Old House	27/02/2024	30/01/2024 12:26	27/02/2024 12:02	Minor insects, minor vegetation		28	1.5	0.9	0.6	77	
15891/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	26/03/2024	27/02/2024 11:53	26/03/2024 12:52	Minor insects		28	0.6	0.4	0.2	24	
15891/2	Badgerys Creek - Dusts	D2 Hay Shed	26/03/2024	27/02/2024 11:21	26/03/2024 12:06	Minor insects		28	0.5	0.4	0.1	24	
15891/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	26/03/2024	27/02/2024 12:28	26/03/2024 13:12	Minor dust, minor insects		28	2.4	2	0.4	25	
15891/4	Badgerys Creek - Dusts	D4 Old House	26/03/2024	27/02/2024 12:02	26/03/2024 12:29	Minor insects		28	0.7	0.4	0.3	23	
16011/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	23/04/2024	26/03/2024 12:52	23/04/2024 12:19	Full. Minor insects		28	0.5	0.2	0.3	115	
16011/2	Badgerys Creek - Dusts	D2 Hay Shed	23/04/2024	26/03/2024 12:06	23/04/2024 11:47	Full. Minor insects		28	0.4	0.2	0.2	115	
16011/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	23/04/2024	26/03/2024 13:12	23/04/2024 12:54	Full		28	0.9	0.6	0.3	115	
16011/4	Badgerys Creek - Dusts	D4 Old House	23/04/2024	26/03/2024 12:29	23/04/2024 12:29	Full		28	0.5	0.3	0.2	114	
16152/1	Badgerys Creek - Dusts	D1 Martin Rd - Near Reside	21/05/2024	23/04/2024 12:19	21/05/2024 12:02			28	0.5	0.2	0.3	91	

Reference	Description	Sample Description	Sample Date	Date & Time On	Date & Time Sampled	Sampling Comments	General Comments/Non Compliance	Number of Days	Insoluble Solids	Ash	Combustible Matter	Calculated Rain	
Units								days	g/m2/mth	g/m2/mth	g/m2/mth	mm	
PQL								0.1	0.1	0.1	1		
Method								AS 3580.10.1	S 3580.10.1	S 3580.10.1	S 3580.10.1	S 3580.10.1	
16152/2	Badgerys Creek - Dusts	D2 Hay Shed	21/05/2024	23/04/2024 11:47	21/05/2024 12:32			28	0.4	0.1	0.3	70	
16152/3	Badgerys Creek - Dusts	D3 Bundwall Near Inghams	21/05/2024	23/04/2024 12:54	21/05/2024 11:23			28	0.6	0.3	0.3	76	
16152/4	Badgerys Creek - Dusts	D4 Old House	21/05/2024	23/04/2024 12:29	21/05/2024 11:41	Insects		28	4.4	2.2	2.2	105	

Reference	Description	Sample Description	Date & Time On	Date of Operation	Date & Time Sampled	Sampling Method	Sampling Comments	Est Mean	Est Mean Pressure (DF 101.3)	Volume Air Sampled	Particulates per filter 400 VGT-WI/44	~Particulates @ 0°C, 101.3kPa µg/m3 2 VGT-WI/44
								Temperature (DF				
								20.0)				
								°C				
Units PQL Method									kPa	m3	µg/filter	
14894/1	Badgerys Creek HVAS	PM 10	20/06/2023 13:15	21/06/2023	18/07/2023 12:24	Unknown	Farming/ grazin	19.1	101.3	7594	132600	17
15034/1	Badgerys Creek HVAS	PM 10	18/07/2023 12:26	14/08/2023	15/08/2023 11:40	Paper ran 5 times	Fine, 19.15°C	19.1	101.3	7595	133900	18
15164/1	Badgerys Creek HVAS	PM 10	15/08/2023 12:15	20/08/2023	12/09/2023 11:40	Paper ran 4 times	17°C, Cloudy	19.4	101.3	6070	88700	15
15231/1	Badgerys Creek HVAS	PM 10	12/09/2023 11:40	13/09/2023	10/10/2023 12:00	Paper ran 5 times	22°C, Cloudy	23.6	101.3	7478	236900	32
15394/1	Badgerys Creek HVAS	PM 10	10/10/2023 11:00	13/10/2023	07/11/2023 11:55	Paper overrun	Fine	26.7	101.3	7055	131700	19
15508/1	Badgerys Creek HVAS	PM 10	07/11/2023 11:55	12/11/2023	05/12/2023 13:00	Paper overrun	Fine	30.3	101.3	4,389	48,200	11
15587/1	Badgerys Creek HVAS	PM 10	05/12/2023 13:25	06/12/2023	02/01/2023 12:30	Paper overrun	Fine	33.4	101.3	7239	159000	22
15676/1	Badgerys Creek HVAS	PM 10	02/01/2024 12:30	05/01/2024	30/01/2024 12:15	Paper overrun	Fine	29.1	101.3	7,344	117,400	16
15825/1	Badgerys Creek HVAS	PM 10	30/01/2024 02:35	04/02/2024	27/02/2024 12:00	Paper overrun	Light Rain	24.6	101.3	5,952	142,200	24
15906/1	Badgerys Creek HVAS	PM 10	27/02/2024 12:00	28/02/2024	26/03/2024 12:30	Paper overrun	Light Rain	27.1	101.3	7327	140000	19
16081/1	Bringelly HVAS	PM 10	21/03/2024 14:45	26/03/2024	27/03/2024 12:45		Not Supplied	20	101.3	1502	34800	23
16081/2	Bringelly HVAS	PM 10	27/03/2024 12:50	01/04/2024	03/04/2024 16:02		Not Supplied	20	101.3	1502	26600	18
16081/3	Bringelly HVAS	PM 10	03/04/2024 16:04	07/04/2024	08/04/2024 15:19		Not Supplied	20	101.3	1502	11500	8
16081/4	Bringelly HVAS	PM 10	08/04/2024 15:21	13/04/2024	17/04/2024 09:20		Not Supplied	20	101.3	1502	22400	15
16081/5	Bringelly HVAS	PM 10	17/04/2024 09:22	19/04/2024	22/04/2024 13:09		Not Supplied	20	101.3	1502	24500	16
16298/1	Badgerys Creek HVAS	PM 10	23/04/2024 12:15	28/04/2024	21/05/2024 11:50	Paper overrun	Fine	24.7	101.3	5,961	68,400	11

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DATE
29 November 2023

SUBJECT
Groundwater Monitoring Report –
October 2023

REFERENCE
0449086_ S011440

Subject: Badgerys Creek Advanced Manufacturing Hub – Annual Groundwater
Monitoring Report – October 2023

Reference: 0606483_ S011440

1. INTRODUCTION

ERM Services Australia Pty Ltd (ERM) were engaged by CSR limited to perform an annual groundwater monitoring event at the CSR Advanced Manufacturing Hub, located at 235 Martin Street, Badgerys Creek, NSW 2555 ('the Site'). The Site lies within the Liverpool Local Government Area (LGA), approximately 15 km southeast of Penrith and 20 km north of Campbelltown.

In accordance with Schedule 3 Condition 23 of the project approval, the DPIE requires that CSR develop and implement a Soil and Water Management Plan (SWMP) for the Site, including both a Site Water Balance and a Surface Water Management Plan. The SWMP is designed to operate as a dynamic document for the duration of quarrying activities occurring on-site, to be updated as necessary when site conditions change.

This Groundwater Monitoring Report presents the results of the October 2023 monitoring event as per the requirements for water management within the current approved SWMP.

2. OBJECTIVES:

The objectives of the October 2023 groundwater monitoring event are to collect and present data in line with the approved groundwater monitoring management plan for the site to allow for CSRs required annual findings report to Water NSW/NRAR.

3. SCOPE OF WORKS

ERM undertook the following activities to achieve the project objectives:

- Gauging, sampling and collection of water quality parameters from 13 on-site groundwater monitoring wells;
- Submission of collected groundwater and surface water samples to a NATA accredited laboratory for analysis;
- Preparation of this groundwater monitoring report summarising the data collected.

4. MONITORING NETWORK

4.1 GROUNDWATER MONITORING NETWORK

The groundwater monitoring network consists of 13 recorded groundwater wells installed across the Site. Among these 13 wells are three sets of paired wells:

- BW2a & BW2b;
- BW4a and BW4b; and,
- BW5a & BW5b.

Paired wells were installed to facilitate monitoring of both the deeper shale and shallow alluvial aquifers and provide information on hydraulic conductivity and connectivity between the shallow and deeper horizons.

Previous reports indicate that wells MW3a, MW3b and MW3c were installed within the immediate vicinity of the former brick making factory as part of a previous contamination investigation. These wells were not used as part of the routine groundwater monitoring works for the SWMP but were previously proposed as a suitable addition for future groundwater monitoring events. However, following demolition of the former factory these wells no longer appear to be present on site and as such were not sampled during the October 2023 works.

MW6 is recorded as an older monitoring bore located in the south-west of the site for which installation details are not available. This well was not located during the October 2023 monitoring works.

MW2 is an existing monitoring bore previously recorded with damage to the surface casing and PVC standpipe sufficient to prevent its inclusion in ongoing monitoring works. As such MW2 was not sampled during this monitoring round.

Table 4.1 Below shows the available installation details for the monitoring well network. Refer to Figure 2 – Site Layout and Sample Locations.

Figure 2 – Site Layout and Sample Locations

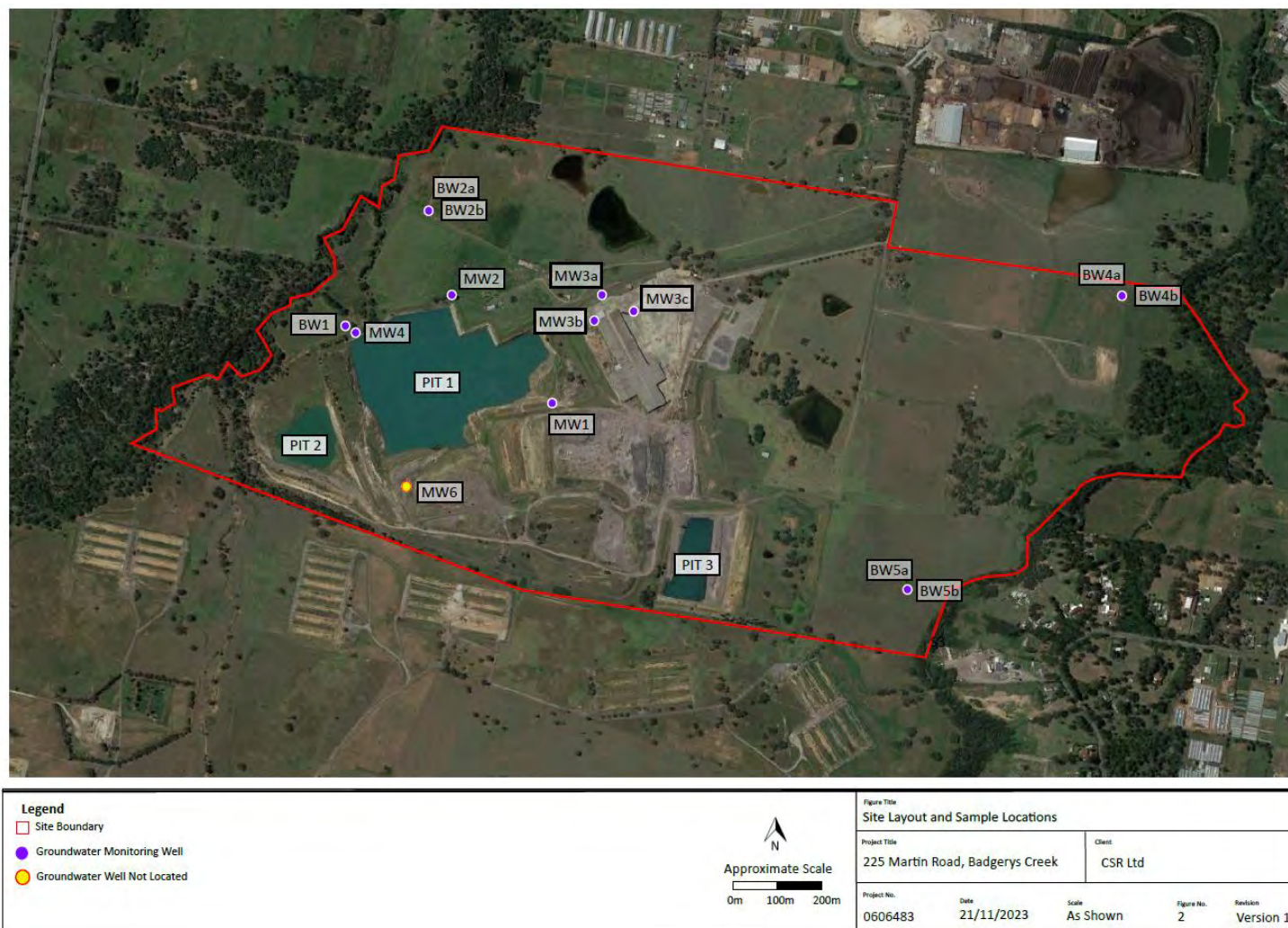


TABLE 4.1 – GROUNDWATER WELL INSTALLATION DETAILS

Well ID	Easting	Northing	Location Description	Depth Installed (m)	Screen Interval (m)	Surface Elevation (mAHD)	SWL (mbTOC) *	SWL (mAHD) *
MW1	292250	6246990	Deep well located adjacent to Pit 1 approximately 60m to the south-east.	31	25 – 31	63.99	13.78	50.99
MW4	291750	6247169	Deep well adjacent to Pit 1 on the northern side, approximately 30m from the batters and 60m from the stored water in the pit.	28	22 – 28	56.43	5.78	50.92
MW6	291872	6246790	South of Pit 1, not located since Nov 2022.	33	Unknown	Unknown	Unknown	Unknown
BW1	291741	6247174	Shallow well adjacent to Pit 1 on the northern side, approximately 30m from the batters and 60m from the stored water in the pit.	8	5 – 8	56.06	3.90	52.88
BW2a	291911	6247442	Shallow well adjacent to Badgerys Creek tributary in the north-west of site (set back to protect an Aboriginal heritage site identified for protection).	8	5 – 8	56.29	4.09	52.85
BW2b	291914	6247440	Deep well adjacent to Badgerys Creek tributary in the north-west of site (set back to protect an Aboriginal heritage site identified for protection).	33	27 – 33	56.40	5.38	51.69
BW4a	293602	6247294	Shallow well adjacent to South creek in the north-east of site.	6	3 – 6	49.04	3.14	46.61
BW4b	293602	6247295	Deep well adjacent to South creek in the north-east of site.	33	27 – 33	49.06	2.51	47.33
BW5a	293098	6246559	Shallow well adjacent to South creek in the South-east of site.	7	4 – 7	45.56	4.35	42.92
BW5b	293098	6246561	Deep well adjacent to South creek in the South-east of site.	33	27 – 33	46.51	2.94	44.27

*Data as of 25/09/2018

5. ASSESSMENT CRITERIA

Individual groundwater data were compared to the relevant assessment criteria. The following assessment criteria were adopted for this monitoring event.

- Australian and New Zealand Guidelines, 2018 for fresh and marine water quality (ANZG, 2018)
 - Fresh water criteria were adopted on the basis that the site borders Badgery's Creek to the east.
- National Health and Medical Research Council, 2008 Guidelines for Managing Risks in Recreational Water (NHMRC, 2008)
 - Health and Aesthetic criteria were adopted on the basis of limited access to on-site surface waters by site staff and potential discharge of on-site groundwater to nearby surface waters (Badgery's Creek).

6. GROUNDWATER RESULTS

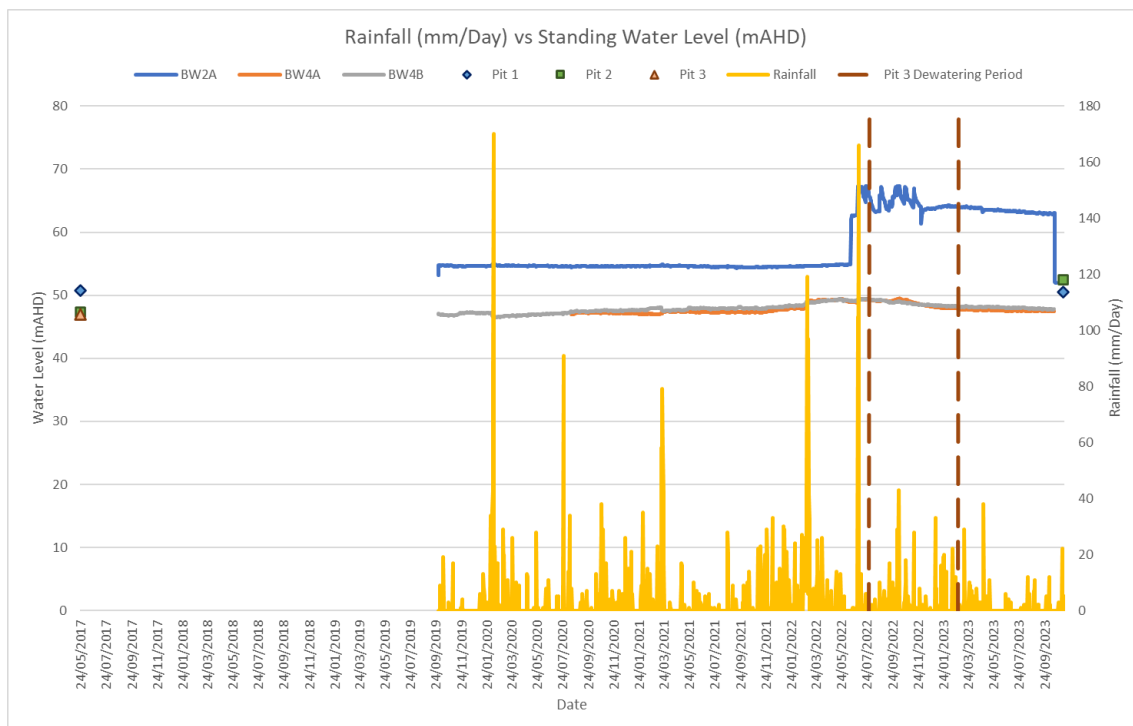
Water level comparisons have been made against the tabulated data provided in the Groundwater Monitoring Report produced for the site in May 2021 (Groundwater Exploration Services 2021) (GES) and the December 2022 GME completed by ERM. The Table is presented in Attachment B – Historical Water Level Data (Table 1).

Groundwater levels in all monitoring wells with the exception of BW2b, decreased between 0.325m and 3.282m with the most significant decrease observed in BW2a. BW2b observed a slight increase in water levels of 0.495m.

The significant decrease in groundwater levels is likely a result of recent dry weather and low rainfall recorded for the area.

ERM retrieved water level logger data via In-situ RuggedTROLLs installed in monitoring wells BW2a, BW4a and BW4b between September 2019 and October 2023. Water Level data vs Rainfall between 2019 to 2023 is presented on the below graph. Pit 1, 2 and 3 water levels are also presented on the graph, with Pit 3 dewatering occurring between August 2022 and March 2023.

BW2a appears to have the most significant variability in groundwater levels during the Pit 3 dewatering period. However, it is unlikely that the dewatering is impacting on these groundwater levels due to the distance between the locations (~1km). BW4a and BW4b groundwater levels do not appear to be impacted by the Pit 3 dewatering.



A significant increase in water level within BW2a is observed between July and December 2022, correlating with a large rainfall event in early July. Water levels remain elevated until recent dry weather in mid-2023 where a significant drop in water level was observed. Rainfall appears to have minimal impact to BW4a and BW4b water levels.

Groundwater gauging data for October 2023 is presented in Table 6.2 below and on Table 2 in Attachment B.

TABLE 6.1 – GROUNDWATER GAUGING

Well ID	Date	SWL (mbtoc)	Depth to Bottom (mbtoc)	SWL (mAHD)
MW1	19/10/2022	12.808	16.383	51.182
MW4	19/10/2022	5.932	24.669	50.498
MW6	NL	NL	NL	NL
BW1	19/10/2022	4.503	7.108	51.557
BW2a	19/10/2022	6.077	7.745	50.283
BW2b	19/10/2022	3.666	34.093	52.734
BW4a	18/10/2022	3.041	33.228	45.999
BW4b	18/10/2022	1.985	6.627	47.075
BW5a	18/10/2022	5.673	8.055	39.887
BW5b	18/10/2022	5.408	34.380	41.102

7. ANALYTICAL RESULTS

Analytical laboratory and field results from the October 2023 sampling of the groundwater monitoring network are summarised in Attachment B (Tables 3 and 4 respectively). Water samples were collected for field analysis of pH, electrical conductivity (EC), and for laboratory testing of the following comprehensive suite of analytes as per the SWMP:

- pH, EC and total dissolved solids (TDS).
- Major cations and anions; and
- Dissolved metals (Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Zinc,).

Laboratory analysis was undertaken by ALS Environmental, a NATA-accredited laboratory based in Sydney. The ANZG (2018) Guidelines for slightly to moderately disturbed ecosystems (freshwater) have been applied to groundwater results. Major ions have been compared with NHMRC (2008) guidelines for recreational purposes for consistency with previous reports.

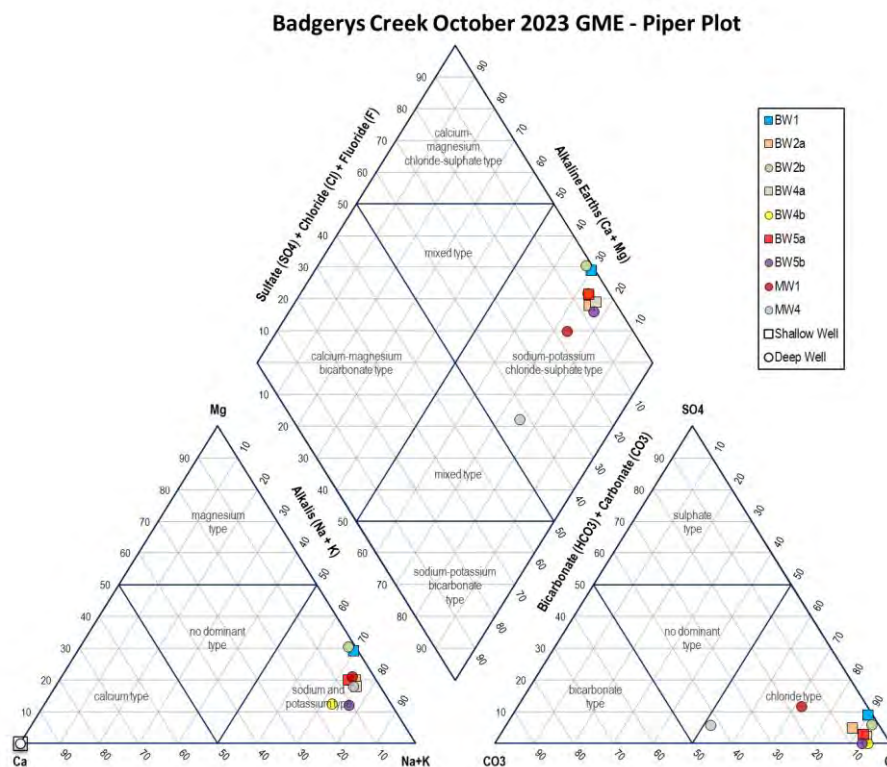
A number of exceedances of the site criteria were reported within groundwater wells for the following analytes:

- Copper concentrations exceeded the ANZG 95% protection levels for freshwater criteria in all groundwater sample locations;
- Nickel concentrations exceeded the ANZG 95% species protection levels for freshwater criteria in groundwater samples BW1, BW2b and BW4a;
- Zinc concentrations exceeded the ANZG 95% species protection levels for freshwater criteria in groundwater samples BW1, BW2b, BW4b, BW5a and BW5b.
- Lead, Cadmium and Chromium (III + VI) concentrations were below laboratory LOR in all groundwater samples analysed, however the laboratory LOR for BW2b exceeded the adopted ANZG 95% freshwater criterias;
- Selenium concentrations were reported below the laboratory LOR in all groundwater samples analysed, however the laboratory LOR exceeded the adopted ANZG 95% freshwater criteria;
- Chloride exceedances of the NHMRC (2008) recreational aesthetic guidelines were reported in all groundwater locations;
- Sodium (Filtered) exceedances of the NHMRC (2008) recreational aesthetic guidelines were reported in all groundwater locations; and,
- Sulphate exceedances of the NHMRC (2008) recreational aesthetic guidelines were reported in the only sample analysed, T01_20231019.

The reported exceedances are low and are likely representative of regional background concentrations for the Badgery's Creek area. The results are consistent with the previous analytical results reported in the October 2022 GME.

EC results and Piper diagram plots have been used to demonstrate site hydrogeological conditions. Differences in salinity between strata tend to reflect recharge rates or connectivity with surface waters. Areas of higher salinity tend to reflect lower recharge rates, while lower salinity may reflect greater recharge / surface water connectivity. Piper plots can be used to assess recharge and discharge processes and allow comparison of water samples derived from different environments within the hydrological cycle. Recently recharged water tends to plot to the left apex of the diamond field in the Piper diagram, waters further from the source of recharge will plot to the right.

The composite Piper plot is presented below of the groundwater samples from the project area. As precise historical analytical groundwater data prior to 2022 has not been provided for the compilation of this report historical results have not been included in the plot.



Review of the plot shows most samples grouped close to the right-hand side of both Cations and Anions trilinear diagram, indicative of saline groundwater high in sodium chloride. There is generally little difference apparent between the shallow and deeper groundwater monitoring locations, with the exception of deep well MW4. MW4 has been plotted slightly left in the piper plot and trilinear anion diagram, similar to the results of the previous monitoring event.

7.1 GROUNDWATER FIELD GEOCHEMISTRY

7.1.1 ELECTRICAL CONDUCTIVITY

Groundwater salinity across the site monitoring network shows variability in electrical conductivity (EC) results. Field physiochemical parameters are presented in Attachment B.

- May 2021 GME (GES 2021): 8,760 (BW2b) to 31,600 $\mu\text{S}/\text{cm}$.
- December 2022 GME (ERM 2022): 1,331 (BW2b) to 26,965 (BW5a) $\mu\text{S}/\text{cm}$.
- October 2023 GME: 2,935 (MW4) to 23,000 (BW5a) $\mu\text{S}/\text{cm}$.

8. BENEFICIAL USE

The National and State guidelines for groundwater protection rely on a framework in which there is the identification of existing or potential beneficial uses for groundwater resources. The choice of a beneficial use classification depends upon the quality of water present and the potential values of the water in the long term (NWQMS, 1995).

The NWQM Strategy Guidelines for Groundwater Protection in Australia (1995) recommended the following beneficial uses that have been adopted in this policy. They include:

- ecosystem protection;
- recreation and aesthetics;
- raw water for drinking water supply;
- agricultural water; and
- industrial water

Site groundwater quality has historically exceeded relevant guideline values. ANZECC & ARMCANZ (2000) (since updated by the ANZG 2018) derive default guideline values for large geographic regions encompassing a broad range of catchments and water types. These guideline values include different levels of protection, depending on the current or desired ecosystem condition. This assessment has applied both recreational and aquatic species protection (95%).

ERM note that with the exception of ecosystem protection, the beneficial uses listed above are not relevant to the Site as groundwater is not used for recreational drinking water, agricultural or industrial purposes. Furthermore, given the historical land use at the Site for agricultural and quarrying purposes, it can be considered a highly disturbed system under the ANZG (2018) guidelines. Considered along with the elevated site salinity typical for this shale unit, the exceedances of the default guideline trigger values may be not necessarily reflective of issues with performance of operational water quality management, nor do they indicate that water quality deterioration has occurred as a result of the Project.

As stated in the May 2021 Groundwater Monitoring Report (GES 2021) The NWQM Strategy Guidelines recommends less conservative site-specific guideline values be derived for management plans using 90th or 10th percentiles of minimally impacted reference-site data, with the goal of continual improvement. The groundwater management plan is to adopt such a strategy to maintain or improve the current use status moving forward, however, as minimal historic data for analytical groundwater and surface water results were available for this reporting period this will be presented in the next groundwater monitoring report.

9. SUMMARY

9.1 GROUNDWATER LEVELS

Groundwater levels across the site generally reflect site topography. Paired monitoring locations and water levels at these sites are within a narrow range but show enough difference to establish there is a poor connection within the shale geological unit (Wianamatta Shale).

The results from this October 2023 GME are generally consistent with the previous results in the ERM 2022 GME for the site.

The recent on-site dewatering activities of Pit 3 do not appear to have an impact on groundwater elevation in MW2, MW4a and MW4b, however the available data loggers were installed in locations approximately 1km north east and west of Pit 3. ERM recommend a data logger be installed at MW1, as well as increased water level reporting of quarry pits, should future hydrogeological assessment of dewatering impacts on the remaining quarry pits be required.

9.2 GROUNDWATER QUALITY

Water quality data for pH and EC shows groundwater quality is brackish to saline, typical of Wianamatta Shale. The physiochemical parameters are generally consistent with the previous monitoring event results.

Groundwater appears to become more saline with depth (MW1, MW2b, MW4a) with the exception of MW5a and MW5b, where the shallow aquifer is more saline than the deep aquifer.

Yours sincerely,




Russell Jarman
Principal Environmental Consultant

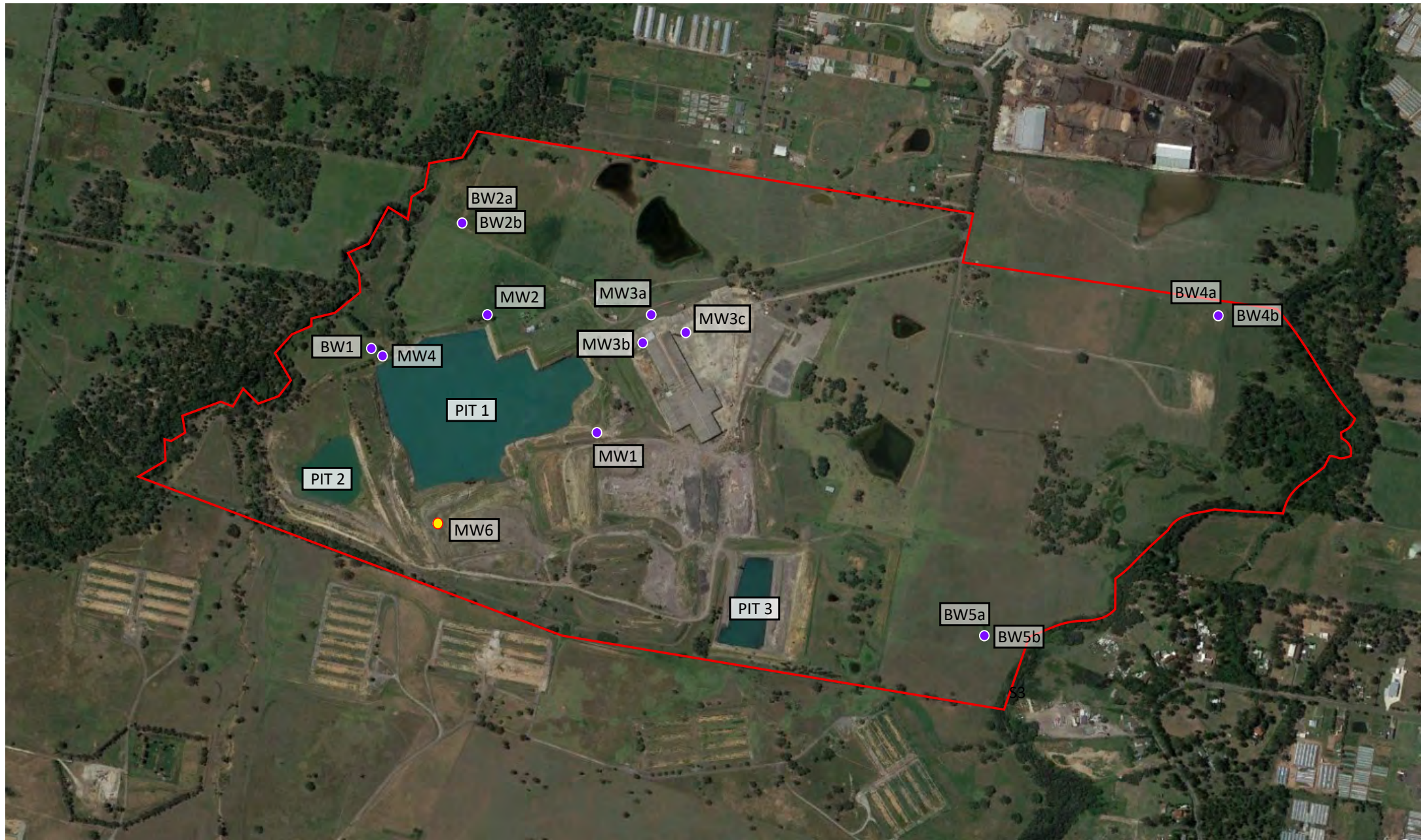


Tiffany Mabbott
Senior Consultant

ATTACHMENT A FIGURES



Legend □ Site Boundary	Figure Title Site Location		 Approximate Scale 0m 125m 250m	
	Project Title 225 Martin Road, Badgerys Creek	Client CSR Ltd		
	Project No. 0606483	Date 21/12/2022	Scale As Shown	Figure No. Revision 1 Version 1.0



Legend

- Site Boundary
- Groundwater Monitoring Well
- Groundwater Well Not Located



Approximate Scale

0m 100m 200m

Figure Title

Site Layout and Sample Locations

Project Title

225 Martin Road, Badgerys Creek

Client

CSR Ltd

Project No.

0606483

Date

21/11/2023

Scale

As Shown

Figure No.

2

Revision

Version 1.0

ATTACHMENT B DATA SUMMARY TABLES



Table 1. Historical Groundwater Elevation Summary
Badgerys Creek
0606483


Well ID	Easting	Northing	Surface Elevation (mAHD)	Depth to Bottom (mBTOC)	Date	Standing Water Level (mbtoc)	Standing Water Level (mAHD)
BW1	291741	6247174	56.06	7.108	25-Sep-18	3.9	52.88
					02-Dec-23	2.602	53.458
					19-Oct-23	4.503	51.557
BW2a	291911	6247442	56.29	7.745	25-Sep-18	4.09	52.85
					02-Dec-23	2.795	53.495
					19-Oct-23	6.077	50.283
BW2b	291914	6247440	56.4	34.093	25-Sep-18	5.38	51.69
					02-Dec-23	4.161	52.239
					19-Oct-23	3.666	52.734
BW4a	293602	6247294	49.04	45.999	25-Sep-18	3.14	46.61
					02-Dec-22	1.635	47.405
					18-Oct-23	3.041	45.999
BW4b	293602	6247295	49.06	47.075	25-Sep-18	2.51	47.33
					02-Dec-22	1.660	47.400
					18-Oct-23	1.985	47.075
BW5a	293098	6246559	45.56	39.887	25-Sep-18	4.35	42.92
					02-Dec-22	4.989	40.571
					18-Oct-23	5.673	39.887
BW5b	293098	6246561	46.51	41.102	25-Sep-18	2.94	44.27
					02-Dec-22	4.432	42.078
					18-Oct-23	5.408	41.102
MW1	292250	6246990	63.99	51.182	25-Sep-18	13.78	50.99
					02-Dec-22	12.629	51.361
					19-Oct-23	12.808	51.182
MW4	291750	6247169	56.43	50.498	25-Sep-18	5.78	50.92
					02-Dec-22	4.859	51.571
					19-Oct-23	5.932	50.498
MW6	291872	6246790	Not measured	Not measured	25-Sep-18	11.56	Not measured
					02-Dec-22	Not Measured	Not Measured
					19-Oct-23	Not Measured	Not Measured



Monitoring Well ID	Date	Depth to SWL (mbTOC)	Depth to bottom (mbTOC)	Top of Casing Elevation (mAHD)	Corrected Water Level (mAHD)	Screened interval (mbTOC)	Deep / Shallow Well	Comments
MW1	19/10/2023	2.808	--	63.99	61.18	25-31	Deep	
MW4	19/10/2023	5.932	--	56.43	50.50	22-28	Deep	
BW1	19/10/2023	4.503	--	56.06	51.56	5-8	Shallow	
BW2A	18/10/2023	6.077	--	56.29	50.21	5-8	Shallow	
BW2B	18/10/2023	3.666	--	56.4	52.73	27-33	Deep	
BW4A	19/10/2023	3.041	--	49.04	46.00	3-6	Shallow	
BW4B	19/10/2023	1.985	--	49.06	47.08	27-33	Deep	
BW5A	18/10/2023	5.673	--	45.56	39.89	4-7	Shallow	
BW5B	18/10/2023	5.408	--	46.51	41.10	27-33	Deep	
SWL = standing water level mbTOC = metres below top of casing mAHD = metres Australian height datum								



Table 3. Groundwater Results Summary
Badgerys Creek
0606483



	Sulfate as SO4 - Turbidimetric (Filtered)	Inorganic	Inorganics												
		Carbonate Alkalinity (as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Alkalinity (total) as CaCO3	Anions Total	Cations Total	Chloride	Electrical conductivity *(lab)	Ionic Balance	pH (Lab)	Sodium	Sodium (Filtered)	Sulphate	TDS
	mg/L	MG/L	mg/L	µg/L	mg/L	meq/L	meq/L	mg/L	uS/cm	%	pH_Units	mg/L	mg/L	mg/L	mg/L
EQL	1	1	1	1000	1	0.01	0.01	1	1	0.01	0.01		1		10
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems															
NHMRC (2008) Recommended Recreational Guidelines - Aesthetic								250				180	180	250	
NHMRC (2008) Recommended Recreational Guidelines - Health	5000													5000	

Field_ID	Lab_Report_Number	Sample_Type	WellCode	Sampled_Date-Time															
BW1	ES2336153	Normal	BW1	19/10/2023	1170	<1	183	<1000	183	274	256	8740	26,000	3.55	6.4	-	4100	-	19,300
BW2a	ES2336153	Normal	BW2a	19/10/2023	220	<1	399	<1000	399	94.1	87.9	2890	9630	3.38	7.23	-	1500	-	6150
D01_20231019	ES2336153	Field_D	BW2a	19/10/2023	901	<1	290	<1000	290	304	302	9890	29,200	0.28	6.78	-	4720	-	21,500
BW2b	ES2336153	Normal	BW2b	19/10/2023	860	<1	300	<1000	300	304	284	9920	29,100	3.42	6.83	-	4420	-	21,000
BW4a	ES2336153	Normal	BW4a	18/10/2023	197	<1	572	<1000	572	193	188	6280	19,000	1.33	7.27	-	3270	-	14,400
BW4b	ES2336153	Normal	BW4b	18/10/2023	<1	<1	716	<1000	716	212	190	7010	21,100	5.34	6.97	-	3150	-	16,100
BW5a	ES2336153	Normal	BW5a	18/10/2023	356	<1	891	<1000	891	272	260	8750	25,800	2.21	7.19	-	4350	-	18,800
BW5b	ES2336153	Normal	BW5b	18/10/2023	<20	<1	878	<1000	878	208	204	6740	20,700	0.82	7.01	-	3580	-	15,300
MW1	ES2336153	Normal	MW1	19/10/2023	572	<1	1040	<1000	1040	106	110	2610	10,000	1.66	7.55	-	1840	-	10,800
T01_20231019	1037389	Interlab_D	MW1	19/10/2023	-	<20	960	<20,000	960	-	-	2700	9700	-	7.6	1600	-	530	6900
MW4	ES2336153	Normal	MW4	19/10/2023	59	<1	570	<1000	570	24	23	402	2290	2.06	7.88	-	396	-	1420

Statistical Summary

Number of Results	10	11	11	11	11	10	10	11	11	10	11	1	10	1	11
Number of Detects	8	0	11	0	11	10	10	11	11	10	11	1	10	1	11
Minimum Concentration	<1	<1	183	<1000	183	24	23	402	2290	0.28	6.4	1600	396	530	1420
Minimum Detect	59	ND	183	ND	183	24	23	402	2290	0.28	6.4	1600	396	530	1420
Maximum Concentration	1170	<20	1040	<20000	1040	304	302	9920	29200	5.34	7.88	1600	4720	530	21500
Maximum Detect	1170	ND	1040	ND	1040	304	302	9920	29200	5.34	7.88	1600	4720	530	21500
Average Concentration	435	1.4	618	1364	618	199	190	5994	18411	2.4	7.2		3133		13788
Median Concentration	288	0.5	572	500	572	210	197	6740	20700	2.135	7.19	1600	3425	530	15300
Standard Deviation	419	2.9	300	2864	300	96	92	3326	9161	1.5	0.42		1439		6653
Number of Guideline Exceedances	0	0	0	0	0	0	0	11	0	0	0	1	10	1	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	11	0	0	0	1	10	1	0



Table 3. Groundwater Results Summary
Badgerys Creek
0606483

	Lead	Metals												
	Lead (Filtered)	Arsenic (Filtered)	Cadmium (Filtered)	Calcium	Calcium (Filtered)	Chromium (III+VI) (Filtered)	Copper (Filtered)	Magnesium	Magnesium (Filtered)	Nickel (Filtered)	Potassium	Potassium (Filtered)	Selenium (Filtered)	Zinc (Filtered)
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.001	0.001	0.0001		1	0.001	0.001		1	0.001		1	0.001	0.005
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems	0.0034	0.013 0.024	0.0002			0.001 0.0033	0.0014			0.011			0.005	0.008
NHMRC (2008) Recommended Recreational Guidelines - Aesthetic														3
NHMRC (2008) Recommended Recreational Guidelines - Health	0.1	0.1	0.02			0.5	20			0.2			0.1	

Field_ID	Lab_Report_Number	Sample_Type	WellCode	Sampled_Date-Time														
BW1	ES2336153	Normal	BW1	19/10/2023	<0.001	0.002	<0.0001	-	51	<0.001	0.007	-	908	0.014	-	4	<0.01	0.03
BW2a	ES2336153	Normal	BW2a	19/10/2023	<0.001	0.001	<0.0001	-	92	<0.001	0.011	-	213	0.003	-	22	<0.01	0.006
D01_20231019	ES2336153	Field_D	BW2a	19/10/2023	<0.01	<0.001	<0.0001	-	101	<0.001	1.12	-	1110	0.011	-	4	<0.1	0.038
BW2b	ES2336153	Normal	BW2b	19/10/2023	<0.01	<0.01	<0.0001	-	98	<0.01	1.32	-	1050	0.025	-	4	<0.1	0.175
BW4a	ES2336153	Normal	BW4a	18/10/2023	<0.001	<0.001	<0.0001	-	224	<0.001	0.007	-	412	0.023	-	12	<0.01	0.005
BW4b	ES2336153	Normal	BW4b	18/10/2023	<0.001	<0.001	<0.0001	-	567	<0.001	0.006	-	287	<0.001	-	64	<0.01	0.031
BW5a	ES2336153	Normal	BW5a	18/10/2023	<0.001	<0.001	<0.0001	-	367	<0.001	0.011	-	632	0.004	-	29	<0.01	0.012
BW5b	ES2336153	Normal	BW5b	18/10/2023	<0.001	0.001	<0.0001	-	444	<0.001	0.006	-	300	0.001	-	67	<0.01	0.031
MW1	ES2336153	Normal	MW1	19/10/2023	<0.001	<0.001	<0.0001	-	123	<0.001	0.004	-	280	0.006	-	27	<0.01	<0.005
T01_20231019	1037389	Interlab_D	MW1	19/10/2023	<0.001	<0.001	<0.0002	99	-	<0.001	0.007	270	-	0.004	34	-	<0.001	<0.005
MW4	ES2336153	Normal	MW4	19/10/2023	<0.001	0.001	<0.0001	-	31	<0.001	0.002	-	50	0.004	-	4	<0.01	0.007

Statistical Summary

Number of Results	11	11	11	1	10	11	11	1	10	11	1	10	11	11
Number of Detects	0	4	0	1	10	0	11	1	10	10	1	10	0	9
Minimum Concentration	<0.001	<0.001	<0.0001	99	31	<0.001	0.002	270	50	<0.001	34	4	<0.001	<0.005
Minimum Detect	ND	0.001	ND	99	31	ND	0.002	270	50	0.001	34	4	ND	0.005
Maximum Concentration	<0.01	<0.01	<0.001	99	567	<0.01	1.32	270	1110	0.025	34	67	<0.1	0.175
Maximum Detect	ND	0.002	ND	99	567	ND	1.32	270	1110	0.025	34	67	ND	0.175
Average Concentration	0.0013	0.0012	0.00014		210	0.00091	0.23		524	0.0087		24	0.013	0.031
Median Concentration	0.0005	0.0005	0.00005	99	112	0.0005	0.007	270	356	0.004	34	17	0.005	0.012
Standard Deviation	0.0018	0.0013	0.00018		186	0.0014	0.49		377	0.0086		24	0.018	0.05
Number of Guideline Exceedances	2	0	2	0	0	1	11	0	0	4	0	0	10	6
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	11	0	0	4	0	0	0	6



Well ID	Date Sampled	Temperature (°C)	pH	Electrical Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Comments
MW1	19/10/2023	21.9	7.06	8.99	1.71	-44.9	Very turbid, no odour, brown suspended sediments at bottom
MW4	19/10/2023	19	7.52	2.935	0.88	22.3	Slightly turbid, greenish, H2S-like odour
BW1	19/10/2023	19.2	6.08	21.91	0.87	44.9	Clear, no odour
BW2A	18/10/2023	20.8	6.88	9.73	1.26	30	Slightly turbid, grey suspended sediments at bottom
BW2B	18/10/2023	20.9	7.04	14.63	3.09	92.5	Clear, no odour
BW4A	19/10/2023	17	6.48	9.326	4.67	78.8	Slightly cloudy, no odour
BW4B	19/10/2023	19.2	5.89	3.906	5.85	83.6	Turbid, no odour, brown/orange suspended sediments throughout
BW5A	18/10/2023	20.8	6.66	23	0.74	75.8	Turbid, light yellow, no odour
BW5B	18/10/2023	21.5	6.37	18.14	0.9	43.3	Turbid, yellow, no odour

mS = millisiemens

cm = centimetres

mg = milligram

L = Litre

mV = millivolts

ATTACHMENT C NATA ANALYTICAL DATA



CHAIN OF CUSTODY

ALS Laboratory: please tick →

DADELAIDE: 3/1 Burns Road, Port Adelaide SA 5095
Ph: 08 8462 5130 E: adelaide@alsglobal.com
CITY/BRISBANE: 2/10th Street, Sturtford QLD 4053
Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
GLADSTONE: 48 Callender Road, Gladstone QLD 4680
Ph: 07 4978 7844 E: alsenviro.gladstone@alsglobal.com

CLIVE/NEWCASTLE: 2/10th Street, Sturtford QLD 4053
Ph: 07 4962 5785 E: alsenviro.mackay@alsglobal.com
MELBOURNE: 2-4 West Road, Springvale VIC 3171
Ph: 03 8549 8800 E: samples.melbourne@alsglobal.com
DUNDEE: 1/23 Sydney Road, Dundee NSW 2830
Ph: 02 6372 9735 E: mudges.nell@alsglobal.com

NEWCASTLE: 5/555, Maitland Road, Mayfield West NSW 2304
Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com
CNOOMPA: 4/13 Cleary Place, North Nova NSW 2541
Ph: 02 4423 2083 E: nova@alsglobal.com
COPER: 26 Riggall Way, Mangara WA 6065
Ph: 08 9405 1301 E: samples.perth@alsglobal.com

CLIVE/NEWCASTLE: 2/10th Street, Sturtford QLD 4053
Ph: 02 4962 5785 E: alsenviro.mackay@alsglobal.com
CNOOMPA: 4/13 Cleary Place, North Nova NSW 2541
Ph: 02 4423 2083 E: nova@alsglobal.com
COPER: 26 Riggall Way, Mangara WA 6065
Ph: 08 9405 1301 E: samples.perth@alsglobal.com

CLIENT: ERM

OFFICE:

PROJECT: Badger's Creek

ORDER NUMBER:

PROJECT MANAGER: Russell Jarman

SAMPLER: A Z

COC Emailed to ALS? (YES / NO)

Email Reports to (will default to PM if no other addresses are listed): russell.jarman@erm.com, jake.embury@erm.com

Email Invoice to (will default to PM if no other addresses are listed):

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ANALYSIS REQUIRED INCLUDING SUITES (NB. Suite Codes must be listed to attract suite price)

Where Metals are required, specify Test (unfiltered bottle required) or Dissolved (field filtered bottle required).

Additional Information

Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact? Yes No

Free ice / frozen ice bricks present upon receipt? Yes No

Random Sample Temperature on Receipt °C

Other comment:

RECEIVED BY: *Preddy*

DATE/TIME: *23/10/23 12:42*

RELINQUISHED BY: *Ashid*

DATE/TIME: *19/10/23 16:00*

COC SEQUENCE NUMBER (Circle)

COC: *2 3 4 5 6 7*

OF: *1 2 3 4 5 6 7*

Standard TAT (List due date):

Non Standard or urgent TAT (List due date):

TURNAROUND REQUIREMENTS:

(Standard TAT may be longer for some tests)

e.g., Ultra Traces Organics

PROJECT NO.: *0000000000*

PURCHASE ORDER NO.:

COUNTRY OF ORIGIN:

CONTACT PH:

SAMPLER MOBILE: *042001337*

EDD FORMAT (or default):

DATE / TIME

MATRIX

TYPE & PRESERVATIVE (refer to codes below)

TOTAL BOTTLES

PH, EC, TDS

Major Cations

and anions

Dissolved metals

As, Cd, Cr, Cu, Fe, Pb, Ni, Se, Zn

Subcon / Forward Lab / Split W/O

Lab / Analysis: *10-1-231019/1000000000*

Organised By / Date:

Relinquished By / Date:

Connote / Counter:

WO No:

Attached By PO / Internal Sheet:

Telephone: + 61-2-8784 8555

Environmental Division

Sydney

Work Order Reference

ES2336153

Barcode

Please forward to Env

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic

V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation bottle; SP = Sulfuric Preserved Plastic

Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; SIT = Sterile Sodium Thiosulfate Preserved Bottles.

Form Page 1 of 1

1037389

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 NATA# 1261 Site# 1254	19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 NATA# 1261 Site# 25403	179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 NATA# 1261 Site# 18217	Unit 1,2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 25466	1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 Site# 20794	1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 25079 & 25289

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road Welshpool WA 6106 Tel: +61 8 6253 4444 NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Christchurch	Tauranga
35 O'Rourke Road Penrose, Auckland 1061 Tel: +64 9 526 4551 IANZ# 1327	43 Detroit Drive Rolleston, Christchurch 7675 Tel: +64 3 343 5201 IANZ# 1290	1277 Cameron Road, Gate Pa, Tauranga 3112 Tel: +64 9 525 0568 IANZ# 1402

Sample Receipt Advice

Company name:	ERM Sydney
Contact name:	Jack Emblen
Project name:	BADGERY'S CREEK
Project ID:	0606483
Turnaround time:	5 Day
Date/Time received	Oct 23, 2023 12:40 PM
Eurofins reference	1037389

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

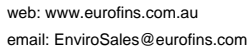
Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Bonnie Pu on phone : or by email: BonniePu@eurofins.com

Results will be delivered electronically via email to Jack Emblen - jack.emblen@erm.com.

Note: A copy of these results will also be delivered to the general ERM Sydney email address.



ABN: 50 005 085 521

Melbourne
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NATA# 1261
Site# 25403

Sydney
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Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261
Site# 18217

Canberra
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Mitchell
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Tel: +61 2 6113 8091
NATA# 1261
Site# 25466

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Christchurch 76
51 Tel: +64 3 343 5
IANZ# 1290

Tauranga
1277 Cameron Road,
Gate Pa,
75 Tauranga 3112
201 Tel: +64 9 525 0568
IANZ# 1402

Company Name: ERM Sydney
Address: Level 15, 309 Kent St
 Sydney
 NSW 2000

Project Name: BADGERY'S CREEK
Project ID: 0606483

Order No.:
Report #: 1037389
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Oct 23, 2023 12:40 PM
Due: Oct 30, 2023
Priority: 5 Day
Contact Name: Jack Emblen

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail																	Total Dissolved Solids Dried at 180 °C ± 2 °C					
																					Eurofins Suite B11 C: Na/K/Ca/Mg	
																						Eurofins Suite B11 E: Cl/SO4/Alkalinity
																						Zinc (filtered)
																						Selenium (filtered)
																						pH (at 25 °C)
																						Nickel (filtered)
																						Lead (filtered)
																						Copper (filtered)
																						Conductivity (at 25 °C)
																						Chromium (filtered)
																						Cadmium (filtered)
																						Arsenic (filtered)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X						
External Laboratory																						
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																	
1	T01_20231019	Oct 19, 2023		Water	S23-Oc0052836	X	X	X	X	X	X	X	X	X	X	X	X					
Test Counts						1	1	1	1	1	1	1	1	1	1	1	1					

CHAIN OF CUSTODY

ALS Laboratory: please tick →

LADELAIDE: 3/1 Burma Road, Portlaoise SA 6095
Ph: 07 4552 5786 E: alslab@alsglobal.com

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LADELAIDE: 3/1 Burma Road, Portlaoise SA 6095
Ph: 07 4552 5786 E: alslab@alsglobal.com

CLIENT: ERM		TURNAROUND REQUIREMENTS: <input type="checkbox"/> Standard TAT (List due date): <input type="checkbox"/> Non Standard or urgent TAT (List due date):		FOR LABORATORY USE ONLY (Circle)	
OFFICE: Sydney		PROJECT NO.: 0606001337		Custody Seal Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PROJECT: Bradley's Creek		PURCHASE ORDER NO.:		Free ice / frozen ice bricks present upon receipt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
ORDER NUMBER:		COUNTRY OF ORIGIN:		Random Sample Temperature on Receipt: 7°C	
PROJECT MANAGER: Russell Jarman		CONTACT PH:		Other comment:	
SAMPLER: Ayden Zhang		SAMPLER MOBILE: 0406001337		RECEIVED BY: Ashid	
COC Emailed to ALS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		EDD FORMAT (or default):		DATE/TIME: 19/10/2023	
Email Reports to (will default to PM if no other addresses are listed): russell.jarman@erm.com, jack.embley@erm.com, gillian.shing@erm.com					
Email Invoice to (will default to PM if no other addresses are listed):					

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY		SAMPLE DETAILS MATRIX: Solid(S) Water(W)		CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).		Additional Information	
LAB ID		SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES			
1-13	1	SP10-1-13	17/10/23	S		13	X		
14	2	SP10-1a	17/10/23	S		1			
-	-	SP10-1b	17/10/23	S		1			
15-20	3	SP9BT-1-6	17/10/23	S		6			
21-30	4	SP9BB-1-10	17/10/23	S		10			
31	5	SP9BB-1a	17/10/23	S		1			
32-34	6	SP8-1-3	17/10/23	S		3			
35-37	7	SP12-1-3	17/10/23	S		3			
38-47	8	SP6-1-10	17/10/23	S		10			
48-69	9	SP6-11-32	18/10/23	S		22			
70	10	SP6-26a	18/10/23	S		1			
71	11	SP6-22a	18/10/23	S		1			
72	12	SP6-11-32	18/10/23	S		1			
TOTAL						74	TSC		

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORG = Nitric Preserved ORC; SH = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airtight Unpreserved Plastic; V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulfate Preserved; AV = Airtight Unpreserved Vial SG = Sulfuric Preserved; Amber Glass; H = HCl Preserved Speciation bottle; SP = Sulfuric Preserved Plastic; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Solids; B = Unpreserved Bag; LI = Lumped Iodine Preserved Bottles; SIT = Sterile Sodium Thiosulfate Preserved Bottles.

Environmental Division
Sydney
Work Order Reference
ES2336155

Barcode: [Barcode]

Telephone: +61-2-4794 8555

Page 1 of 1



CHAIN OF CUSTODY
ALS Laboratory:
please tick →

For use by the Laboratory only. This form is to be completed by the Laboratory and is not to be filled out by the client. The Laboratory will use this information to ensure the integrity of the sample and to provide the client with a copy of the Chain of Custody form. The Laboratory will also use this information to ensure the integrity of the sample and to provide the client with a copy of the Chain of Custody form.

CLIENT: Bodger's Creek

OFFICE: Bodger's Creek

PROJECT: 0606483

ORDER NUMBER: 0606483

PROJECT MANAGER: Russell Jarman

SAMPLER: AZ

COC emailed to ALS? (YES / NO)

Email Reports to (will default to PM if no other addresses are listed):

Email Invoice to (will default to PM if no other addresses are listed):

TURNAROUND REQUIREMENTS: ☐ Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date):

ALS QUOTE NO.:

CONTACT PH:

SAMPLER MOBILE:

EDD FORMAT (or default):

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact? Yes No

Printed / frozen ice bricks present upon receipt? Yes No

Random Sample Temperature on Receipt: °C

Other comment:

RECEIVED BY: Asmid

DATE/TIME: 19/10/200

RECEIVED BY:

DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ANALYSIS REQUIRED INCLUDING SUITES (NB. Suite Codes must be listed to attract suite price)

Where Metals are required, specify Total (unfiltered bottles required) or Dissolved (filtered bottles required).

CONTAINER INFORMATION

TYPE & PRESERVATIVE (to codes below)

MATRIX

DATE / TIME

SAMPLE ID

LAB ID

USE

WATER

SAMPLE ID

DATE / TIME

MATRIX

TYPE & PRESERVATIVE (to codes below)

CONTAINERS

TOTAL

DATE / TIME

SAMPLE ID

LAB ID

USE

WATER

SAMPLE ID

DATE / TIME

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TOTAL

DATE / TIME

SAMPLE ID

LAB ID

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
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Sample Receipt Advice

Company name:	ERM Sydney
Contact name:	Russell Jarman
Project name:	BADGERY'S CREEK
Project ID:	606483
Turnaround time:	5 Day
Date/Time received	Oct 23, 2023 12:40 PM
Eurofins reference	1037447

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

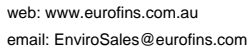
Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Bonnie Pu on phone : or by email: BonniePu@eurofins.com

Results will be delivered electronically via email to Russell Jarman - russell.jarman@erm.com.

Note: A copy of these results will also be delivered to the general ERM Sydney email address.



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IANZ# 1290

1277 Cameron Road,
Gate Pa,
Tauranga 3112
Tel: +64 9 525 0568
IANZ# 1402

Order No.:
Report #: 1037447
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Oct 23, 2023 12:40 PM
Due: Oct 30, 2023
Priority: 5 Day
Contact Name: Russell Jarman

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	SP10-1B	Oct 17, 2023		Soil	S23-Oc0053320	X	X	X
2	SP9BB-1B	Oct 17, 2023		Soil	S23-Oc0053321	X	X	X
3	SP6-22B	Oct 18, 2023		Soil	S23-Oc0053322	X	X	X
4	SP6-26B	Oct 18, 2023		Soil	S23-Oc0053323	X	X	X
Test Counts						4	4	4



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2336155**

Client	: ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)	Laboratory	: Environmental Division Sydney
Contact	: RUSSELL JARMAN	Contact	: Sarah Mathew
Address	: Level 14 207 Kent Street SYDNEY NSW AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: russell.jarman@erm.com	E-mail	: sarah.mathew@alsglobal.com
Telephone	: 02 8586 8717	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 0606483 BADGERYS CREEK	Page	: 1 of 4
Order number	: ----	Quote number	: EP2020ENVRES0018 (EN/000)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AYDEN ZHANG		

Dates

Date Samples Received	: 19-Oct-2023 16:00	Issue Date	: 21-Oct-2023
Client Requested Due Date	: 31-Oct-2023	Scheduled Reporting Date	: 31-Oct-2023

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 3	Temperature	: 14.9'C 11.6'C 16.8'C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 74 / 74

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- **QC Forward analysis will be conducted by Eurofins.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP080 BTEXN	SOIL - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals	SOIL - S-18 (NO MOIST) TRH(C6-C9)/BTEXN with No Moisture for TBs
ES2336155-001	17-Oct-2023 00:00	SP10-1	✓		✓	
ES2336155-002	17-Oct-2023 00:00	SP10-2	✓		✓	
ES2336155-003	17-Oct-2023 00:00	SP10-3	✓		✓	
ES2336155-004	17-Oct-2023 00:00	SP10-4	✓		✓	
ES2336155-005	17-Oct-2023 00:00	SP10-5	✓		✓	
ES2336155-006	17-Oct-2023 00:00	SP10-6	✓		✓	
ES2336155-007	17-Oct-2023 00:00	SP10-7	✓		✓	
ES2336155-008	17-Oct-2023 00:00	SP10-8	✓		✓	
ES2336155-009	17-Oct-2023 00:00	SP10-9	✓		✓	
ES2336155-010	17-Oct-2023 00:00	SP10-10	✓		✓	
ES2336155-011	17-Oct-2023 00:00	SP10-11	✓		✓	
ES2336155-012	17-Oct-2023 00:00	SP10-12	✓		✓	
ES2336155-013	17-Oct-2023 00:00	SP10-13	✓		✓	
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ES2336155-015	17-Oct-2023 00:00	SP9BT-1	✓		✓	
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ES2336155-017	17-Oct-2023 00:00	SP9BT-3	✓		✓	
ES2336155-018	17-Oct-2023 00:00	SP9BT-4	✓		✓	
ES2336155-019	17-Oct-2023 00:00	SP9BT-5	✓		✓	
ES2336155-020	17-Oct-2023 00:00	SP9BT-6	✓		✓	
ES2336155-021	17-Oct-2023 00:00	SP9BB-1	✓		✓	
ES2336155-022	17-Oct-2023 00:00	SP9BB-2	✓		✓	
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ES2336155-034	17-Oct-2023 00:00	SP8-3	✓		✓	
ES2336155-035	17-Oct-2023 00:00	SP12-1	✓		✓	



			SOIL - EA055-103 Moisture Content	SOIL - EP080 BTEXN	SOIL - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals	SOIL - S-18 (NO MOIST) TRH(C6-C9)/BTEXN with No Moisture for TBs
ES2336155-036	17-Oct-2023 00:00	SP12-2	✓		✓	
ES2336155-037	17-Oct-2023 00:00	SP12-3	✓		✓	
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ES2336155-039	17-Oct-2023 00:00	SP6-2	✓		✓	
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ES2336155-041	17-Oct-2023 00:00	SP6-4	✓		✓	
ES2336155-042	17-Oct-2023 00:00	SP6-5	✓		✓	
ES2336155-043	17-Oct-2023 00:00	SP6-6	✓		✓	
ES2336155-044	17-Oct-2023 00:00	SP6-7	✓		✓	
ES2336155-045	17-Oct-2023 00:00	SP6-8	✓		✓	
ES2336155-046	17-Oct-2023 00:00	SP6-9	✓		✓	
ES2336155-047	17-Oct-2023 00:00	SP6-10	✓		✓	
ES2336155-048	17-Oct-2023 00:00	SP6-11	✓		✓	
ES2336155-049	17-Oct-2023 00:00	SP6-12	✓		✓	
ES2336155-050	17-Oct-2023 00:00	SP6-13	✓		✓	
ES2336155-051	17-Oct-2023 00:00	SP6-14	✓		✓	
ES2336155-052	17-Oct-2023 00:00	SP6-15	✓		✓	
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ES2336155-054	17-Oct-2023 00:00	SP6-17	✓		✓	
ES2336155-055	17-Oct-2023 00:00	SP6-18	✓		✓	
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ES2336155-058	17-Oct-2023 00:00	SP6-21	✓		✓	
ES2336155-059	17-Oct-2023 00:00	SP6-22	✓		✓	
ES2336155-060	17-Oct-2023 00:00	SP6-23	✓		✓	
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ES2336155-063	17-Oct-2023 00:00	SP6-26	✓		✓	
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ES2336155-065	17-Oct-2023 00:00	SP6-28	✓		✓	
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ES2336155-067	17-Oct-2023 00:00	SP6-30	✓		✓	
ES2336155-068	17-Oct-2023 00:00	SP6-31	✓		✓	
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ES2336155-072	16-Oct-2023 00:00	TB				✓
ES2336155-073	16-Oct-2023 00:00	TS		✓		
ES2336155-074	16-Oct-2023 00:00	TSC		✓		

Requested Deliverables

- A4 - AU Tax Invoice (INV)	Email	au.accounts@erm.com
AYDEN ZHANG		
- *AU Certificate of Analysis - NATA (COA)	Email	ayden.zhang@erm.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	ayden.zhang@erm.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	ayden.zhang@erm.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	ayden.zhang@erm.com
- Chain of Custody (CoC) (COC)	Email	ayden.zhang@erm.com
- EDI Format - ENMRG (ENMRG)	Email	ayden.zhang@erm.com
- EDI Format - EQUIS V5 ERM (EQUIS_V5_ERM)	Email	ayden.zhang@erm.com
- EDI Format - ESDAT (ESDAT)	Email	ayden.zhang@erm.com
ERM GLOBAL EQUIS		
- EDI Format - EQUIS V5 ERM (EQUIS_V5_ERM)	Email	ermapac@equisonline.com
- Electronic SRN for EQUIS (ESRN_EQUIS)	Email	ermapac@equisonline.com
JACK EMBLEN		
- *AU Certificate of Analysis - NATA (COA)	Email	jack.emblen@erm.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jack.emblen@erm.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jack.emblen@erm.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jack.emblen@erm.com
- Chain of Custody (CoC) (COC)	Email	jack.emblen@erm.com
- EDI Format - ENMRG (ENMRG)	Email	jack.emblen@erm.com
- EDI Format - EQUIS V5 ERM (EQUIS_V5_ERM)	Email	jack.emblen@erm.com
- EDI Format - ESDAT (ESDAT)	Email	jack.emblen@erm.com
RUSSELL JARMAN		
- *AU Certificate of Analysis - NATA (COA)	Email	russell.jarman@erm.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	russell.jarman@erm.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	russell.jarman@erm.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	russell.jarman@erm.com
- Chain of Custody (CoC) (COC)	Email	russell.jarman@erm.com
- EDI Format - ENMRG (ENMRG)	Email	russell.jarman@erm.com
- EDI Format - EQUIS V5 ERM (EQUIS_V5_ERM)	Email	russell.jarman@erm.com
- EDI Format - ESDAT (ESDAT)	Email	russell.jarman@erm.com



CHAIN OF CUSTODY

ALS Laboratory please tick →

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LABORATORY: 15th Floor, 1000 St. George's Road, St. George's, NSW 2250
Ph: 02 8192 5130 E: info@als.com.au

CLIENT: ERM

OFFICE: Sydney

PROJECT: Badgery's Creek

ORDER NUMBER:

PROJECT MANAGER: Russell Tawman

SAMPLER: Hayden Zhang

COC: Emailed to ALS (YES / NO)

Email Reports to (will default to PM if no other addresses are listed): russell.tawman@erm.com.au, jack.leah@erm.com.au

Email Invoice to (will default to PM if no other addresses are listed): hayden.zhang@erm.com.au

COMMENTS/SPECIAL HANDLING/TORAGE OR DISPOSAL:

TURNAROUND REQUIREMENTS: ☐ Standard TAT (List due date)
☐ Non Standard or urgent TAT (List due date)

RECEIVED BY: *Asriel*

DATE/TIME: 19/10/2023

RECEIVED BY: *Asriel*

DATE/TIME: 19/10/2023

COUNTRY OF ORIGIN:

CONTACT PH:

SAMPLER MOBILE: 0406001337

EDD FORMAT (or default):

REINQUISHED BY: *AZ*

DATE/TIME: 18/10/23

DATE/TIME:

DATE/TIME:

DATE/TIME:

DATE/TIME:

DATE/TIME:

DATE/TIME:

DATE/TIME:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(s) Water(w)	CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB: Suite Codes must be listed to attract suite price) Where Words are required, specify Total (unfilled bottle required) or Dissolved (the filtered bottle required)	Additional Information
--------------	---	-----------------------	--	------------------------

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	ANALYSIS REQUIRED	Additional Information
--------	-----------	-------------	--------	---	---------------	-------------------	------------------------

1	SP10-1-13	17/10/23	S		13	X	
---	-----------	----------	---	--	----	---	--

2	SP10-1a	17/10/23	S		1		
---	---------	----------	---	--	---	--	--

3	SP10-1b	17/10/23	S		1		
---	---------	----------	---	--	---	--	--

4	SP9BT-1-6	17/10/23	S		6		
---	-----------	----------	---	--	---	--	--

5	SP9BB-1-10	17/10/23	S		10		
---	------------	----------	---	--	----	--	--

6	SP9BB-1a	17/10/23	S		1		
---	----------	----------	---	--	---	--	--

7	SP8-1-3	17/10/23	S		3		
---	---------	----------	---	--	---	--	--

8	SP12-1-3	17/10/23	S		3		
---	----------	----------	---	--	---	--	--

Environmental Division
Sydney
Work Order Reference
ES2336155

Barcode:

Telephone: +61-2-8784 8656



ALS Laboratory
please call: 770-440-1100

CLIENT:

OFFICE: Handwritten's Ltrals

PROJECT:

ORDER NUMBER: 000487

PROJECT MANAGER: Kasir El Jarraa

SAMPLER

COC emailed to ALS? (YES / NO)

Email Reports to (will default to FTM if no other address is listed)

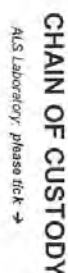
Email Invoice to (will detail to you in a few days)

COMMENT/SPECIAL HANDLING/STORAGE OR DISPOSAL:

[illegible][illegible]

Water Conditioner Code: P = Unpretreated Plastic; N = Nalgene Pretreated Plastic; NV = Air-tight Unpretreated Vial SQ
Vial Code: V = VOA Vial Sealed; B = VOA Vial Sealed Bubbler; VS = VOA Vial Sealed Vial; V = VOA Vial Sealed Vial
V = VOA Vial Sealed Bubbler; ST = Sealed Bottle; ASS = Plastic Bag for Acid Sulfate Scale; B = Unpretreated Bag
V = Zirc. Zirconium Pretreated Bottle

Eurofit

[illegible]

CLIENT: ERM

OFFICE: Sydney

PROJECT: bad news's Creek

ORDER NUMBER: PURCHASE ORDER NO.:

PROJECT MANAGER:	<i>Ruthell T. Janning</i>	CONTACT PH
------------------	---------------------------	------------

SAMPLER: Andam 21 May 1984

COC Emailed to ALS? (YES / NO)

Email Reports to (will default to PM if no other addresses are listed) INM401 - Training Admin

Email Invoice to (will default to PM if no other addresses are listed)

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL

ALS USE ONLY

SAMPLE DETAILS
MATRIX: Solid(S) Water(W)

CONTAINER INFORMATION

When Metals are required specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).

Additional Information

LAB ID:

SAMPLE ID

DATE / TIME

MATRIX

TYPE & PRESERVATIVE
(refer to codes below)

TOTAL BOTTLES	516
---------------	-----

Created By /

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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1

Relinquished By / Date: AC NW
Console / Courier:
WO No: ES2336155

Next forward to
Eurofin

Environmental Division
Sydney

Order Reference
ES2336155

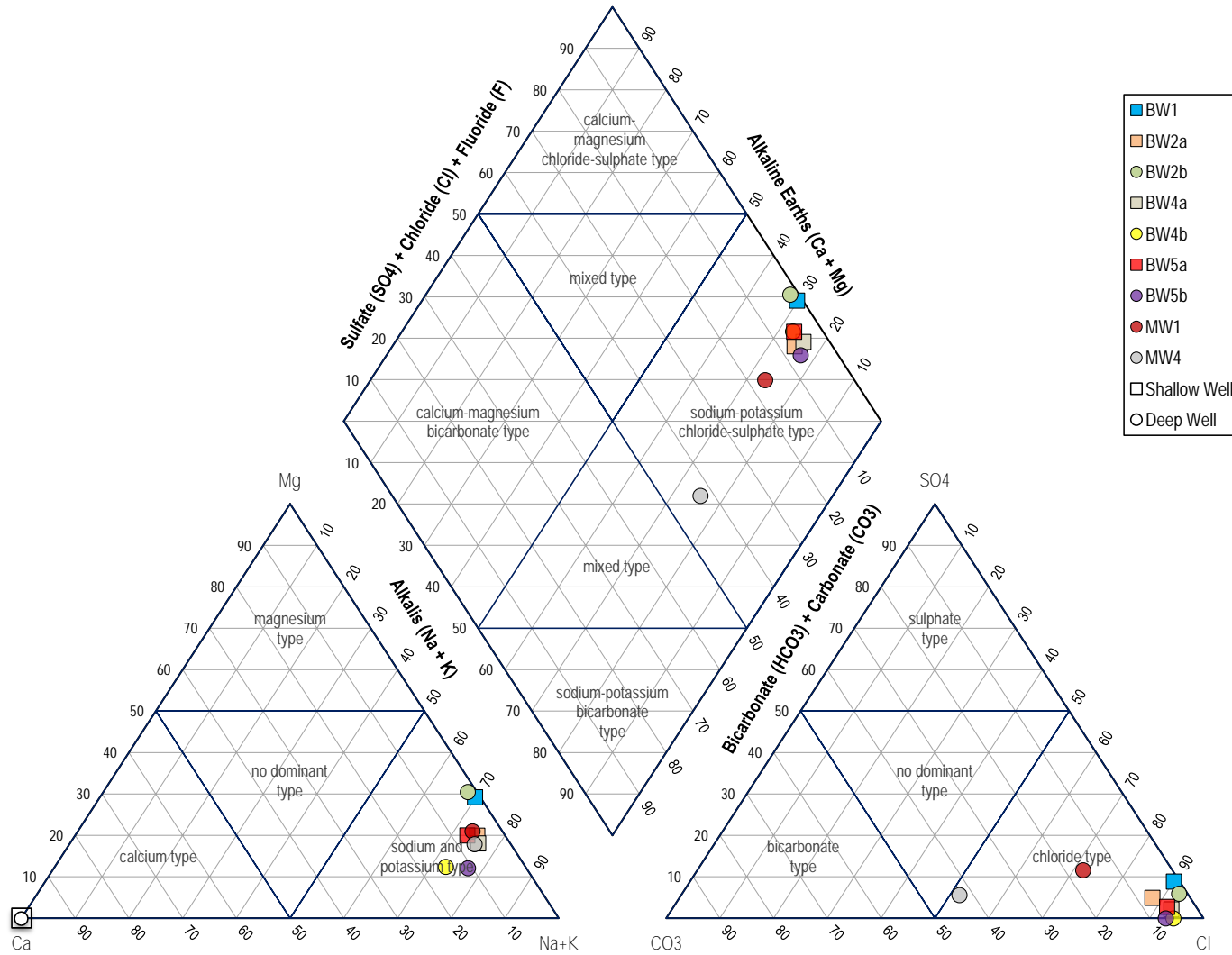


Telephone: +61-2-8784 8555

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airtight Unpreserved Plastic; V = VOA Val; HCl Preserved; VB = VOA Val Sodium Bisulfite Preserved; VA = Airtight Unpreserved Val; SG = Silicate Preserved Amber Glass; H = HCl Preserved Specimen bottle; SP = Silicate Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acid Preserved Bottle; E = EDTA Preserved Bottle; S = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soil; B = Unpreserved Bag; U = Lugers Iodine Preserved Plastic; T = Zinc Carbonate Preserved Bottle; ST = Sterile Plastic Thimble Preserved Bottle

ATTACHMENT D PIPER PLOT

Badgerys Creek October 2023 GME - Piper Plot



Noise Monitoring Assessment

CSR Advanced Manufacturing Hub
Badgerys Creek, NSW
Quarter Ending May 2024



Document Information

Noise Monitoring Assessment

CSR Advanced Manufacturing Hub

Badgerys Creek, NSW

Quarter Ending May 2024

Prepared for: PGH Bricks & Pavers Pty Limited

60 Greendale Road

Bringelly NSW 2256

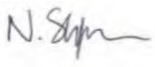

Prepared by: Muller Acoustic Consulting Pty Ltd

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Document ID	Date	Prepared By	Signed	Reviewed By	Signed
MAC221719-01RP1	16 April 2024	Nicholas Shipman		Rod Linnett	

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1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by PGH Bricks & Pavers Pty Limited (PGH) to complete a Noise Monitoring Assessment (NMA) for the CSR Advanced Manufacturing Hub (CSR) at 235 Martin Road, Badgerys Creek, 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 Consolidated Consent PA 10_0014 (the Consent) and Environmental Protection Licence #684 (EPL) noise limits.

The NMA has quantified potential operational 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 #684 (EPL), October 2023;
- Badgerys Creek Brick Quarry and Brick Making Project Noise Management Plan (BRK-BAD-Noise Management Version 7, 21/12/2023);
- NSW Government Department of Planning and Environment, Project Approval (PA) 10_0014, January 2022; 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**.

1.1 Locality

CSR Advanced Manufacturing Hub is located at 235 Martin Road, Badgerys Creek, 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 the EPL (#684). The monitoring locations with respect to CSR are presented in the locality plan shown in **Figure 1**.

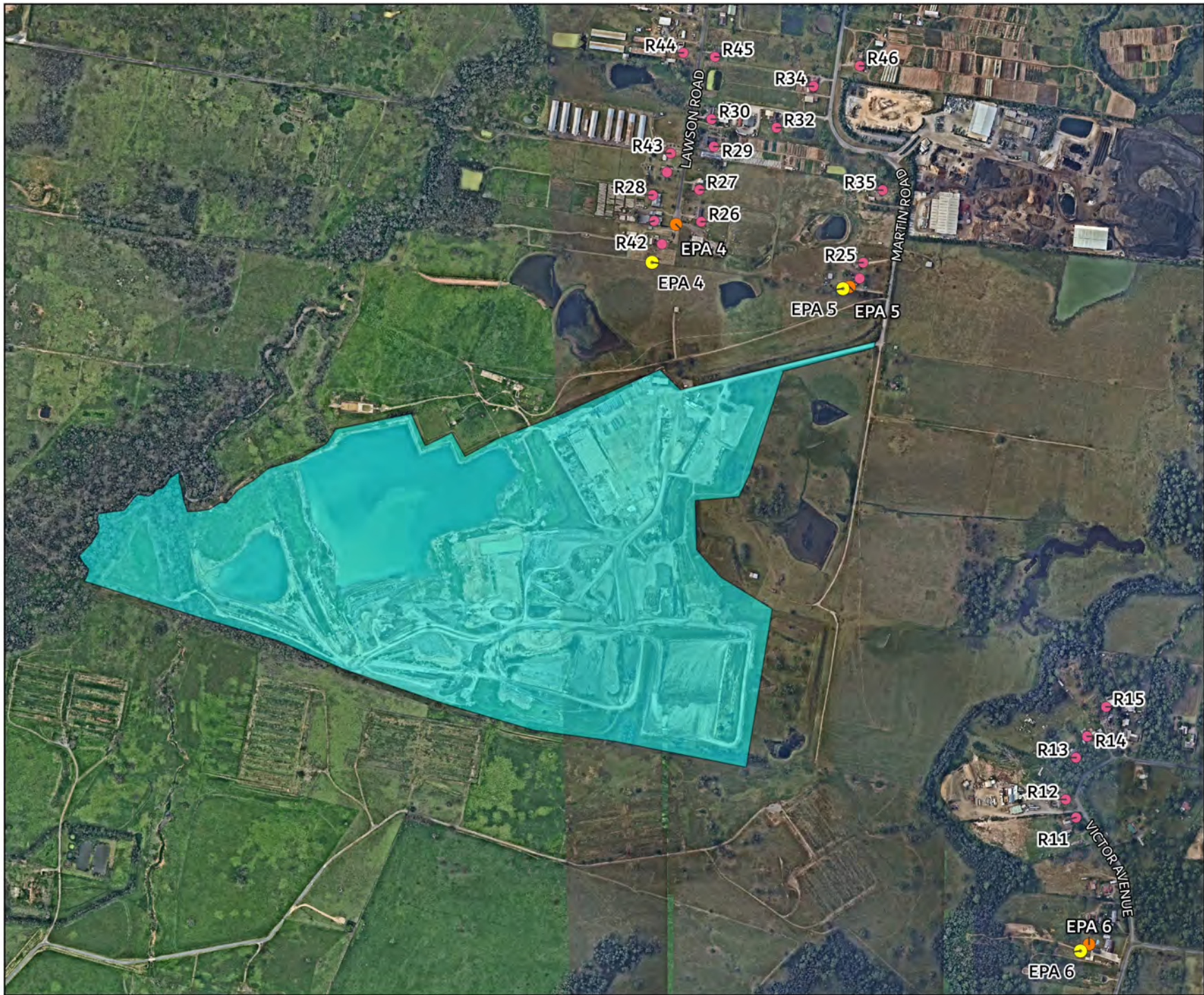






FIGURE 1
LOCALITY PLAN
MAC221719-01
CSR Advanced
Manufacturing Hub
Badgerys Creek, NSW

KEY

-  Site Boundary
-  Unattended Monitor Locations
-  Attended Monitoring Locations
-  Consent Locations



2 Noise Criteria

Section L4 of the projects EPL (EPL #684) 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 premises (excluding mobile plant) must not exceed:

- a) *An LA₁₀ (15 minute) noise emission criterion of 55 dB(A) (0700 to 2200) Monday to Saturday and (0800 to 2200) Sunday and Public Holidays; and*
- b) *An LA₁₀ (15 minute) noise emission criterion of 40 dB(A) at all other times, except as expressly provided by this licence.*

L4.2 Noise from the operation of mobile plant must not exceed:

- a) *An LA₁₀ (15 minute) noise emission criterion of 50 dB(A) (0700 to 2200) Monday to Saturday and (0800 to 2200) Sunday and Public Holidays; and*
- b) *An LA₁₀ (15 minute) noise emission criterion of 40 dB(A) at all other times, except as expressly provided by this licence.*

L4.3 Noise from the premises is to be measured or computed at the most affected point on or within the residential property boundary or, if that is more than 30 meters from the residence, at the most affected point within 30 meters of the residence to determine compliance with condition L4.1. 5 dB(A) must be added if the noise is tonal or impulsive in character.

L4.4 Noise generated at the premises that is measured at each noise monitoring point established under this licence must not exceed the noise levels specified in Column 4 of the table below for that point during the corresponding time periods specified in Column 1 when measured using the corresponding measurement parameters listed in Column 2.

Table 1 EPL Noise Criteria¹

Receiver	Location Description	Time Period	Noise Level Parameter	
			dB LAeq (15min)	dB LAF (max)
EPA Point 4	255 Lawson Road, Badgerys Creek, 2555	Morning Shoulder	42	N/A
		Day	42	N/A
		Evening	41	N/A
		Night	38	52
EPA Point 5	217 Martin Road, Badgerys Creek, 2555	Morning Shoulder	43	N/A
		Day	45	N/A
		Evening	40	N/A
		Night	38	52
EPA Point 6	50 Victor Avenue, Kemps Creek, 2178	Morning Shoulder	43	N/A
		Day	43	N/A
		Evening	43	N/A
		Night	38	52

Note 1: Noise criteria adopted from the EPL (EPL #684).

L4.5 For the purpose of the condition above:

- a) *Morning shoulder means the period from 5am and 7am Monday to Saturday and the period from 5am to 8am Sunday and public holidays.*
- b) *Day means the period from 7am to 6pm Monday to Saturday and the period from 8am to 6pm Sunday and public holidays.*
- c) *Evening means the period from 6pm to 10pm.*
- d) *Night means the period from 10pm to 5am Monday to Saturday and the period from 10pm to 5am Sunday and public holidays.*

The Badgerys Creek Brick Quarry and Brick Making Project 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, there are separate criteria relating to each period.

Table 2 Consolidated Consent Noise Criteria ¹					
Receiver (EPA Reference)	Morning Shoulder	Day	Evening	Night ²	
	dB LAeq(15min)			dB LA1(max) ³	
R9, R25, R35 (EPA Point 5)	43	45	40	38	52
R5, R26, R27, R28, R29, R30, R31, R32, R34, R42, R43, R44, R45, R46 (EPA Point 4)	42	42	41	38	52
R11, R12, R13, R14, R15 (EPA Point 6)	43	43	43	38	52
All other residences	N/A	40	35	35	52

Note 1: Noise criteria adopted from the Consolidated Consent.

Note 2: Monitoring periods are defined in Section L4.5 of the EPL #684

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

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

3 Methodology

3.1 Unattended Assessment Methodology

The unattended noise survey was conducted in general accordance with the procedures described in Australian Standard AS 1055:2018, "Acoustics – Description and Measurement of Environmental Noise".

The measurements were carried out using two Svantek 977 noise analysers and one Svantek 958 noise analyser from Tuesday 12 March 2024 to Tuesday 19 March 2024. The acoustic instrumentation used carries current NATA calibration 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 $\pm 0.5\text{dBA}$. All equipment carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per the EPA's Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022).

To quantify the existing background noise environment of the area, unattended noise monitors were installed at three (3) locations (EPA 4, EPA 5, EPA 6) representative of the ambient environment surrounding the project site.

Unattended data affected by adverse meteorological conditions have been excluded from the results in accordance with methodologies provided in Fact Sheet A4 of the NPI. The measured daily Ambient Background Levels (ABLs) along with summary results for the background monitoring are provided in **Section 5.1**. The long-term unattended noise monitoring charts are provided in **Appendix B**.

3.2 Operator Attended Noise Monitoring

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). Attended 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 $\pm 0.5\text{dBA}$.

Attended 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 three (3) locations (EPA 4, EPA 5, EPA 6) on Wednesday 20 March 2024 during the day period to satisfy the requirements of the NMP and EPL. Attended measurements were not conducted during the evening and night periods due to the site not operating between the hours of 6pm and 7am.

Extraneous noise sources were excluded from the attended analysis to determine the $\text{LA}_{\text{eq}}(15\text{min})$ site 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.

4 Results

4.1 Unattended Noise Monitoring Results

The results of long-term unattended noise monitoring are provided in **Table 3**, **Table 4** and **Table 5**. The noise monitoring charts for the background monitoring assessment are provided in **Appendix B**. Data affected by adverse meteorological conditions have been excluded from the results in accordance with methodologies provided in Fact Sheet A4 of the NPI.

Table 3 Background Noise Monitoring Summary – EPA 4

Date	Measured Background Noise Level (LA90) dB ABL ¹			Measured Ambient Noise Level dB LAeq(period)		
	Day	Evening	Night	Day	Evening	Night
Tuesday 12 March 2024	N/A	35	35	N/A	47	47
Wednesday 13 March 2024	33	34	36	52	40	44
Thursday 14 March 2024	35	34	34	52	46	49
Friday 15 March 2024	38	36	31	50	45	44
Saturday 16 March 2024	33	35	33	50	45	49
Sunday 17 March 2024	28	36	34	55	45	43
Monday 18 March 2024	33	35	36	45	43	45
Tuesday 19 March 2024	34	33	39	45	41	46
EPA 4 – RBL / Leq Overall	34	35	35	51	45	46

Note 1: Assessment background level (ABL) – the single-figure background level representing each assessment period day, evening and night as per NPI Fact Sheet A.

Note 2: Excludes periods of wind or rain affected data. Meteorological data obtained from the Bureau of Meteorology weather station Badgerys Creek AWS Site 67108.

Note 3: 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.

Table 4 Background Noise Monitoring Summary – EPA 5

Date	Measured Background Noise Level (LA90) dB ABL ¹			Measured Ambient Noise Level dB LAeq(period)		
	Day	Evening	Night	Day	Evening	Night
Tuesday 12 March 2024	N/A	39	39	N/A	45	52
Wednesday 13 March 2024	37	39	39	50	53	52
Thursday 14 March 2024	38	41	45	57	51	57
Friday 15 March 2024	41	43	38	51	51	54
Saturday 16 March 2024	36	40	39	49	48	59
Sunday 17 March 2024	36	40	40	48	55	53
Monday 18 March 2024	37	39	40	50	54	52
Tuesday 19 March 2024	38	39	41	51	48	50
EPA 5 – RBL / Leq Overall	37	40	40	52	52	55

Note 1: Assessment background level (ABL) – the single-figure background level representing each assessment period day, evening and night as per NPI Fact Sheet A.

Note 2: Excludes periods of wind or rain affected data. Meteorological data obtained from the Bureau of Meteorology weather station Badgerys Creek AWS Site 67108.

Note 3: 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.

Table 5 Background Noise Monitoring Summary – EPA 6

Date	Measured Background Noise Level (LA90) dB ABL ¹			Measured Ambient Noise Level dB LAeq(period)		
	Day	Evening	Night	Day	Evening	Night
Tuesday 12 March 2024	N/A	41	38	N/A	49	48
Wednesday 13 March 2024	36	40	40	53	47	49
Thursday 14 March 2024	40	40	38	50	54	47
Friday 15 March 2024	38	41	34	48	50	42
Saturday 16 March 2024	36	40	37	48	49	49
Sunday 17 March 2024	33	40	39	46	53	50
Monday 18 March 2024	36	43	40	47	50	49
Tuesday 19 March 2024	37	42	42	55	50	49
EPA 6 – RBL / Leq Overall	37	41	38	60	51	48

Note 1: Assessment background level (ABL) – the single-figure background level representing each assessment period day, evening and night as per NPI Fact Sheet A.

Note 2: Excludes periods of wind or rain affected data. Meteorological data obtained from the Bureau of Meteorology weather station Badgerys Creek AWS Site 67108.

Note 3: 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.

4.2 Prevailing Meteorological Conditions

Weather data for the noise assessment period was sourced from Badgerys Creek AWS Site 67108 as well as operator observations at each measurement location. The data was used to determine prevailing meteorological conditions at the time of the attended measurements. Meteorological data is presented in **Table 6** 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 6 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)
20/03/2024 13:03	SW	1.9	S	0.3
20/03/2024 13:39	SSW	1.6	S	1.5
20/03/2024 14:07	SW	2.4	S	1.2

4.3 Assessment Results - Location EPA 4

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location EPA 4 for the NMA are presented in **Table 7**.

Table 7 Operator-Attended Noise Survey Results - Location EPA 4

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL, dBA
		L _{Amax}	L _{A1}	L _{A10}	L _{A90}	L _{Aeq}		
20/03/2024	14:07 (Day)	99	87	60	40	74	WD: S WS: 1.2m/s Rain: Nil	Dog bark 48-99
								Industrial noise 44-52
								Aircraft 42-67
								Birds 42-52
								Insects <40
								Residential noise <40
								CSR operations 38-42 (trucks and mobile plant) (8 minutes)
CSR Site L _{Aeq} (15min) Contribution								37

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 EPA 5

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location EPA 5 for the NMA are presented in **Table 8**.

Table 8 Operator-Attended Noise Survey Results - Location EPA 5

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL, dBA
		LAmax	LA1	LA10	LA90	LAeq		
20/03/2024	13:03 (Day)	65	56	50	42	47	WD: S WS: 0.3m/s Rain: Nil	Dog bark 48-61
								Insects 40-54
								Birds 44-65
								Aircraft 43-55
								Industrial noise 42-52
								Traffic 45-54
								CSR operations 41-45 (trucks and mobile plant)
								(10 minutes)
CSR Site LAeq(15min) Contribution								41

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 EPA 6

The monitored noise level contributions and observed meteorological conditions for each assessment period at Location EPA 6 for the NMA are presented in **Table 9**.

Table 9 Operator-Attended Noise Survey Results - Location EPA 6

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL, dBA
		L _{Amax}	L _{A1}	L _{A10}	L _{A90}	L _{Aeq}		
20/03/2024	13:39 (Day)	84	56	51	43	52	WD: S WS: 1.5m/s Rain: Nil	Insects 42-45
								Aircraft 44-61
								Traffic 41-49
								Dog bark 48-84
								Birds 43-48
								Industrial noise 45-57
								Residential noise 41-43
								CSR inaudible
CSR Site L _{Aeq} (15min) Contribution								<33

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 EPA 4

Monitoring on Wednesday 20 March 2024 identified that CSR activities were audible for approximately eight (8) minutes during the measurement period at location EPA 4. CSR activities were inclusive of truck and mobile plant movements. The site contribution was estimated to be below the relevant noise limits during the assessed day period.

CSR was not operational during the evening or night periods, therefore noise measurements were not conducted. Extraneous sources such as dogs barking, other industrial noise, aircraft, birds, insects, and local residential noise were audible during the measurement period.

5.2 Assessment Results - Location EPA 5

Monitoring on Wednesday 20 March 2024 identified that CSR activities were audible for approximately 10 minutes during the measurement period at location EPA 5. CSR activities were inclusive of truck and mobile plant movements. The site contribution was estimated to be below the relevant noise limits during the assessed day period.

CSR was not operational during the evening or night periods, therefore noise measurements were not conducted. Extraneous sources such as dogs barking, insects, birds, aircraft, other industrial noise, and traffic were audible during the measurement period.

5.3 Assessment Results - Location EPA 6

Monitoring on Wednesday 20 March 2024 identified that CSR activities were inaudible during the measurement period at location EPA 6. Therefore, site the contribution was estimated to be below the relevant noise limits during the assessed day period.

CSR was not operational during the evening or night periods, therefore noise measurements were not conducted. Extraneous sources such as insects, aircraft, traffic, dogs barking, birds, other industrial noise 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 Limited (PGH) for the CSR Advanced Manufacturing Hub (CSR) at 235 Martin Road, Badgerys Creek, NSW. The assessment was completed to assess the site's compliance with the relevant noise criteria during the quarter period ending May 2024.

Operator attended noise monitoring was undertaken on Wednesday 20 March 2024 at three (3) representative receiver locations. The assessment has identified that noise emissions generated by CSR were measured to be below the relevant noise criteria throughout the survey period, satisfying the relevant noise 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**.

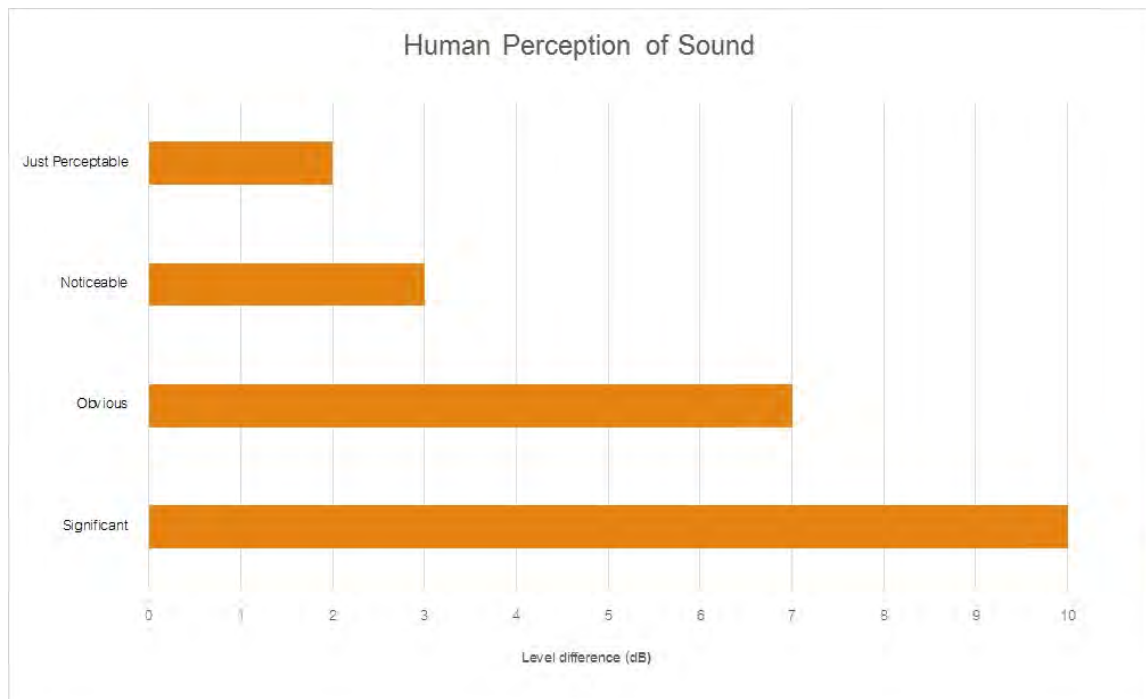
Table A1 Glossary of Acoustical Terms	
Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI 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



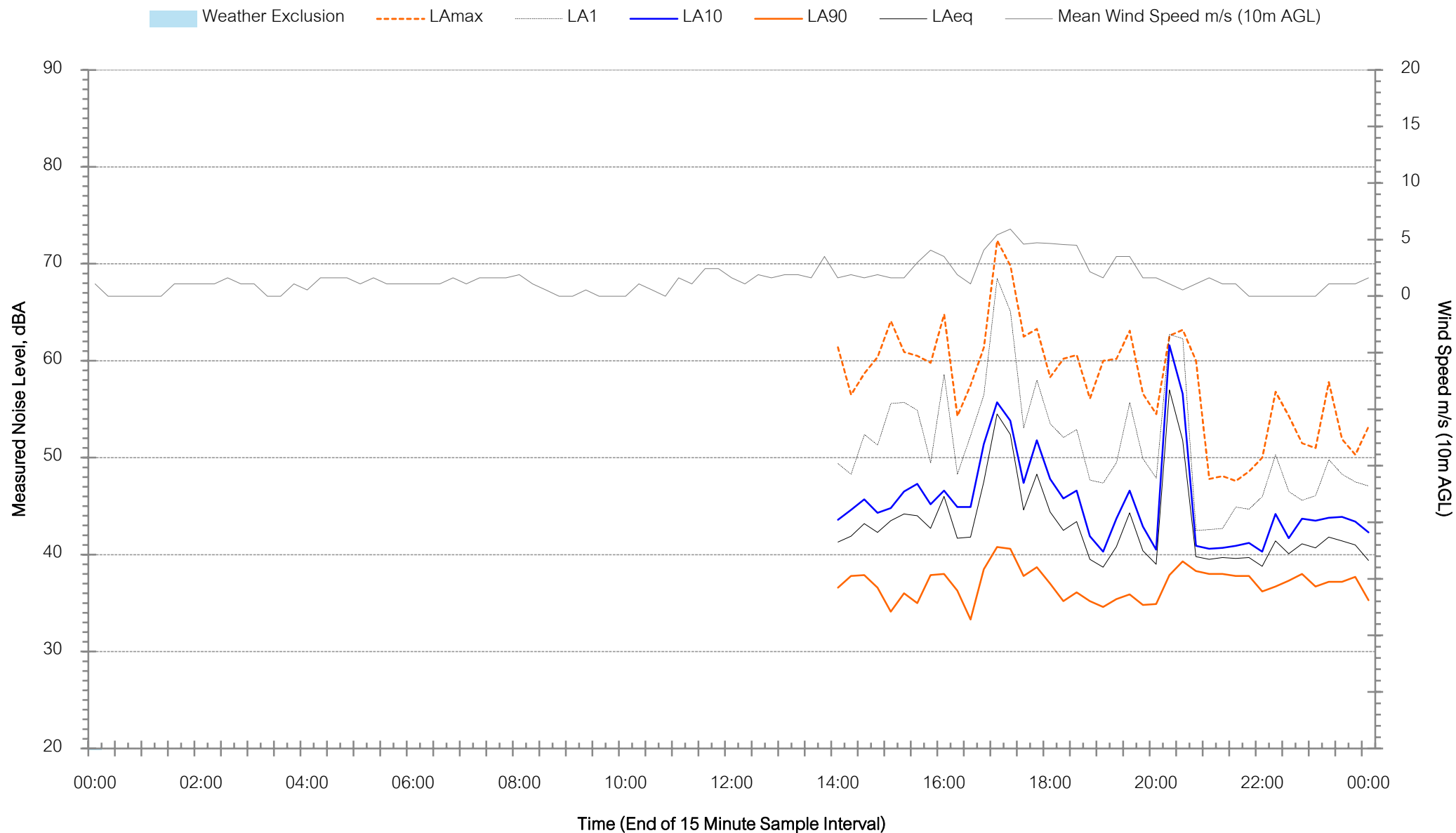
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Appendix B – Unattended Noise Monitoring Charts



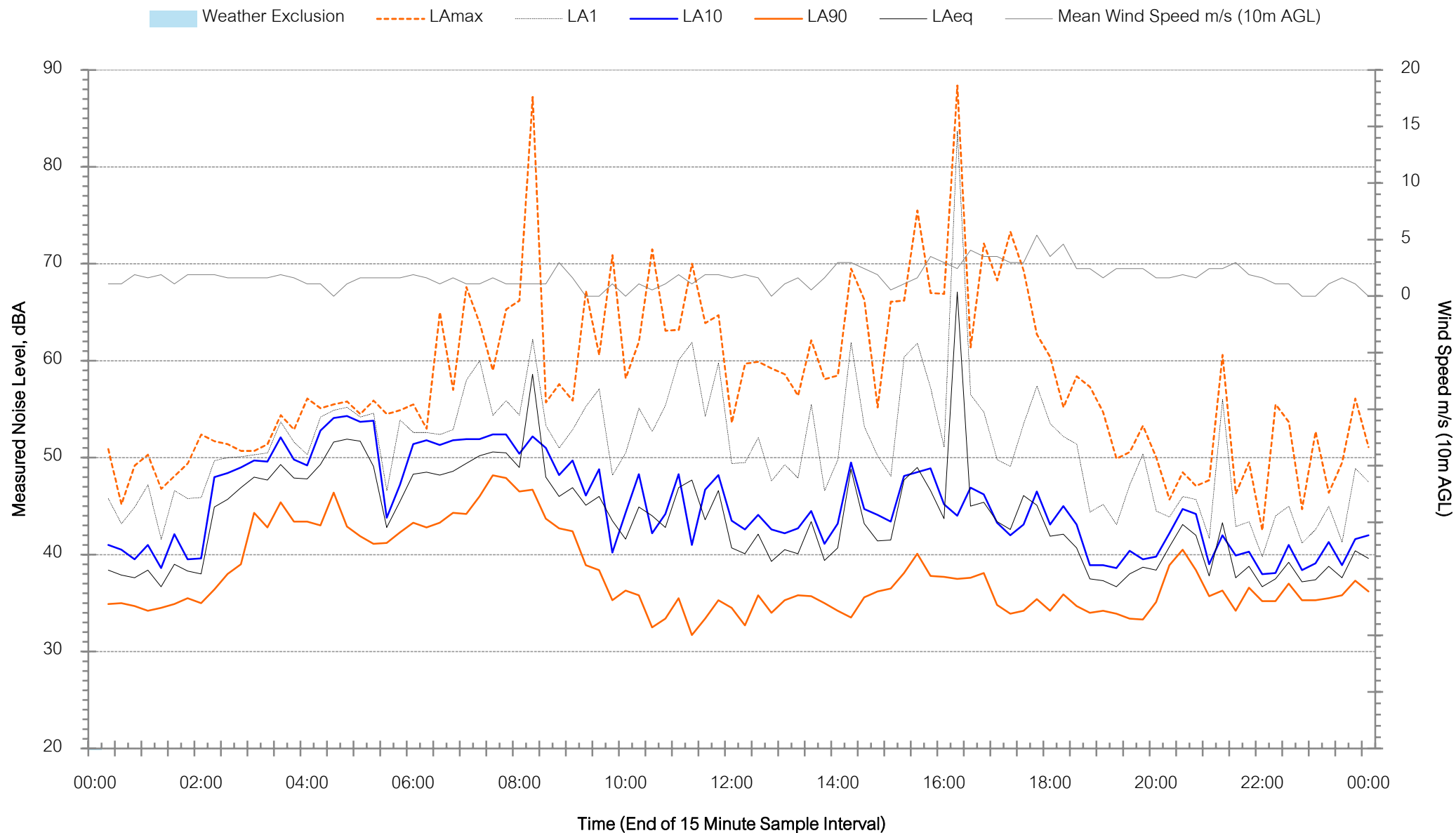
Background Noise Levels

255 Lawson Road, Badgerys Creek (EPA 4) - Tuesday 12 March 2024



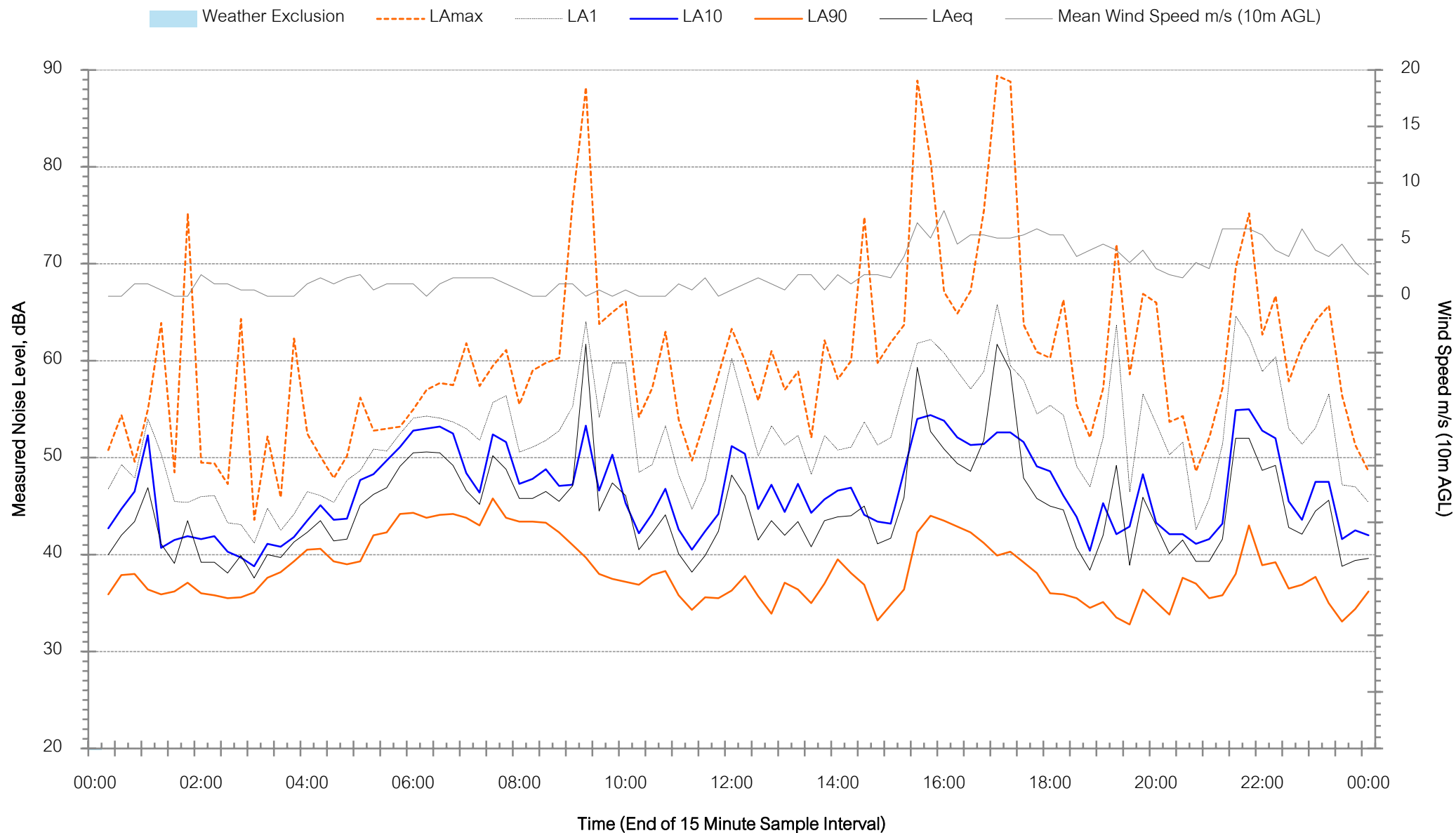
Background Noise Levels

255 Lawson Road, Badgerys Creek (EPA 4) - Wednesday 13 March 2024



Background Noise Levels

255 Lawson Road, Badgerys Creek (EPA 4) - Thursday 14 March 2024



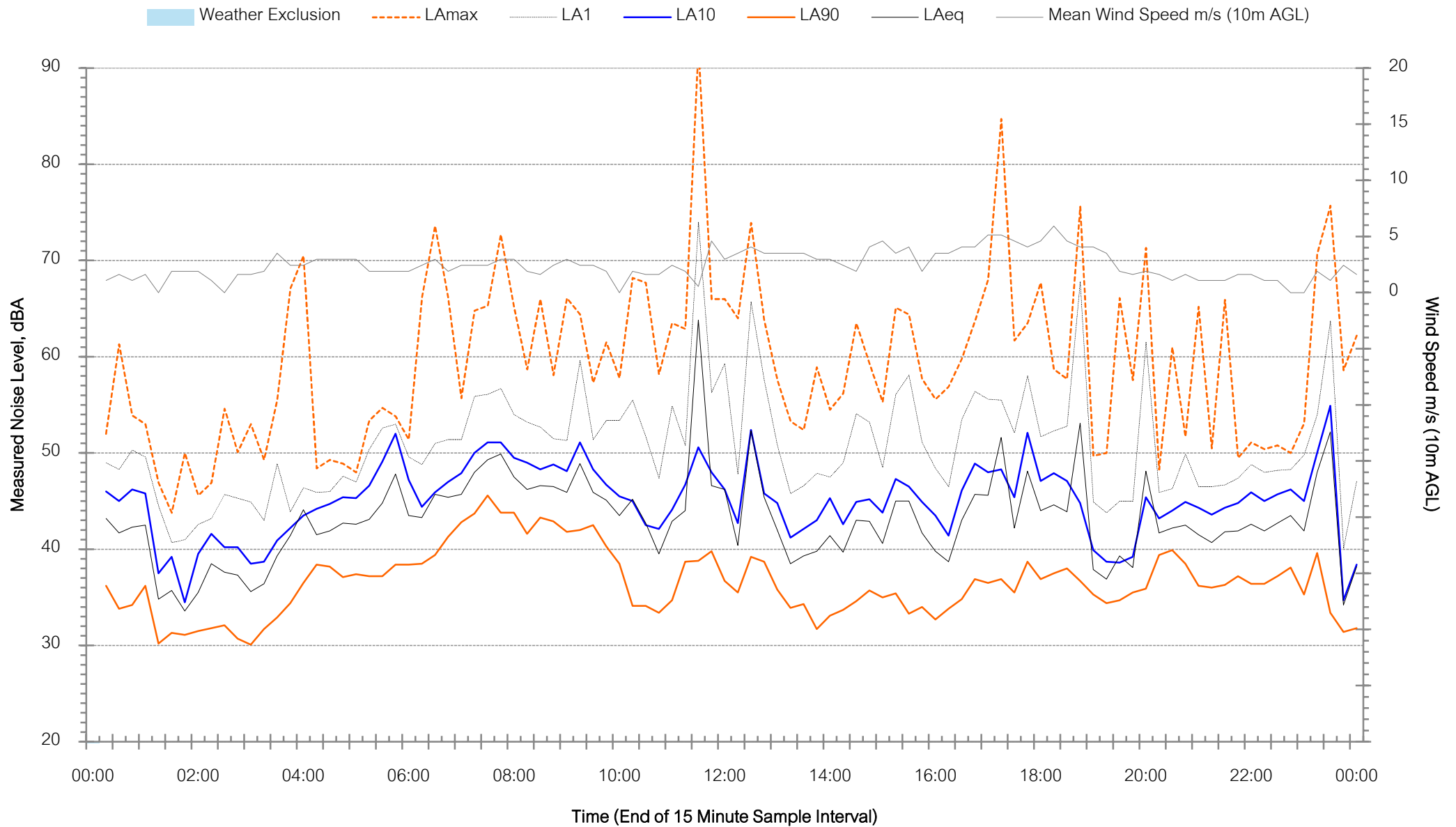
Background Noise Levels

255 Lawson Road, Badgerys Creek (EPA 4) - Friday 15 March 2024



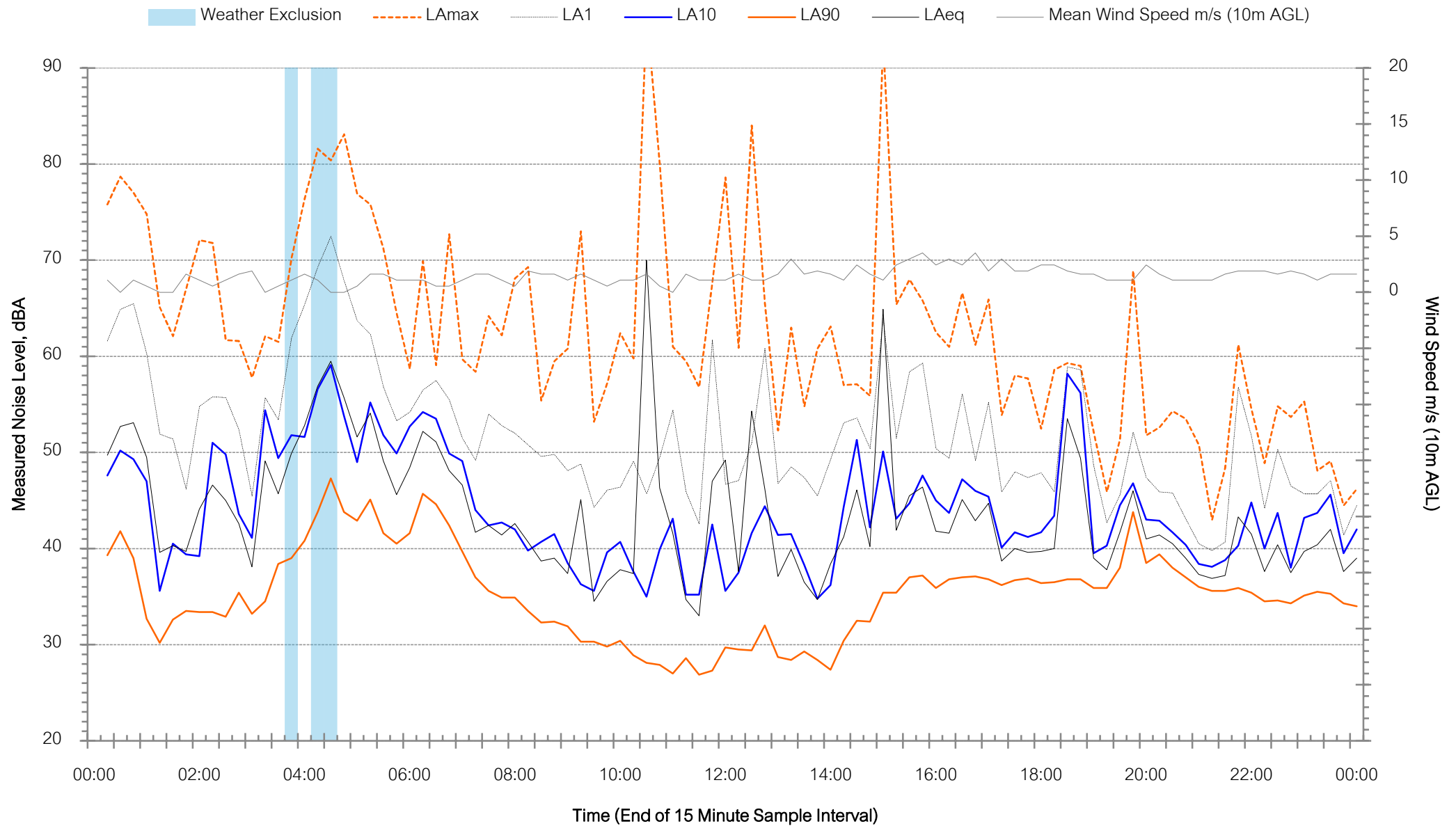
Background Noise Levels

255 Lawson Road, Badgerys Creek (EPA 4) - Saturday 16 March 2024



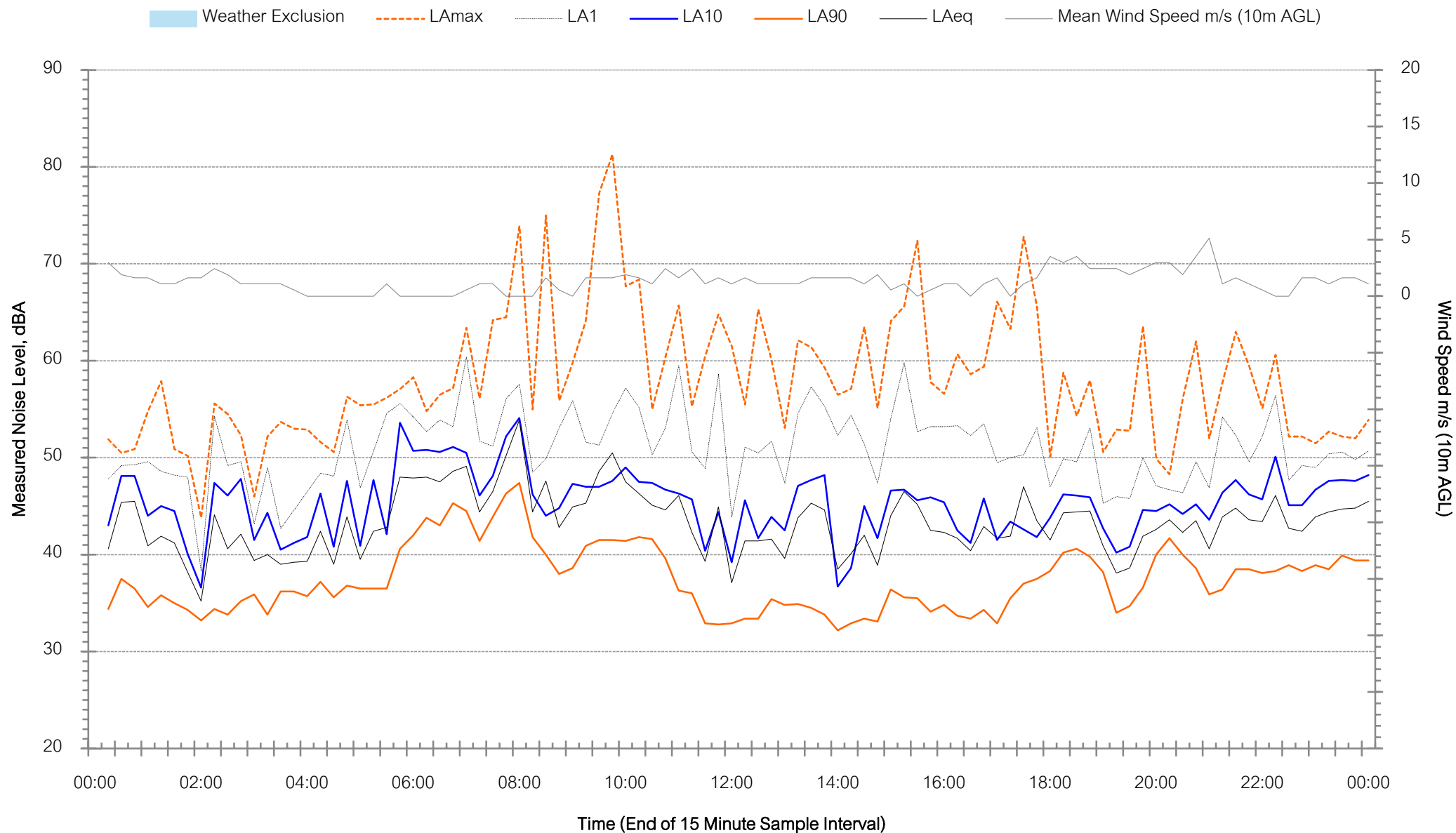
Background Noise Levels

255 Lawson Road, Badgerys Creek (EPA 4) - Sunday 17 March 2024



Background Noise Levels

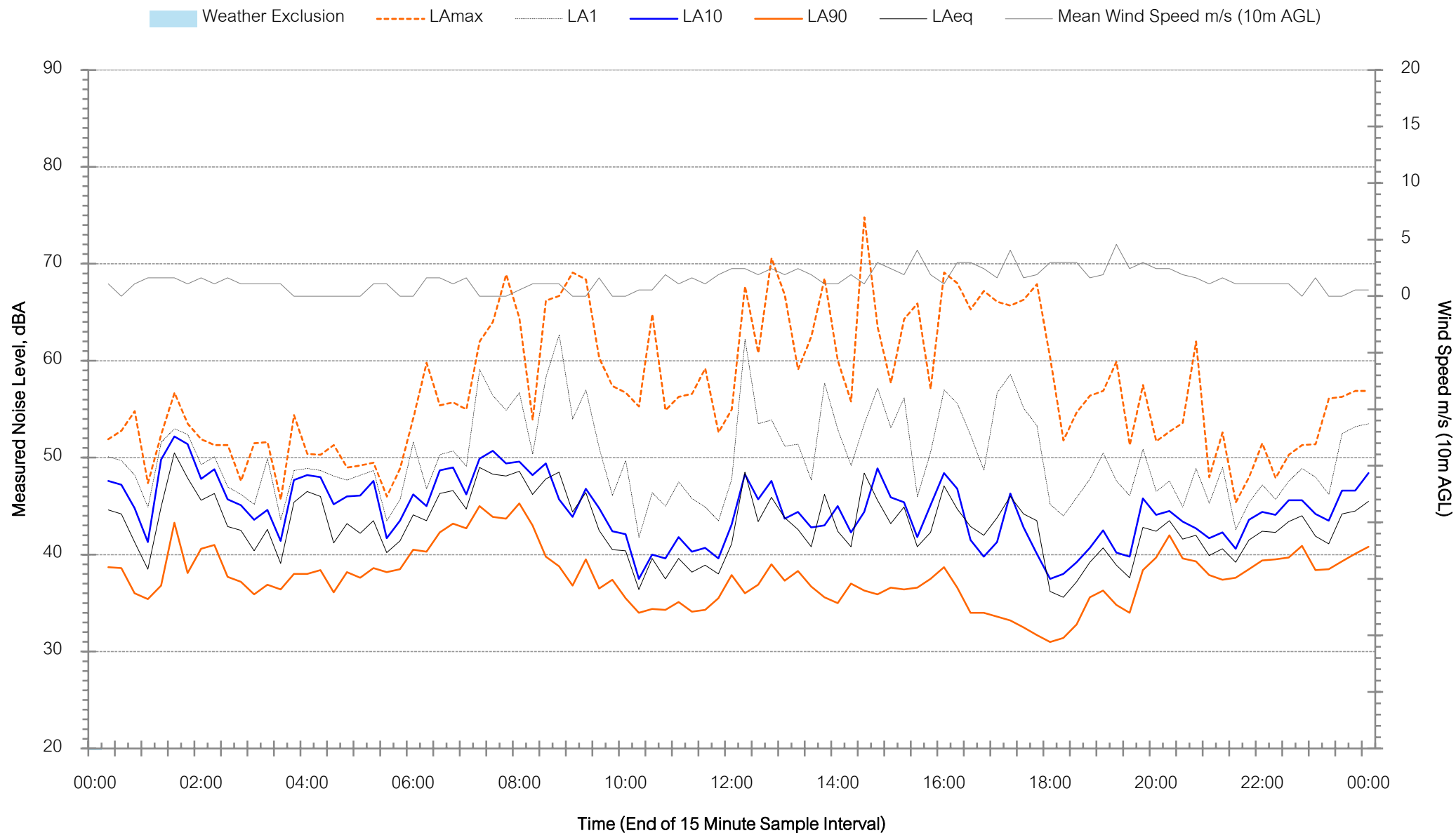
255 Lawson Road, Badgerys Creek (EPA 4) - Monday 18 March 2024





Background Noise Levels

255 Lawson Road, Badgerys Creek (EPA 4) - Tuesday 19 March 2024



Background Noise Levels

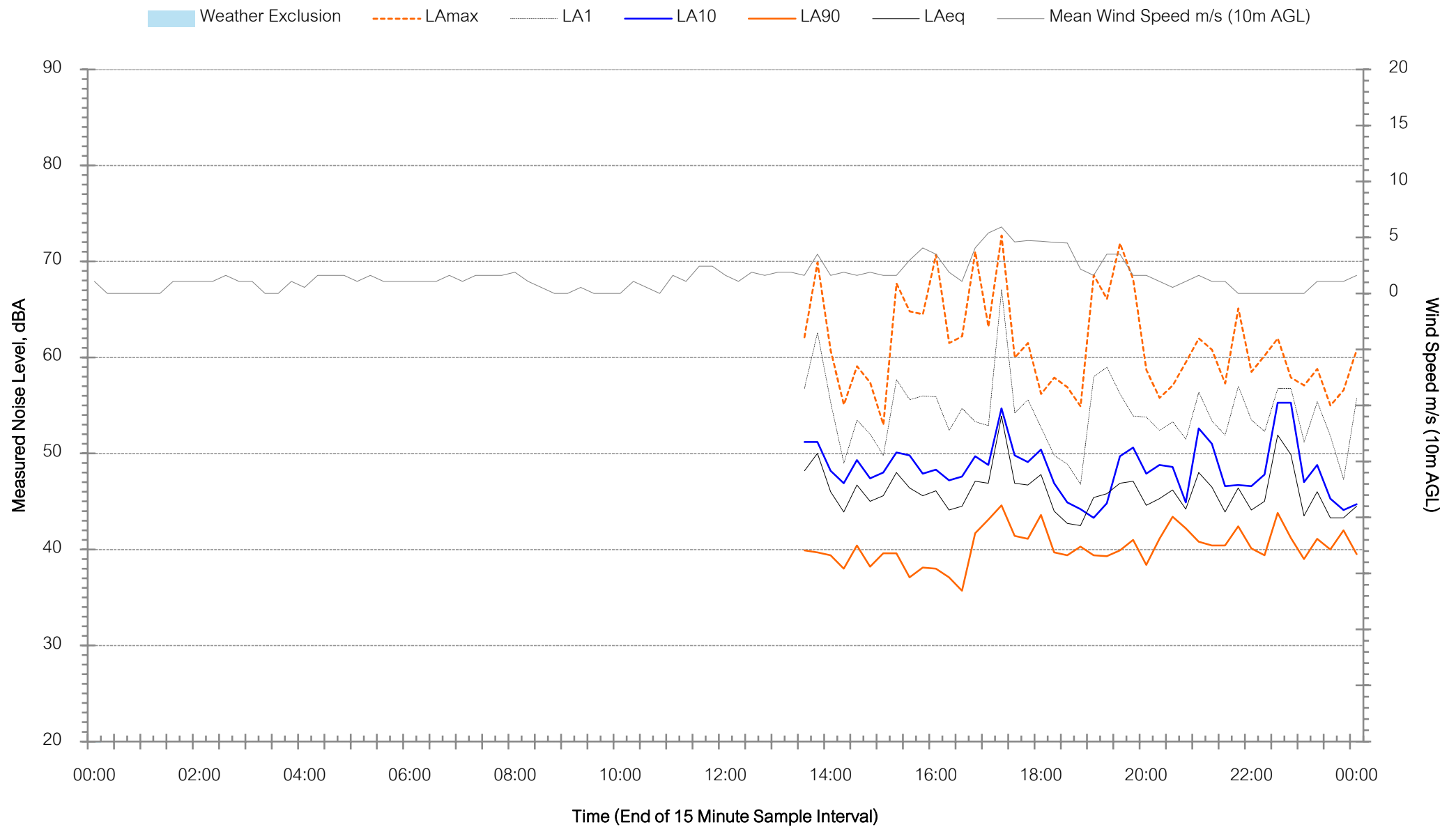
255 Lawson Road, Badgerys Creek (EPA 4) - Wednesday 20 March 2024





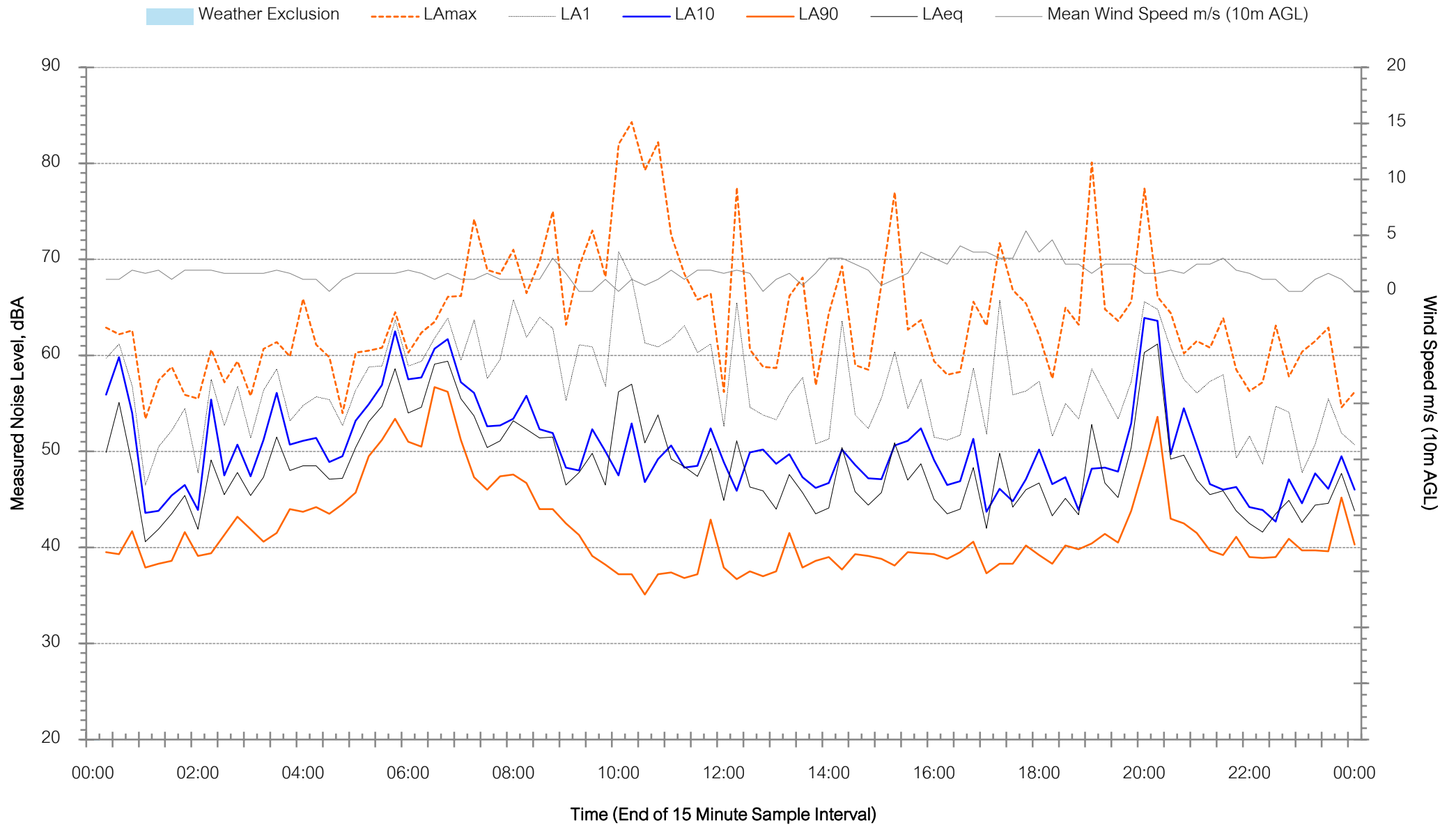
Background Noise Levels

217 Martin Road, Badgerys Creek (EPL 5) - Tuesday 12 March 2024



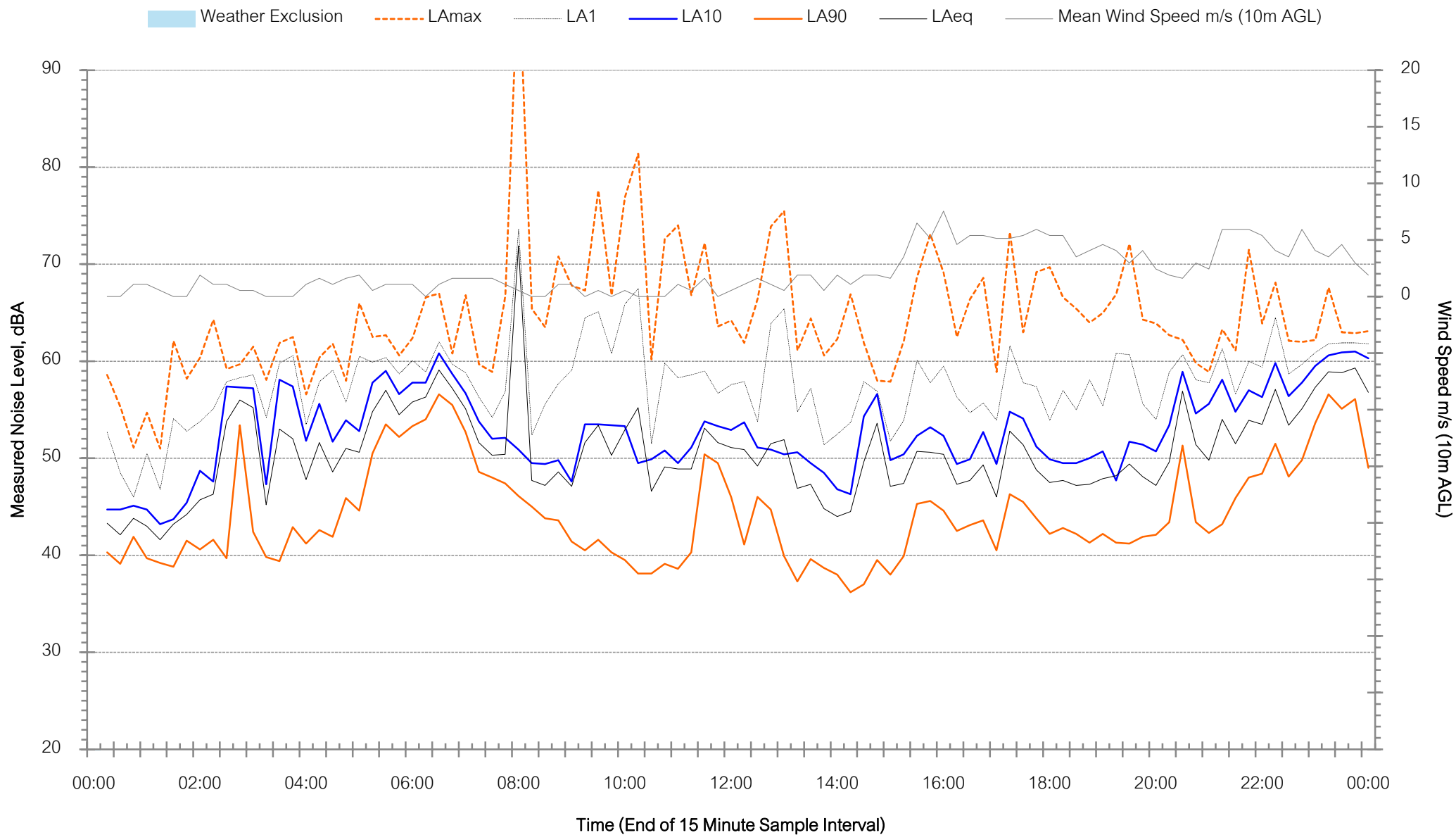
Background Noise Levels

217 Martin Road, Badgerys Creek (EPL 5) - Wednesday 13 March 2024



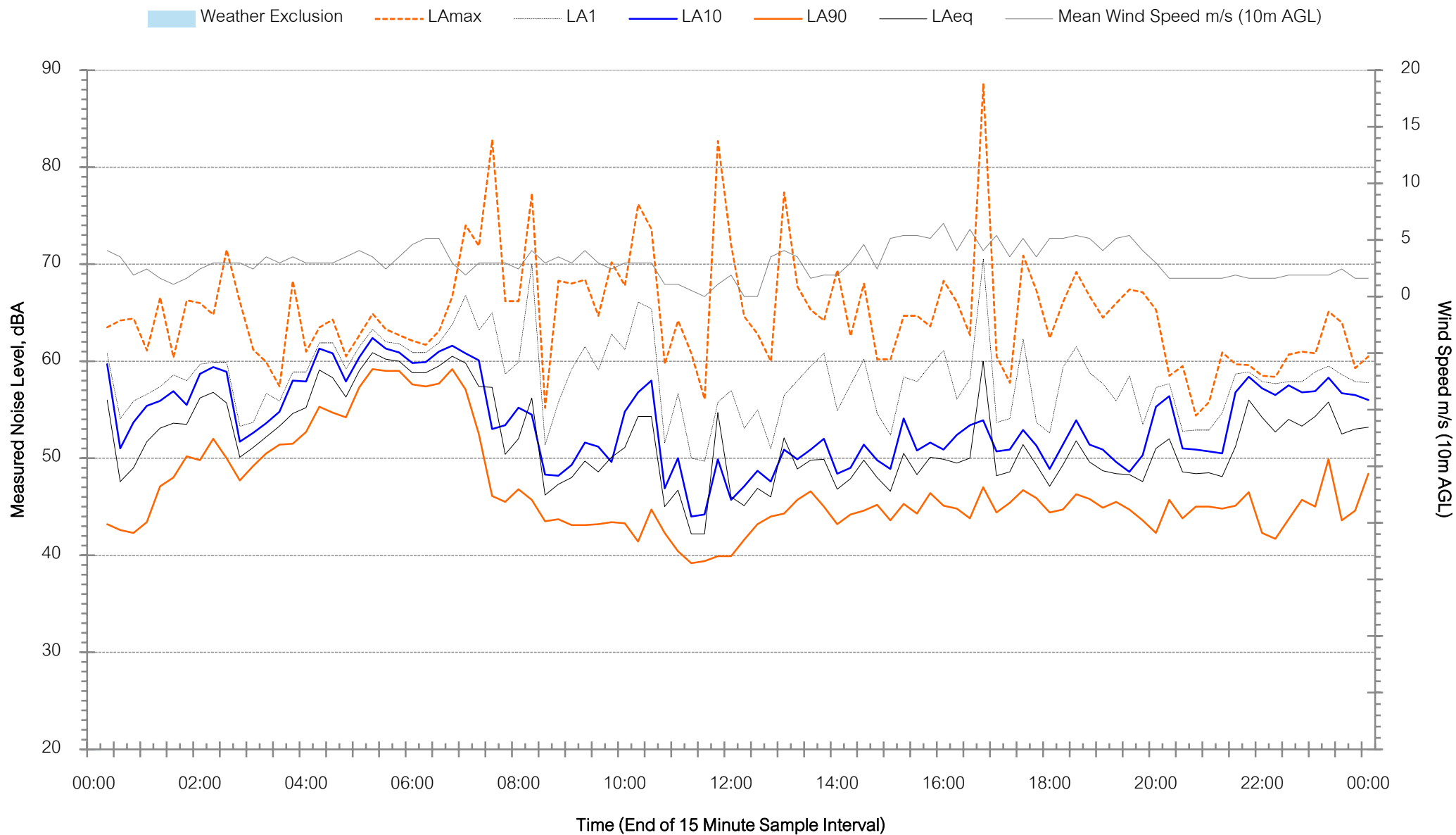
Background Noise Levels

217 Martin Road, Badgerys Creek (EPL 5) - Thursday 14 March 2024



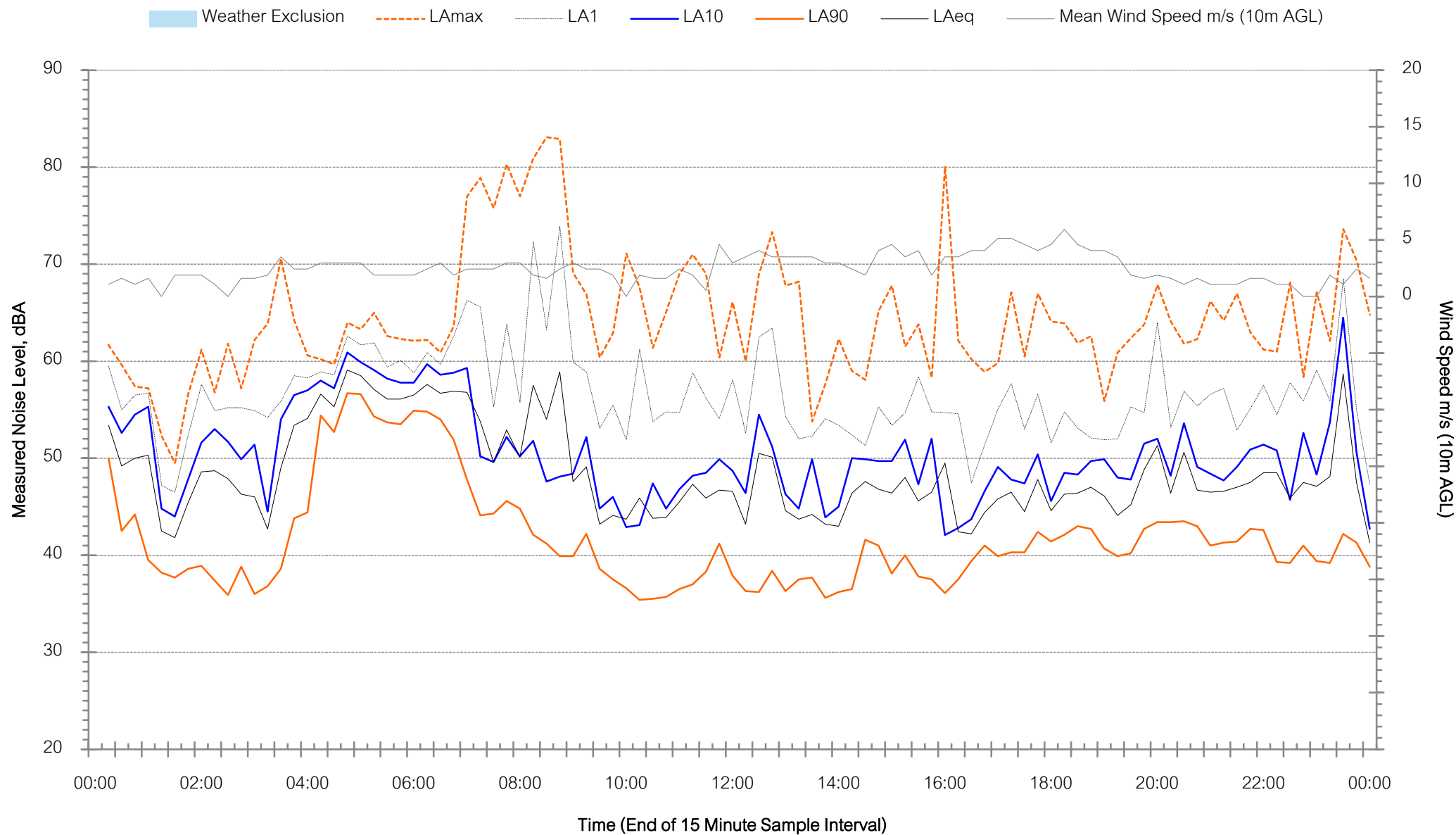
Background Noise Levels

217 Martin Road, Badgerys Creek (EPL 5) - Friday 15 March 2024



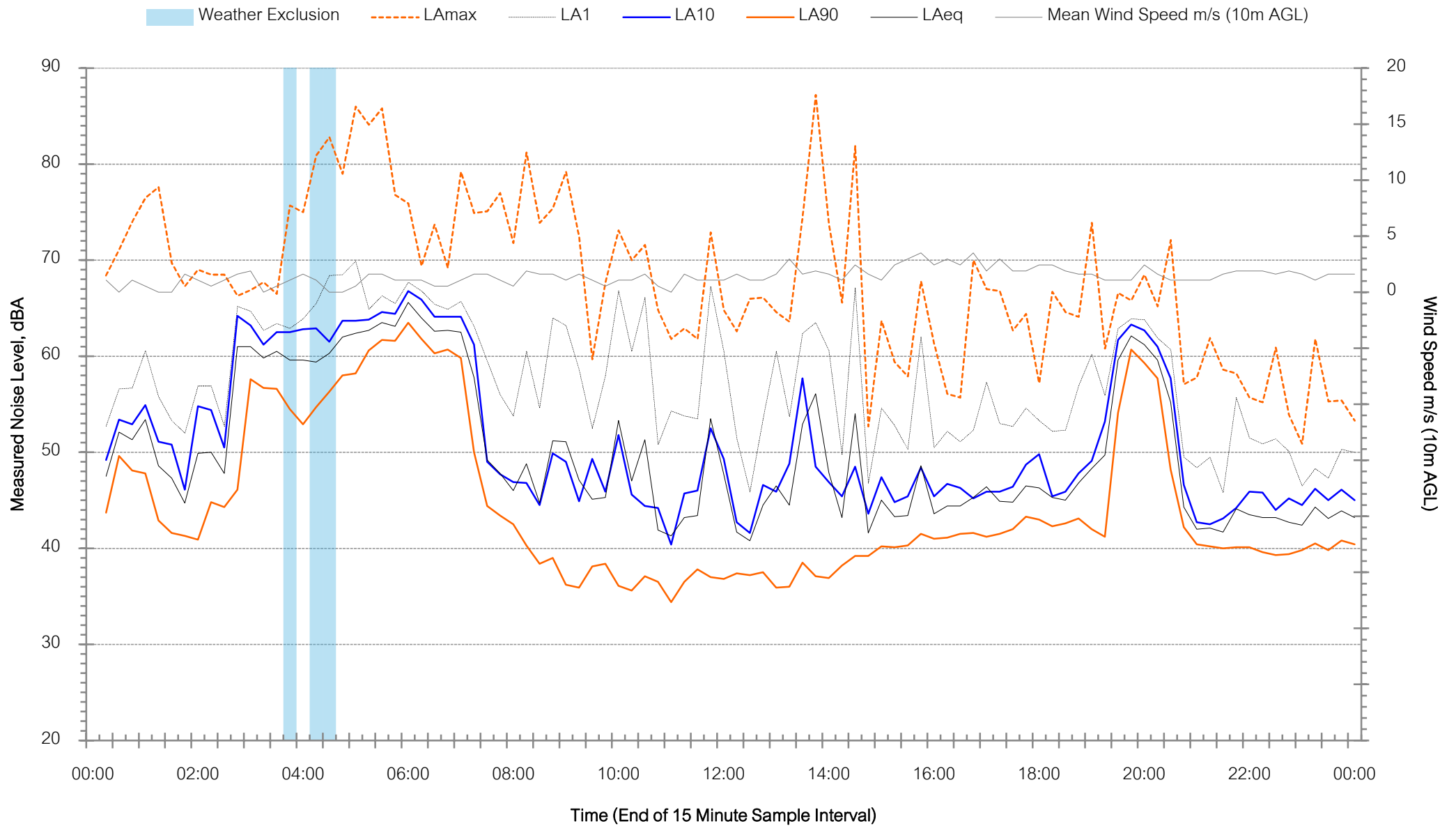
Background Noise Levels

217 Martin Road, Badgerys Creek (EPL 5) - Saturday 16 March 2024



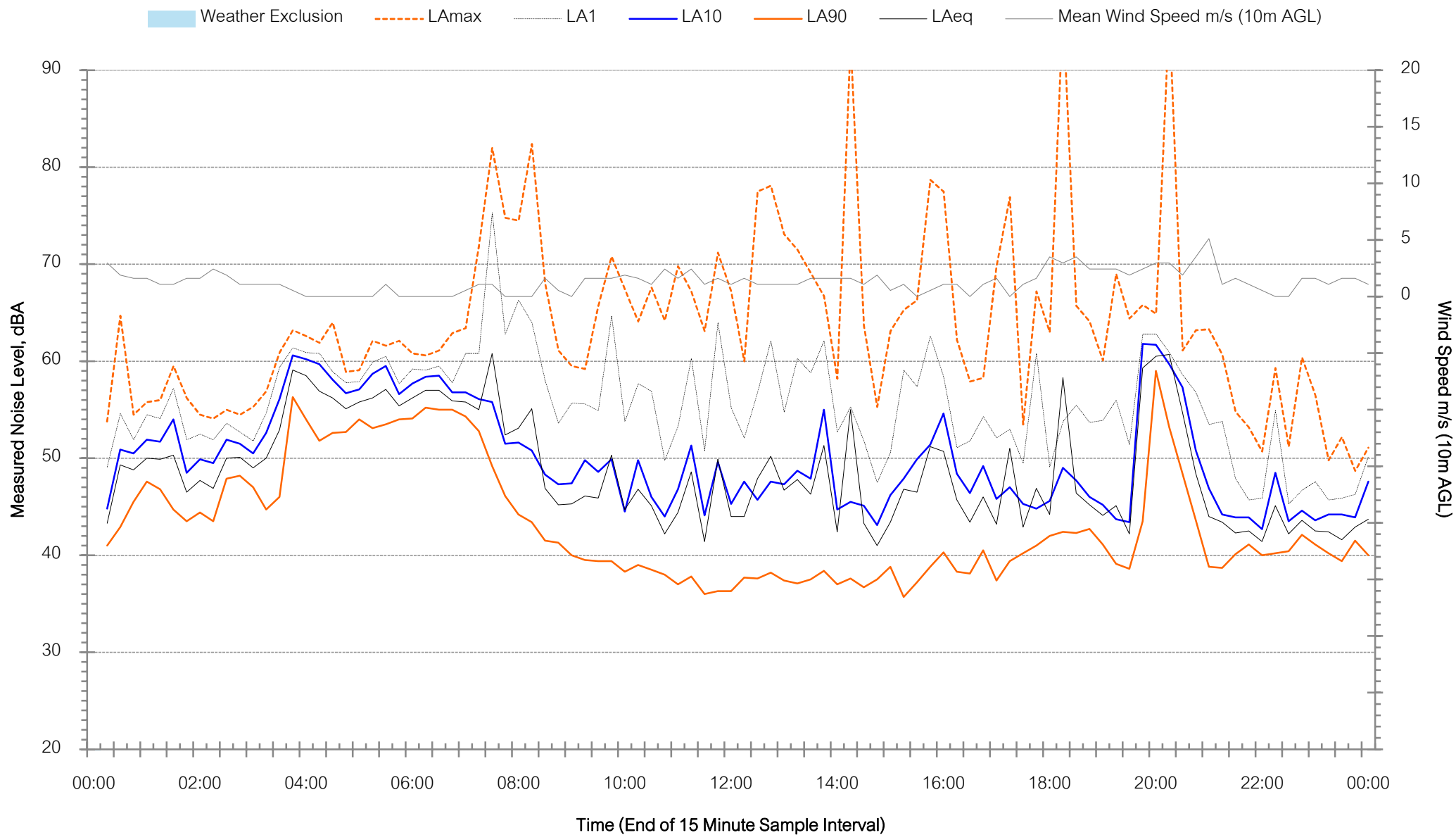
Background Noise Levels

217 Martin Road, Badgerys Creek (EPL 5) - Sunday 17 March 2024



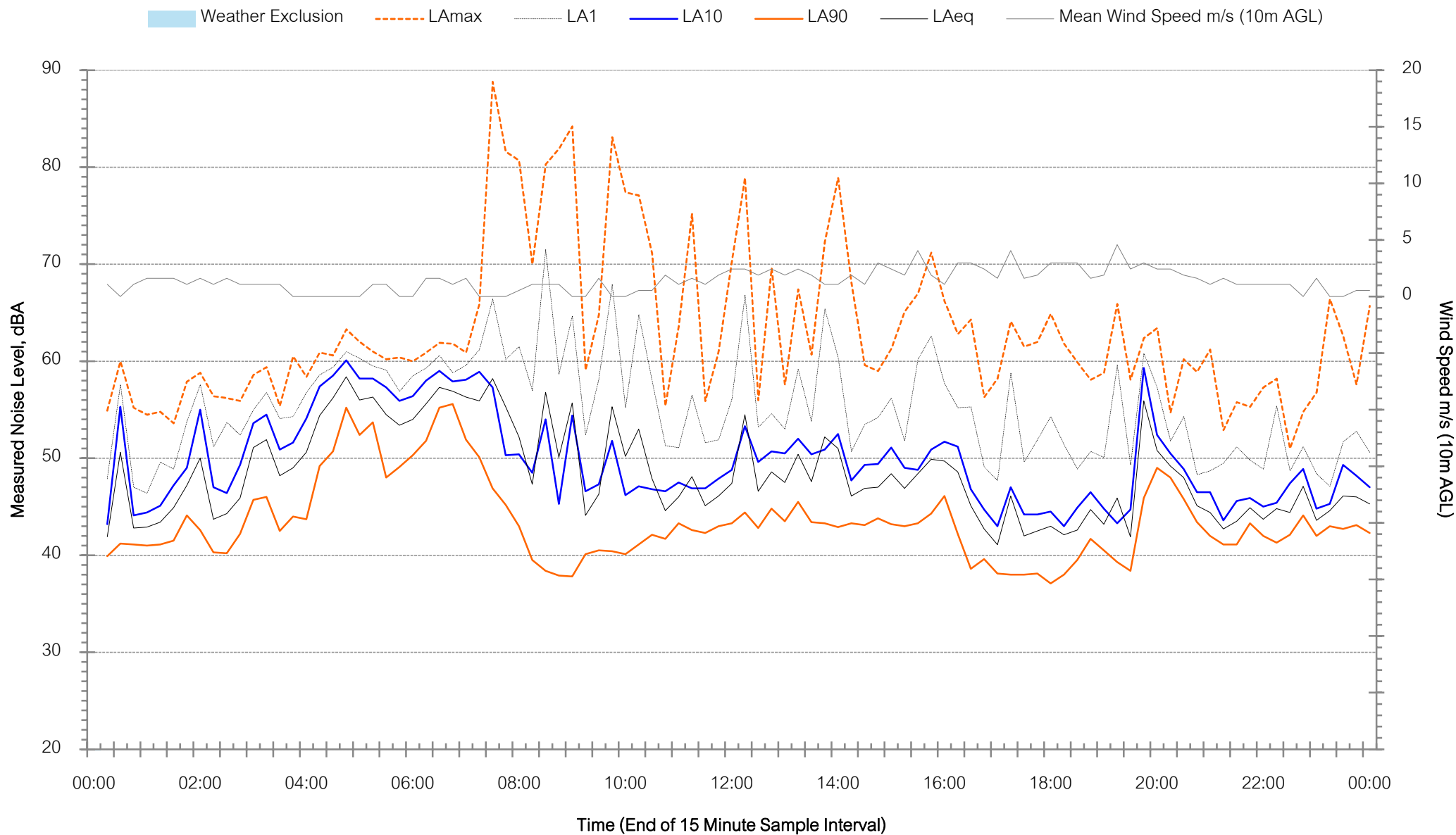
Background Noise Levels

217 Martin Road, Badgerys Creek (EPL 5) - Monday 18 March 2024



Background Noise Levels

217 Martin Road, Badgerys Creek (EPL 5) - Tuesday 19 March 2024





Background Noise Levels

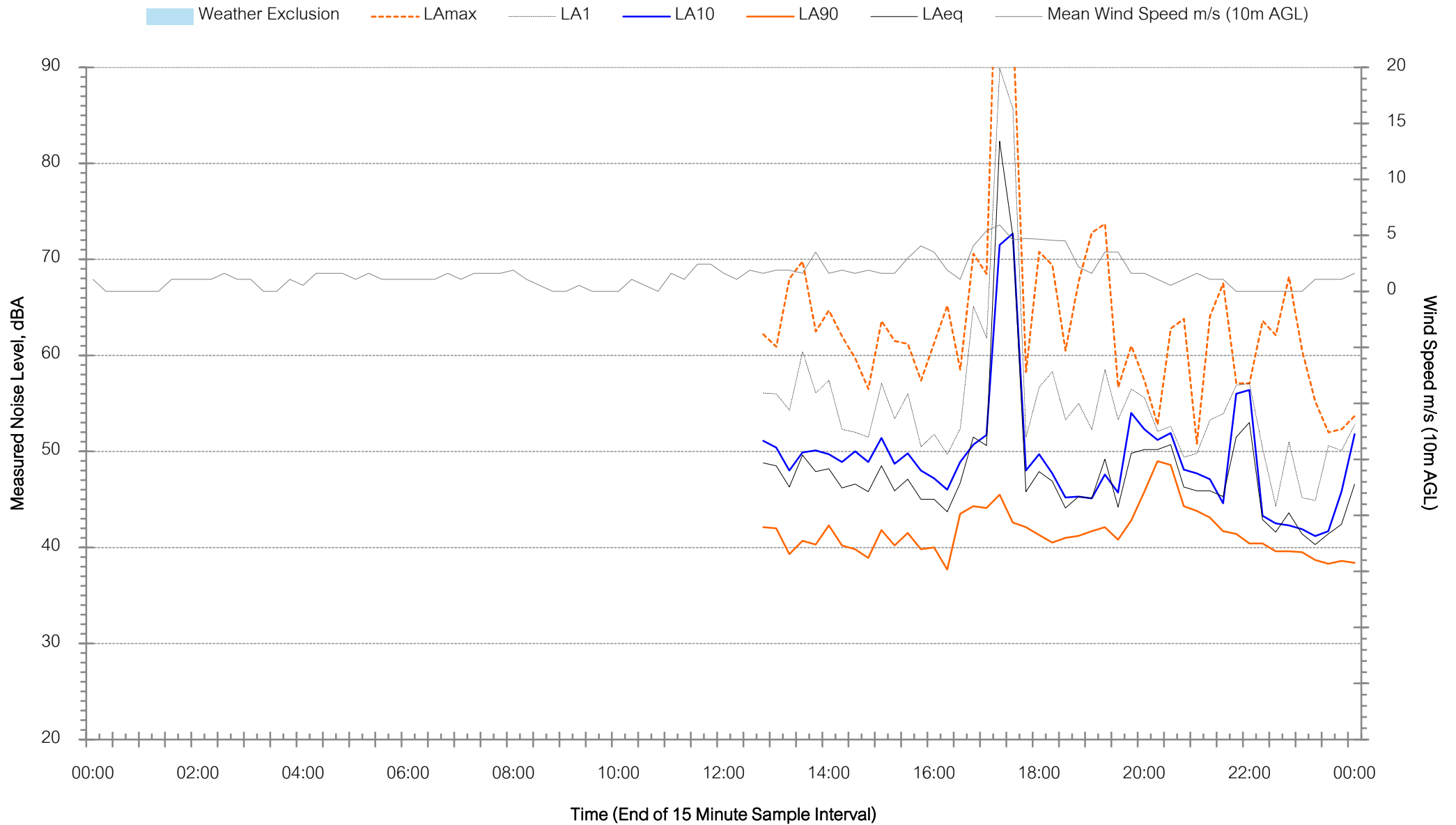
217 Martin Road, Badgerys Creek (EPL 5) - Wednesday 20 March 2024





Background Noise Levels

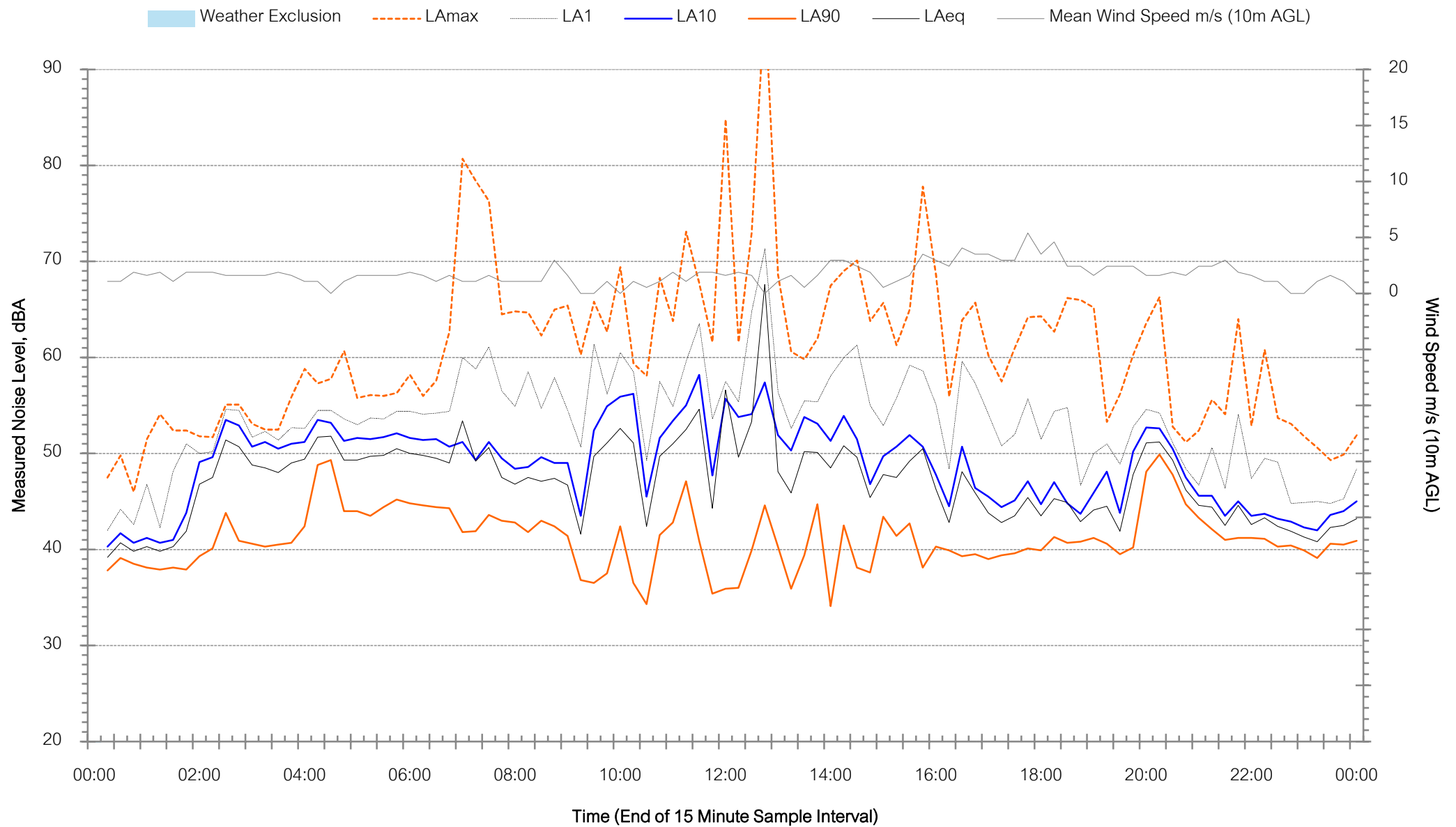
330 Ramsay Road, Kemps Creek (EPA 6) - Tuesday 12 March 2024





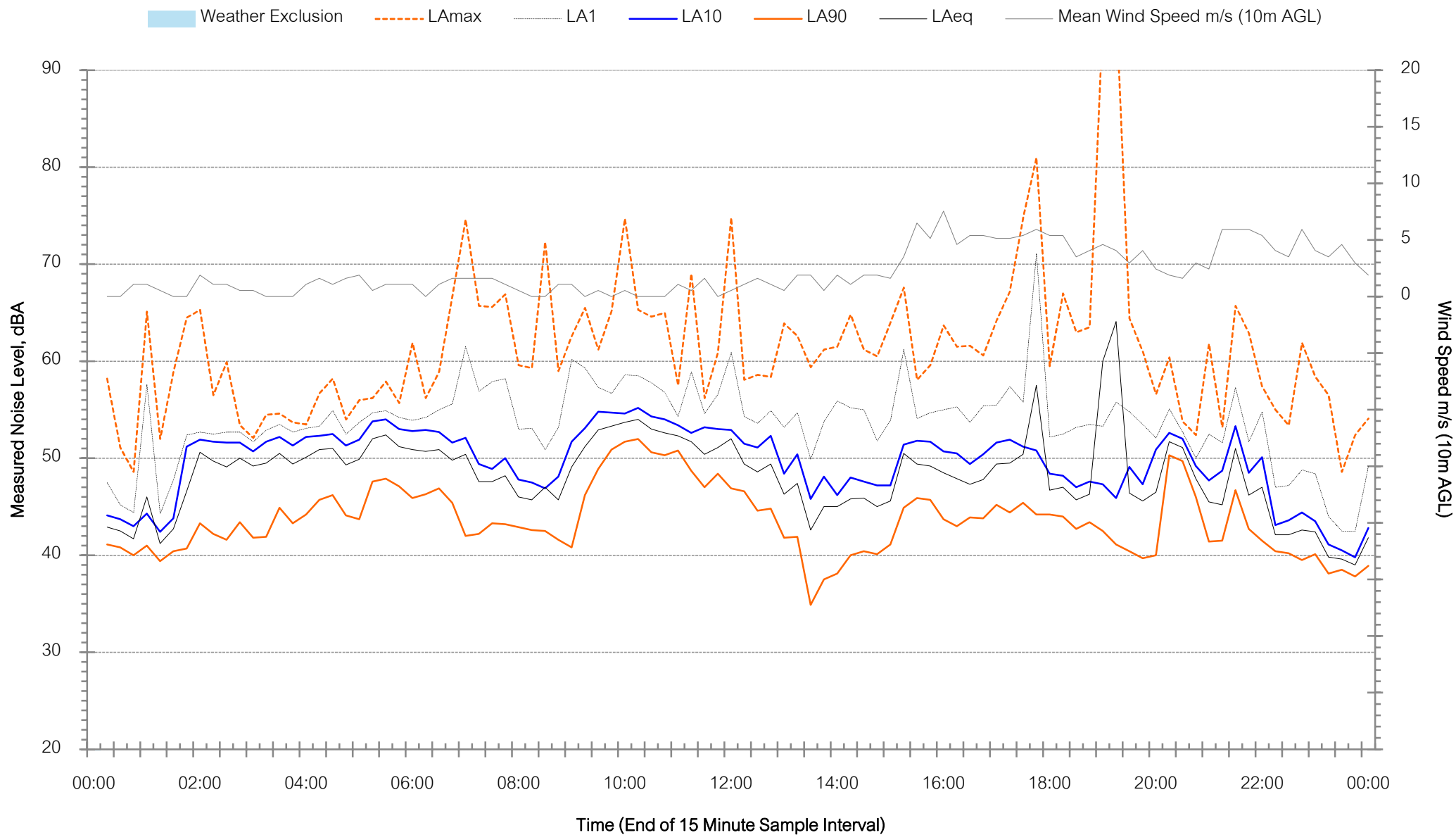
Background Noise Levels

330 Ramsay Road, Kemps Creek (EPA 6) - Wednesday 13 March 2024



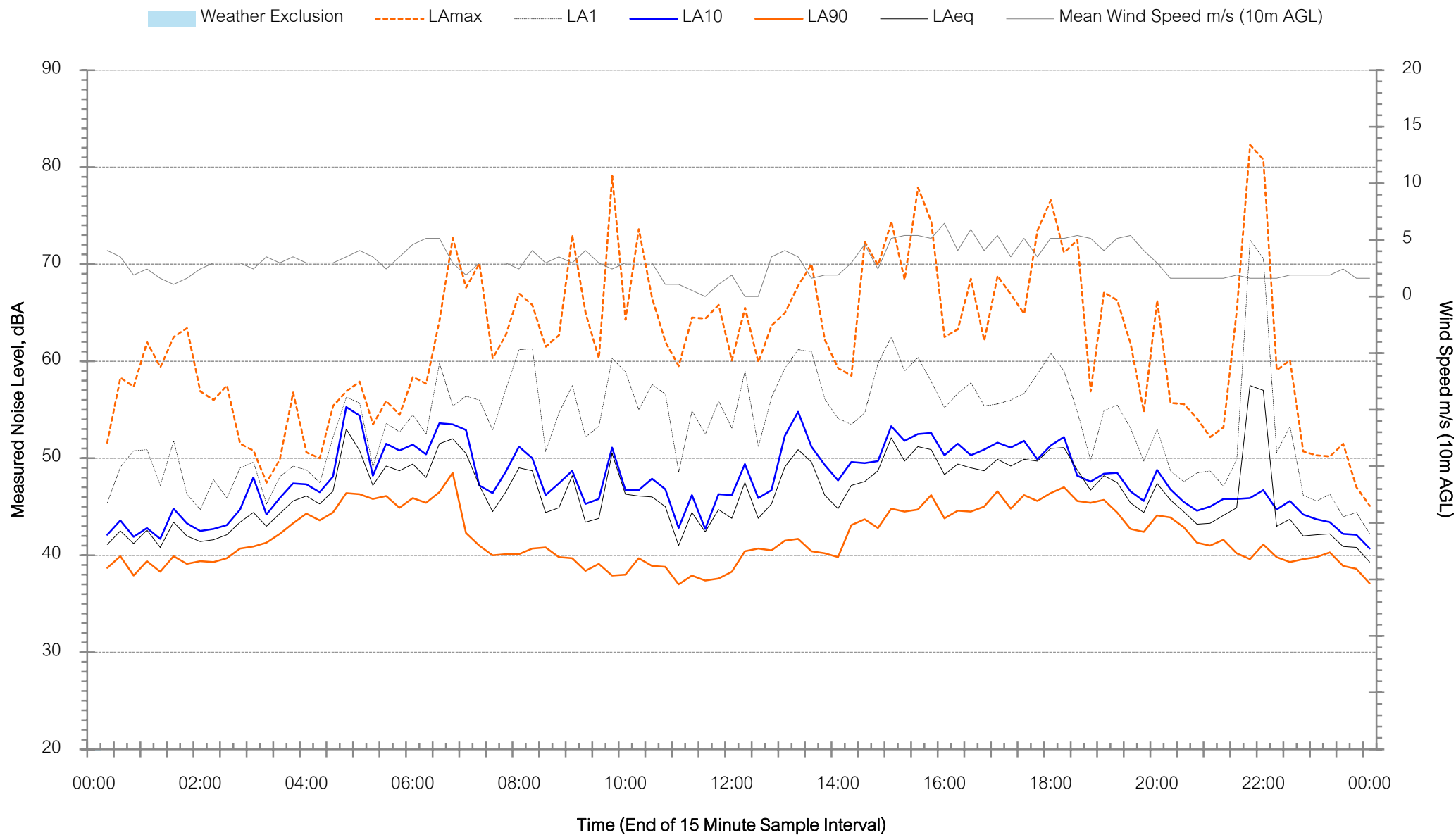
Background Noise Levels

330 Ramsay Road, Kemps Creek (EPA 6) - Thursday 14 March 2024



Background Noise Levels

330 Ramsay Road, Kemps Creek (EPA 6) - Friday 15 March 2024



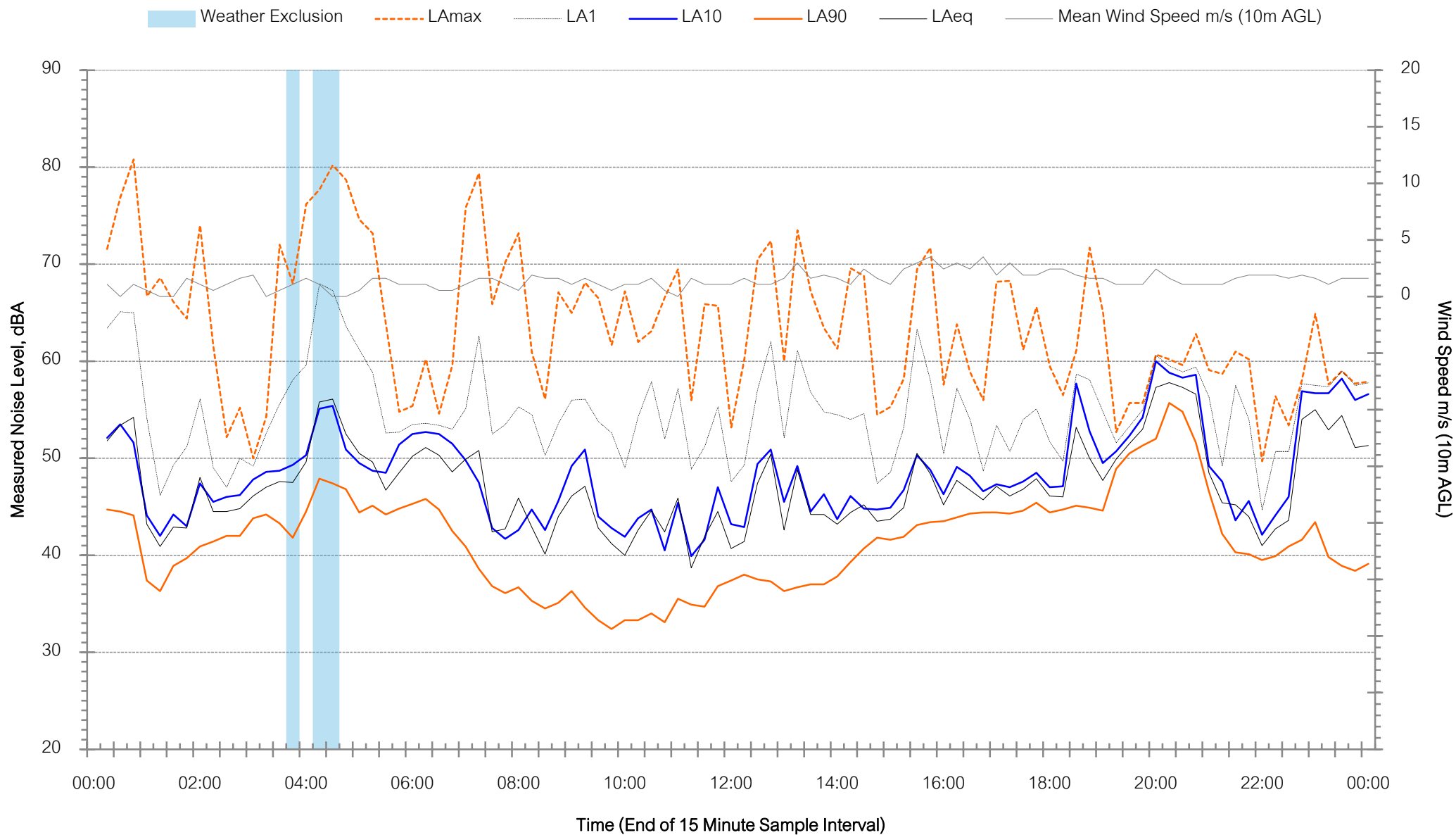
Background Noise Levels

330 Ramsay Road, Kemps Creek (EPA 6) - Saturday 16 March 2024



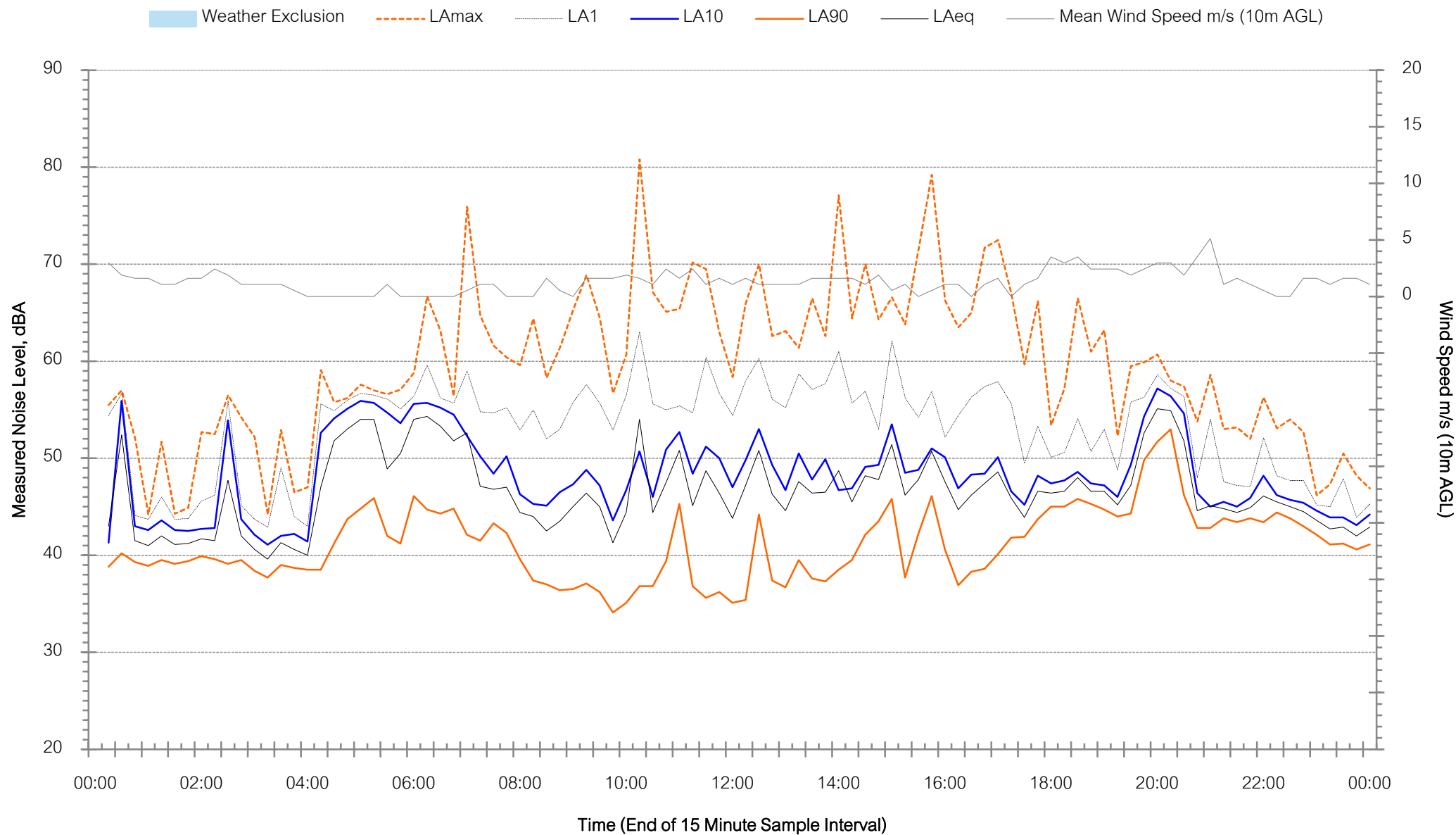
Background Noise Levels

330 Ramsay Road, Kemps Creek (EPA 6) - Sunday 17 March 2024



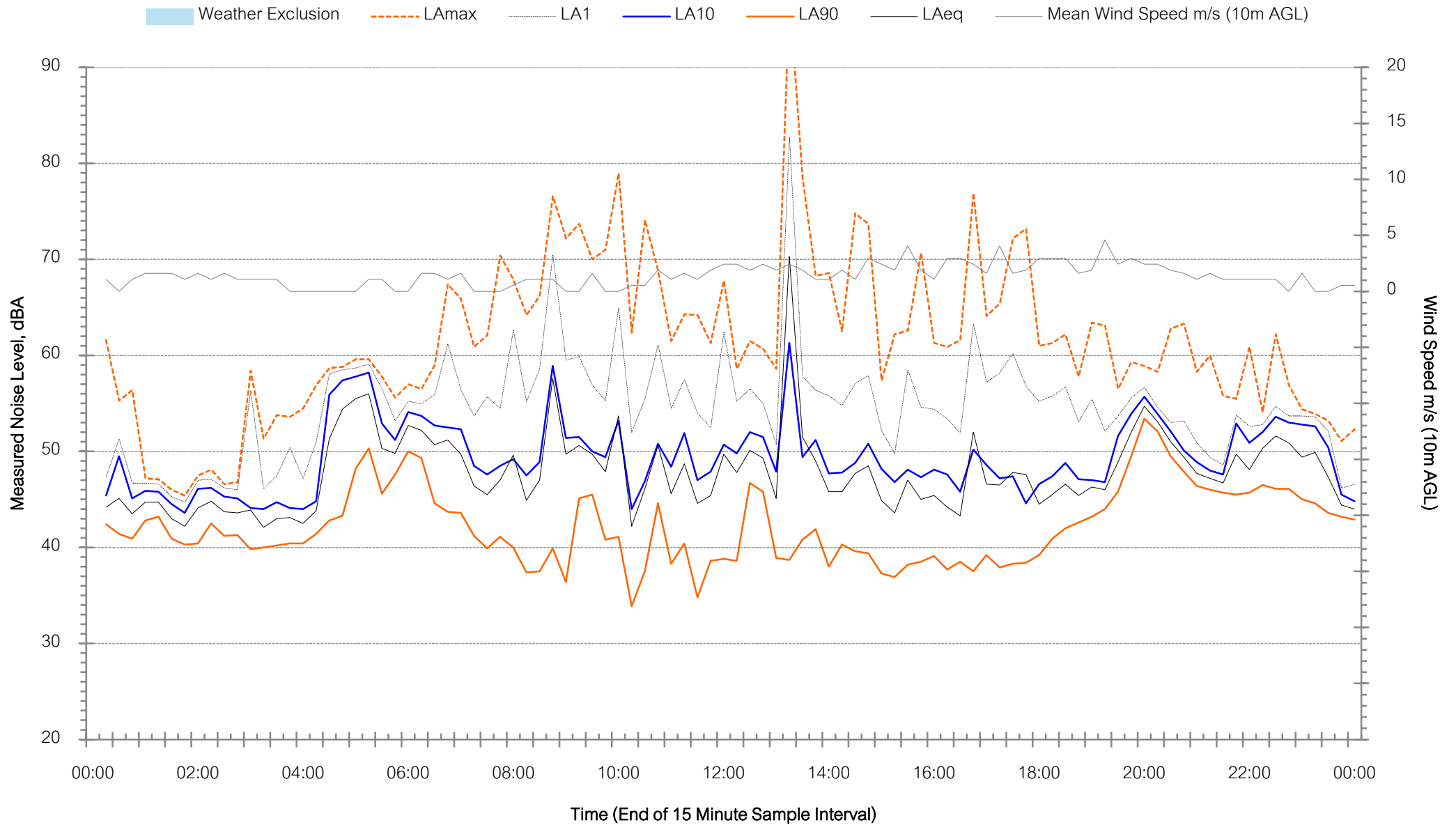
Background Noise Levels

330 Ramsay Road, Kemps Creek (EPA 6) - Monday 18 March 2024



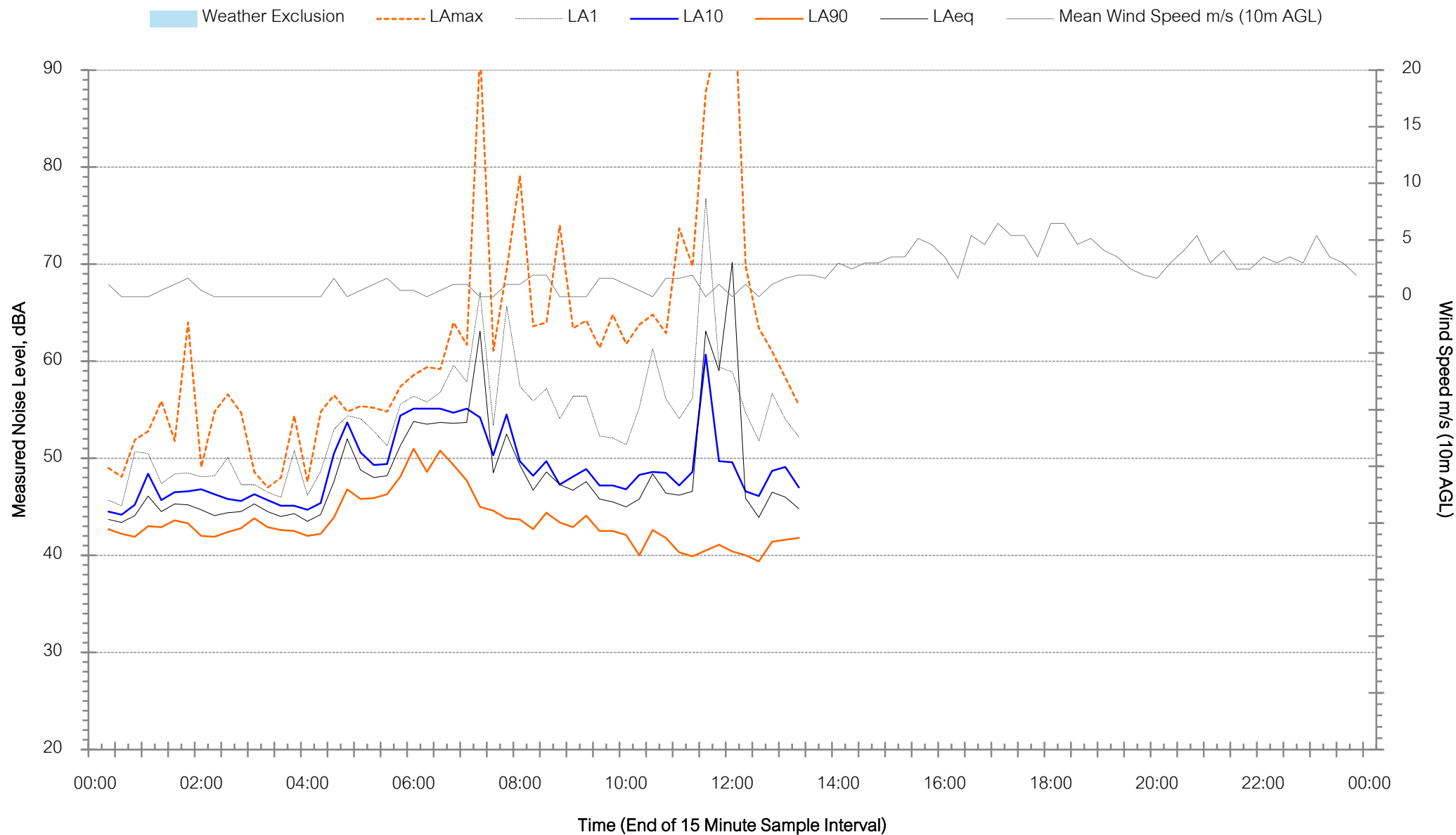
Background Noise Levels

330 Ramsay Road, Kemps Creek (EPA 6) - Tuesday 19 March 2024



Background Noise Levels

330 Ramsay Road, Kemps Creek (EPA 6) - Wednesday 20 March 2024



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Noise Monitoring Assessment

CSR Advanced Manufacturing Hub
Badgerys Creek, NSW
Quarter Ending August 2024



Document Information

Noise Monitoring Assessment

CSR Advanced Manufacturing Hub

Badgerys Creek, NSW

Quarter Ending July 2024

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APPENDIX A – GLOSSARY OF TERMS		

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1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by PGH Bricks & Pavers Pty Limited (PGH) to complete a Noise Monitoring Assessment (NMA) for the CSR Advanced Manufacturing Hub (CSR) at 235 Martin Road, Badgerys Creek, NSW.

This assessment has been undertaken for the quarterly period ending July 2024, and forms part of the annual noise monitoring program to address conditions outlined in the Consolidated Consent PA 10_0014 (the 'Consent') and Environmental Protection Licence #684 (EPL) noise limits.

The NMA has quantified potential operational 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 #684 (EPL), October 2023;
- Badgerys Creek Brick Quarry and Brick Making Project Noise Management Plan (BRK-BAD-Noise Management Version 7, 21/02/2023);
- NSW Government Department of Planning and Environment, Project Approval (PA) 10_0014, January 2022; 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**.

1.1 Locality

CSR Advanced Manufacturing Hub is located at 235 Martin Road, Badgerys Creek, 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 the EPL (#684). The monitoring locations with respect to CSR are presented in the locality plan shown in **Figure 1**.

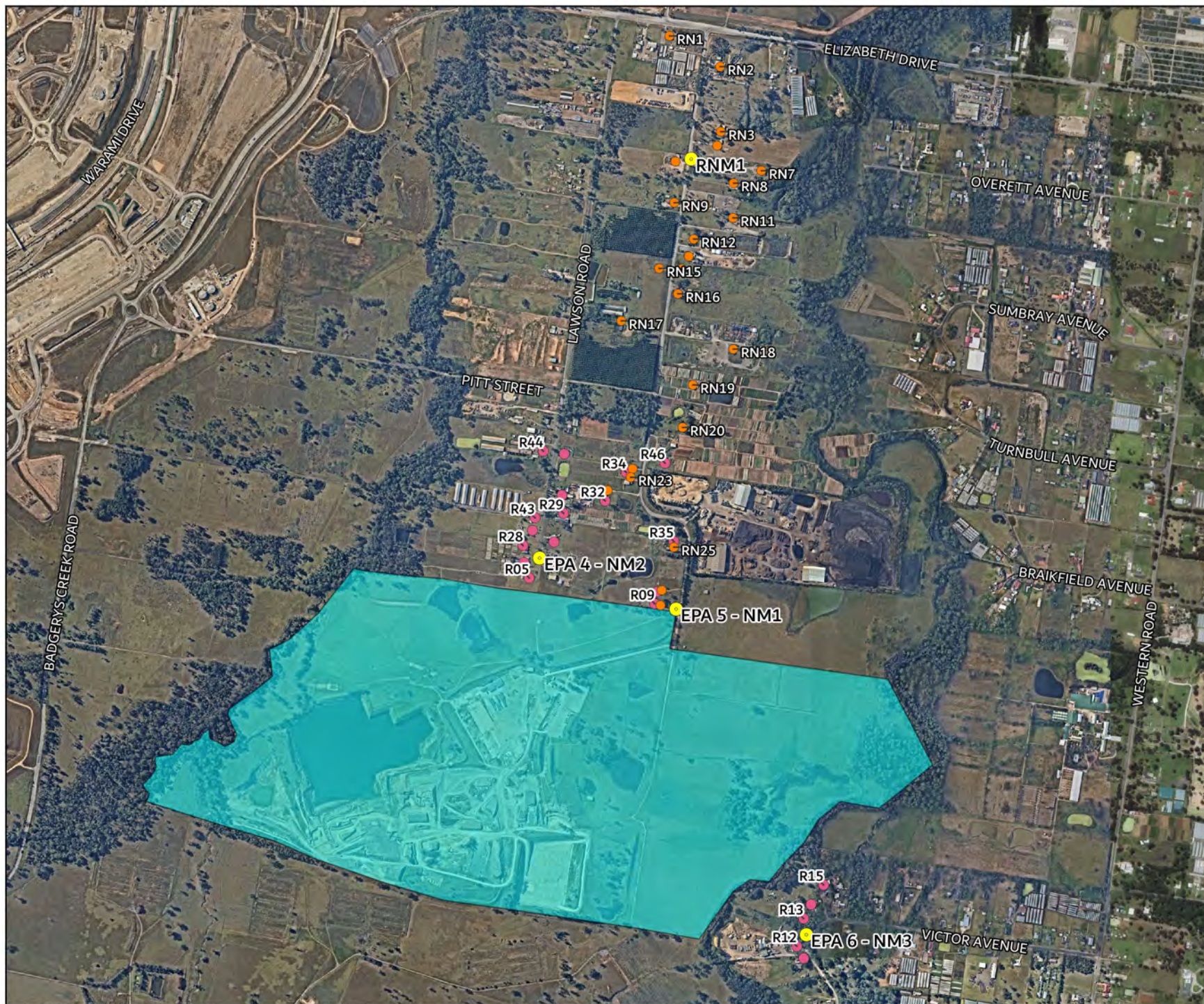
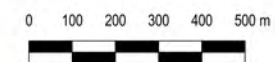


FIGURE 1
LOCALITY PLAN
MAC221719-01
CSR Advanced
Manufacturing Hub
Badgerys Creek, NSW

KEY

- Site Boundary
- Attended Monitoring Locations
- Consent Locations
- Traffic Locations



2 Noise Criteria

2.1 EPL Noise Limits

Section L4 of the project EPL (EPL #684) 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 premises (excluding mobile plant) must not exceed:

- a) An LA10 (15 minute) noise emission criterion of 55 dB(A) (0700 to 2200) Monday to Saturday and (0800 to 2200) Sunday and Public Holidays; and*
- b) An LA10 (15 minute) noise emission criterion of 40 dB(A) at all other times, except as expressly provided by this licence.*

L4.2 Noise from the operation of mobile plant must not exceed:

- a) An LA10 (15 minute) noise emission criterion of 50 dB(A) (0700 to 2200) Monday to Saturday and (0800 to 2200) Sunday and Public Holidays; and*
- b) An LA10 (15 minute) noise emission criterion of 40 dB(A) at all other times, except as expressly provided by this licence.*

L4.3 Noise from the premises is to be measured or computed at the most affected point on or within the residential property boundary or, if that is more than 30 meters from the residence, at the most affected point within 30 meters of the residence to determine compliance with condition L4.1. 5 dB(A) must be added if the noise is tonal or impulsive in character.

L4.4 Noise generated at the premises that is measured at each noise monitoring point established under this licence must not exceed the noise levels specified in Column 4 of the table below for that point during the corresponding time periods specified in Column 1 when measured using the corresponding measurement parameters listed in Column 2.

Table 1 EPL Noise Limits¹

Receiver	Location Description	Time Period	Noise Level Parameter	
			dB LAeq (15min)	dB LAF (max)
EPA Point 4	255 Lawson Road, Badgerys Creek, 2555	Morning Shoulder	42	N/A
		Day	42	N/A
		Evening	41	N/A
		Night	38	52
EPA Point 5	217 Martin Road, Badgerys Creek, 2555	Morning Shoulder	43	N/A
		Day	45	N/A
		Evening	40	N/A
		Night	38	52
EPA Point 6	50 Victor Avenue, Kemps Creek, 2178	Morning Shoulder	43	N/A
		Day	43	N/A
		Evening	43	N/A
		Night	38	52

Note 1: Noise criteria adopted from the EPL (EPL #684).

L4.5 For the purpose of the condition above:

- a) *Morning shoulder means the period from 5am and 7am Monday to Saturday and the period from 5am to 8am Sunday and public holidays.*
- b) *Day means the period from 7am to 6pm Monday to Saturday and the period from 8am to 6pm Sunday and public holidays.*
- c) *Evening means the period from 6pm to 10pm.*
- d) *Night means the period from 10pm to 5am Monday to Saturday and the period from 10pm to 5am Sunday and public holidays.*

2.2 Consent Noise Criteria

2.2.1 Operations

Schedule 3, Condition 5 of the consent 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, there are separate criteria relating to each period.

Table 2 Consent Noise Criteria ¹					
Receiver (EPA Reference)	Morning Shoulder	Day	Evening	Night ²	
	dB LAeq(15min)			dB LA1(max) ³	
R9, R25, R35 (EPA Point 5)	43	45	40	38	52
R5, R26, R27, R28, R29, R30, R31, R32, R34, R42, R43, R44, R45, R46 (EPA Point 4)	42	42	41	38	52
R11, R12, R13, R14, R15 (EPA Point 6)	43	43	43	38	52
All other residences	N/A	40	35	35	52

Note 1: Noise criteria adopted from the Consent.

Note 2: Monitoring periods are defined in Section L4.5 of the EPL #684.

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

2.2.2 Road Noise Criteria

Schedule 3, Condition 6 of the of the consent relating to road traffic noise are reproduced in **Table 3**.

Table 3 Road Traffic Noise Criteria dB(A)		
Road	Assessment Criteria (dBA)	
	Day and Evening	Night
	LAeq(1hour)	LAeq(1hour)
Prior to Martin Road and Elizabeth Road Intersection Upgrade		
Martin Road, Badgerys Creek, NSW	60	55
Following Martin Road and Elizabeth Road Intersection Upgrade		
RN5	61	55
RN9, RN21	62	55
RN14, RN22	63	55
RN16	64	55
All other residence on Martins Road	60	55

Note: The noise generated by the project is to be measured in accordance with the relevant procedures in the NSW Road Noise Policy.

Section 7.5.2 of the projects Noise Management Plan (NMP BRK-BAD-Noise Management Version 7, 21/02/2023) is reproduced below:

Road traffic noise monitoring will be conducted on a quarterly basis at one location for the first year of Phase 1 operations, or in response to any received complaints at a road traffic monitoring location along Martin Road, representative of noise sensitive receivers lodging the complaint.

Noise monitoring would ideally consist of attended monitoring over a one-hour period to accurately identify and quantify Project-related trucks against ambient (non-project) traffic flows. Alternatively, where unattended logging is the preferred approach, the logging device should satisfy specifications of a Type 1 sound level analyser and contain audio capabilities for source identification that can be cross checked with truck ingress and egress data from the site.

Furthermore, in-field noise measurements should be validated using calculation methodologies that are in accordance with Calculation of Road Traffic Noise (CORTN) algorithm (or equivalent), as developed by the UK Department of Transport or where traffic flows are <10,000 vehicles per day a model that can accurately calculate low flow noise levels such as US Federal Highways Administration TNM (or equivalent)

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

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3 Methodology

3.1 Operator Attended Noise Monitoring

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). Attended 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 $\pm 0.5\text{dBA}$.

Attended 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 three (3) locations (EPA 4, EPA 5, EPA 6) on Monday 13 May 2024 during the day period to satisfy the requirements of the NMP and EPL. Attended measurements were not conducted during the evening and night periods due to the site not operating between the hours of 6pm and 7am.

Extraneous noise sources were excluded from the attended analysis to determine the $\text{LAeq}(15\text{min})$ site 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.

3.2 Attended Road Traffic Noise Monitoring

Attended road traffic monitoring was conducted on the boundary of 50 Martin Road, Badgerys Creek, NSW (RNM-1) using a Svantek Type 1, 971 noise analyser on Monday 13 May 2024. Noise levels obtained at the monitoring location are considered representative of 50 Martin Road, Badgerys Creek, NSW.

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4 Results

4.1 Traffic Monitoring Results

To assess road traffic noise levels associated with the site, a one (1) hour attended measurement was conducted on the boundary of 50 Martin Road, Badgerys Creek, NSW (RNM1), approximately 7m from the road centreline.

Traffic flows have been provided by CSR and included in the report to determine CSR traffic contribution along Martin Road during the measurement period. The results of the road traffic noise measurements on Monday 13 May 2024 are summarised in **Table 4** showing the overall ambient LAeq(1hour) noise level, the CSR contributed LAeq(1hour) noise level and the relevant noise limit.

Results of the road traffic noise measurements identify that traffic noise levels related to CSR at RNM1 are below the relevant criteria.

Table 4 Road Noise Survey Results – RNM1 (Daytime¹)

Date & Time	Measured dB LAeq(1hour)	CSR Contribution dB LAeq(1hour)	Compliance Limit dB LAeq(1hour)
13/05/2024 13:44	77 ²	59 ³	60

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.

Note 2: Overall ambient level.

Note 3: CSR contributed road traffic noise level from (six (6) CSR truck passbys during the 1-hour period).

4.2 Road Traffic Compliance Assessment

Results of the road traffic noise measurements are calculated to all identified receivers showing the offset distance and the received level in **Table 5**. Results identify that traffic noise levels related to CSR at this location are below the consent criteria.

Table 5 Calculated Road Traffic Noise Levels (Daytime¹)

RTN ID	CSR Contribution dB LAeq(1hour) at RNM1	Offset from Road (m)	CSR Contribution dB LAeq(1hour) at Receiver	Compliance Limit dB LAeq(1hour)
RN1, RN19, RN24	59	120	46	60
RN2, RN12, RN13, RN26, RN27	59	60	49	60
RN3, RN4	59	90	48	60
RN5, RN6 RN15, RN25	59	45	51	60
RN7	59	250	43	60
RN8, RN11	59	160	45	60
RN9, RN14, RN16, RN21 RN22, RN23	59	30	52	60
RN10	59	75	48	60
RN17	59	140	46	60
RN18	59	240	43	60
RN20	59	105	47	60

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 Prevailing Meteorological Conditions

Weather data for the noise assessment period was sourced from Badgerys Creek AWS Site 67108 as well as operator observations at each measurement location. The data was used to determine prevailing meteorological conditions at the time of the attended measurements. Meteorological data is presented in **Table 6**. Furthermore, wind speed at the microphone height satisfies requirements of Fact Sheet A of the NPI.

Table 6 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)
13/05/2024 12:29	SW	7.6	S	2.8
13/05/2024 12:57	WSW	7.0	S	2.4
13/05/2024 13:23	SW	7.6	S	2.0

4.4 Assessment Results - Location EPA 4

The monitored noise level contributions and observed meteorological conditions at Location EPA 4 are presented in **Table 7**.

Table 7 Operator-Attended Noise Survey Results - Location EPA 4

Date	Time (hrs) ¹	Descriptor (dBA re 20µPa)					Meteorology	Description and SPL, dBA
		L _A max	L _A 1	L _A 10	L _A 90	L _A eq		
13/05/2024	12:29 (Day)	67	59	55	45	52	WD: S WS: 2.8m/s Rain: Nil	Aircraft 48-67
								Wind in vegetation 43-56
								Local residential noise 43-48
								Birds 46-54
								CSR inaudible
		CSR Site L _A eq(15min) Contribution						<35
		CSR Site L _A 10(15min) 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 EPA 5

The monitored noise level contributions and observed meteorological conditions at Location EPA 5 are presented in **Table 8**.

Table 8 Operator-Attended Noise Survey Results - Location EPA 5

Date	Time (hrs) ¹	Descriptor (dBA re 20μPa)					Meteorology	Description and SPL, dBA
		L _{Amax}	L _{A1}	L _{A10}	L _{A90}	L _{Aeq}		
13/05/2024	13:23 (Day)	85	76	57	43	61	WD: S WS: 2.0m/s Rain: Nil	Birds 42-54
								Insects <42
								Wind in vegetation 42-48
								Aircraft 42-85
								Traffic 42-81
								CSR haul trucks 44-48
								(5 seconds)
								CSR impacts 51-54
								(5 seconds)
								CSR Site L _{Aeq} (15min) Contribution
CSR Site L _{A10} (15min) Contribution							<40	

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 EPA 6

The monitored noise level contributions and observed meteorological conditions at Location EPA 6 are presented in **Table 9**.

Table 9 Operator-Attended Noise Survey Results - Location EPA 6								
Date	Time (hrs) ¹	Descriptor (dBA re 20µPa)					Meteorology	Description and SPL, dBA
		L _A max	L _A 1	L _A 10	L _A 90	L _A eq		
13/05/2024	12:57 (Day)	81	70	56	46	58	WD: S WS: 2.4m/s Rain: Nil	Aircraft 45-62
								Birds 45-56
								Wind in vegetation 41-47
								Traffic 46-81
								Industrial noise 44-52
								CSR inaudible
CSR Site L _A eq(15min) Contribution								<36
CSR Site L _A 10(15min) Contribution								<40

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.

4.7 Operational Compliance Assessment

The monitored noise level contributions are compared against the relevant criterion for the assessment are presented in **Table 10**.

Table 10 Operational Compliance Assessment							
Receiver Location	Time (hrs) ¹	CSR Site Contribution L _{A10} (15min)	EPL Limit L _{A10} (15min)	Compliant	CSR Site Contribution L _{Aeq} (15min)	Consent Criteria L _{Aeq} (15min)	Compliant
EPA 4	12:29	<45	50	✓	<35	42	✓
EPA 5	13:23	<40	50	✓	<30	45	✓
EPA 6	12:57	<40	50	✓	<36	43	✓

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

Noise measurements were not conducted during the evening or night periods at any location as CSR was not operational during these periods.

5.1 Assessment Results – Location RNM1

Offset calculations have been applied to assess attenuation of CSR traffic to residential receivers along Martin Road, Badgerys Creek. Monitoring on Monday 13 May 2024 identified that CSR traffic movements remain below relevant noise limits during the daytime measurement period at location RNM1.

Extraneous sources such as traffic, wind in vegetation, birds, insects, other industrial noise and aircraft were audible during the measurement period.

5.2 Assessment Results - Location EPA 4

Monitoring on Monday 13 May 2024 identified that CSR activities were inaudible during the measurement period at location EPA 4. Therefore, site the contribution was estimated to be below the relevant noise limits during the assessed day period.

Extraneous sources such as aircraft, wind in vegetation, local residential noise and birds were audible during the measurement period.

5.3 Assessment Results - Location EPA 5

Monitoring on Monday 13 May 2024 identified that CSR activities were audible for approximately 10 seconds during the measurement period at location EPA 5. CSR activities were inclusive of truck movements entering, exiting site and site impacts from construction. The site contribution was estimated to be below the relevant noise limits during the assessed day period.

Extraneous sources such as birds, insects, wind in vegetation, aircraft and traffic were audible during the measurement period.

5.4 Assessment Results - Location EPA 6

Monitoring on Monday 13 May 2024 identified that CSR activities were inaudible during the measurement period at location EPA 6. Therefore, site the contribution was estimated to be below the relevant noise limits during the assessed day period.

Extraneous sources such as aircraft, birds, wind in vegetation, traffic and industrial 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 Limited (PGH) for the CSR Advanced Manufacturing Hub (CSR) at 235 Martin Road, Badgerys Creek, NSW. The assessment was completed to assess the site's compliance with the EPL noise limits and consent noise criteria for the quarter ending July 2024.

Operator attended noise monitoring was undertaken on Monday 13 May 2024 at three (3) representative receiver locations. The assessment has identified that noise emissions generated by CSR were measured to be below the relevant noise criteria throughout the survey period, satisfying the relevant noise conditions.

Road traffic noise levels were influenced by extraneous noise sources such as insects, birds and local road traffic not associated with CSR. Notwithstanding, CSR road traffic noise levels comply with the relevant road noise criteria.

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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**.

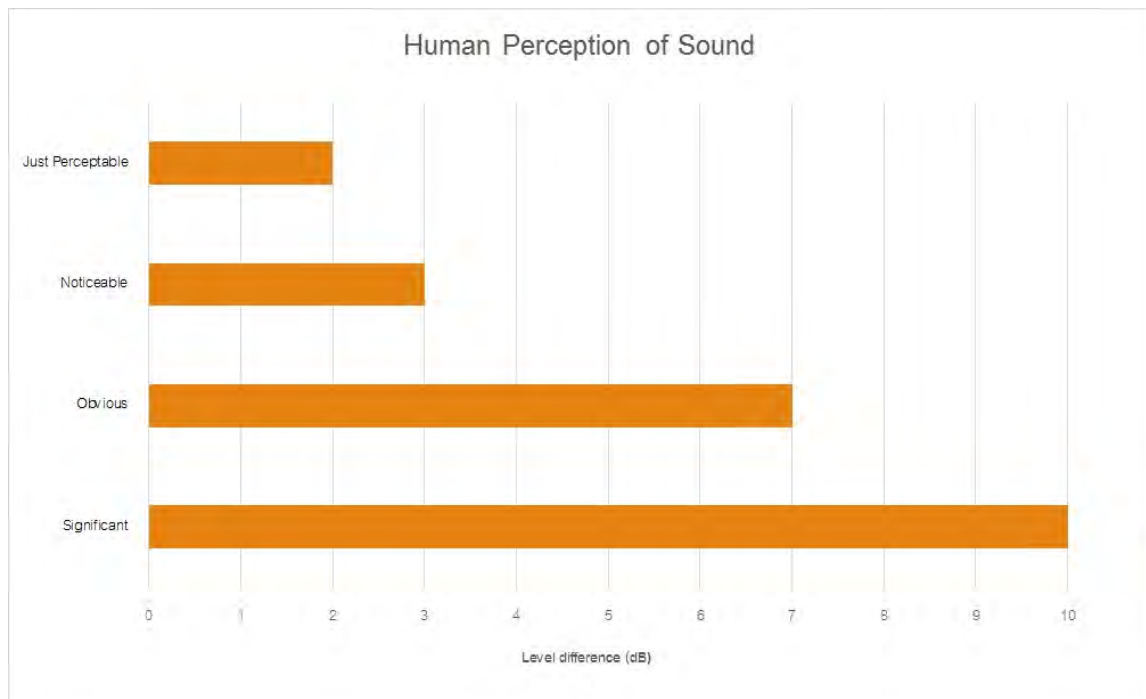
Table A1 Glossary of Acoustical Terms	
Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI 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



Muller Acoustic Consulting Pty Ltd

PO Box 678, Kotara NSW 2289

ABN: 36 602 225 132

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www.mulleracoustic.com



Appendix H: Correspondence to NRAR

From: [Nelma Arancibia](#)
To: [Alex Bowlay](#)
Cc: [Andy Mannall](#)
Subject: Badgerys Creek EU- Clause 1.2 (g) water data
Date: Tuesday, 30 January 2024 10:33:00 AM
Attachments: [CSR Water Tracking January 2024.xlsx](#)
[image001.png](#)

Hi Alex

In accordance with clause 1.2 (g) (i) of the varied UE in placed at Badgerys Creek, we are required to provide water monitoring data collected every 6 months until 30 January 2027.

Hope this meets the requirement and if you need more information, please do not hesitate to contact me.



Nelma Arancibia

Major Projects Manager | CSR Property

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NARANCIBIA@csr.com.au

Please consider the environment before printing this email.

This email is confidential. If received in error, please delete it from your system.

Date	Flowmeter Start	Flowmeter end of Day	Monthly Volume (KL)	Comments
1/12/2012	588,025	588,025	-	Q4: 1st December 2022 - 3rd March 2023
2/03/2023	588,025	593,378	5,353	Q4: 1st December 2022 - 3rd March 2023
30/06/2023	593,378	610,114	16,736	Q1: March 2023
25/07/2023	610,114	613,895	3,781	Q2: July 2023
24/01/2024	613,895	642,641	28,746	Q2: July 2024

Appendix I: Correspondence to DPE

CSR LIMITED

Development Name Badgerys Creek
Consent Number MP10_0014 Mod 5
Notice Schedule 5 Condition 10 Non-compliance Notification
Schedule 2 Condition 12 – Truck movement exceedance
Issued by Nelma Arancibia – CSR Limited
Issued date 8th September 2023

Schedule 5 Condition 10 Non-Compliance Notification

Non-Compliance Notification

Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be made in writing through the Department's Major Projects website and identify the project (including the development application number and name), set out the condition of this approval that the project is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.

Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

Condition of this approval that the project is non-compliant.

CSR is notifying the Department of Planning & Environment of a non-compliance for the development, the non-compliance is identified under

Schedule 2 Condition 12 of the consent which notes;

12. The Applicant must not exceed the total truck movements detailed in Table 2.

Table 2: Total Truck Movements

Transport Route Stage	Development Phases	Day	Total truck movements ^a
Prior to the upgrade of the Martin Road-Elizabeth Drive Intersection	1,2 and 3	Monday to Friday	120
		Saturday	40
		Sundays	40
Following completion of the Martin Road-Elizabeth Drive Intersection upgrade	1,2 and 3	Monday to Friday	800
		Saturday	358
		Sundays	200
	4	Monday to Friday	366
		Saturday	98
		Sunday	0

^a Note: each truck entering or exiting the site is counted as a separate movement.

The site is currently operating under 'Prior to the upgrade of the Martin Road-Elizabeth Drive intersection'.

Which limits the traffic movements to:

CSR LIMITED

TRINITY 3, 39 DELHI ROAD, NORTH RYDE NSW 2113 AUSTRALIA
LOCKED BAG 1345, NORTH RYDE BC NSW 1670 AUSTRALIA
T 61 2 9235 8000 F 61 2 8362 9012

CSR.COM.AU

ABN 90 000 001 276



Monday to Friday = 120 movements per day
 Saturdays = 40 movements per day
 Sunday = 40 movements per day (fill only)

Noncompliance

During our yearly review it was noted that the truck movement limitation was exceeded on a few occasions as shown on the table below;

Table 1 – Exceedances

Date	nature of material transported	weight in Tonnage	number of trucks (per day)	movements
Saturday, 25 June 2022	Raw material	1118.64	30	60
Monday, 27 June 2022	Raw material	2426.22	67	135
Saturday, 16 July 2022	Raw material	827.00	22	43
Saturday, 20 August 2022	Raw material	991.76	26	52
Saturday, 27 August 2022	Raw material	1355.83	36	72
Saturday, 15 October 2022	Raw material	968.01	25	50
Saturday, 29 October 2022	Raw material	873.00	28	56
Saturday, 19 November 2022	Raw material	1473.78	39	78
Saturday, 4 February 2023	Raw Material	1171.65	30	60
Saturday, 11 February 2023	Raw Material	1219.74	31	62
Saturday, 22 April 2023	Raw Material	1467.00	37	74
Saturday, 3 June 2023	Raw Material	1023.21	26	52
Saturday, 15 July 2023	Raw Material	1080.10	27	54
Saturday, 22 July 2023	Raw Material	1943.50	53	106

The condition of limiting the truck movements was established to minimise the risk of trucks exiting the site via Martin Road and turning right onto Elizabeth Drive into oncoming traffic travelling East, until the signalised intersection is upgraded.



Figure 11 | Proposed conceptual Martin Road/Elizabeth Drive intersection geometry

*extract figure from the Badgerys Creek Mod 3 and 4 Assessment Report – Prepared by DPIE

CSR LIMITED

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 LOCKED BAG 1345, NORTH RYDE BC NSW 1670 AUSTRALIA
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 ABN 90 000 001 276



CSR has been removing raw material from the development to its other brick making facilities for the purpose of bricks making.

All the exceedances (but 4) were raw material being transported to our Bringelly PGH brick facility, all trucks exiting the site were exiting the site via martin road and turning left onto Elizabeth Drive, as shown on the figures below.



Figure 1 – Travel paths between CSR Badgerys Creek and PGH Bringelly



Figure 2 – intersection Martin Road/Elizabeth Drive

CSR LIMITED

TRINITY 3, 39 DELHI ROAD, NORTH RYDE NSW 2113 AUSTRALIA
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T 61 2 9235 8000 F 61 2 8362 9012

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ABN 90 000 001 276



The process put in place to capture and notify the truck movement and prevent exceedances has not worked as desired which allowed for the exceedance to take place, we have now changed our process to prevent any further exceedances.

Measures put in place to prevent any further exceedances.

A heavy vehicle automated monitoring system was installed and commissioned at the development. The system is installed at the main central access gate into the site (refer to *Figure 3*) to ensure all heavy vehicle movements are recorded, as vehicles drive across the laser (which is positioned at a height to exclude light vehicles) the interruption registers a movement and record a timestamp. This occurs on both the entry and exit lanes.

Once the truck numbers are approaching the daily limit, a notification is sent to the site manager noting that we are approaching the daily limit, then communication is sent to the site contractor noting that traffic is to cease (incoming or outgoing heavy vehicle movements) when limits is reached, and when the daily limit has been reached, a red light will be activated and the main access gate will automatically close.

This lockout will remain until the next day when heavy vehicle movements restarts.



Image 1: Monitoring Unit



Image 2: Display screen

CSR LIMITED

TRINITY 3, 39 DELHI ROAD, NORTH RYDE NSW 2113 AUSTRALIA
LOCKED BAG 1345, NORTH RYDE BC NSW 1670 AUSTRALIA
T 61 2 9235 8000 F 61 2 8362 9012

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Figure 3 – Site layout

Nelma Arancibia
Major Projects Manager | CSR Property

CSR LIMITED

TRINITY 3, 39 DELHI ROAD, NORTH RYDE NSW 2113 AUSTRALIA
LOCKED BAG 1345, NORTH RYDE BC NSW 1670 AUSTRALIA
T 61 2 9235 8000 F 61 2 8362 9012

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ABN 90 000 001 276



Appendix J: Dewatering Management Plan

CSR Building Products Limited
Locked Bag 1345
North Ryde BC, NSW 1670

Project 92442.00
17 May 2024
R.001.Rev0
ECR

Attention: Nelma Arancibia
Email: narancibia@csr.com.au

Report on Geotechnical Monitoring and Assessment Quarry Pit Dewatering (Pit 2) 235 Martin Road, Badgerys Creek NSW

1. Introduction

This report presents the results of geotechnical monitoring and assessment undertaken for the dewatering of Pit 2 (the Pit) at 235 Martins Road, Badgerys Creek. The work was commissioned 2 December 2020 by Nelma Arancibia of CSR Building Products Limited and was undertaken in accordance with Douglas Partners Pty Ltd (Douglas) proposal MAC200282.P.001.Rev0 dated 16 September 2020.

The scope of work included a baseline drone survey carried out 10 December 2020 and a subsequent survey 27 March 2024 following the dewatering of the Pit. The drone surveys utilised photogrammetry techniques to create a three dimensional model for analysis. The monitoring and assessment are understood to be required as a condition of consent during the dewatering of the pit. Furthermore, the existing fill within the pit is proposed to be removed followed by the backfilling of the whole pit and stability assessment is required to plan safe backfilling methodology.

2. Site description

Pit 2 is one of three quarry pits within the site historically used for brickmaking (See Figure 1). Pit 2 is an irregular shaped area of approximately 5.3 ha with maximum north-south and east-west dimensions of 375 m and 200 m respectively. The Pit is estimated to be about 20 – 25 m in depth (from the highest parts of the surrounding batters) however the base of the pit was still covered with some water and backfill preventing accurate measurements. The pit was partially backfilled starting in 2007. The backfill was mainly placed in the northern part of the Pit which blocked off a channel which previously connected Pit 2 to Pit 1. Some of the southern part of the pit was also partially backfilled leaving an unfilled void in the central part of the Pit which subsequently filled with water. (Figures 2 and 3 show the pit before and after the partial backfilling. Dewatering of the pit was nearly complete during our 27 March 2024 drone survey. A detailed description of the different parts of the Pit is presented in Section 5.



Figure 1: Quarry site showing location of previous quarry pits



Figure 2: Pit 2 in January 2005 prior to backfilling (left), and March 2024 (right)

3. Site Geology

The NSW Seamless Geological Series indicates that, prior to excavation, Pit 2 was partially underlain by Bringelly Shale in the south eastern part of the site and by alluvial deposits in the north western part of the site (see Figure 3). The Triassic Aged Bringelly Shale of the Wianamatta Group typically comprises shale, carbonaceous claystone, claystone, laminite, fine to medium-grained lithic sandstone with occasional coal and tuff. Bringelly shale typically weathers to form clays of medium to high plasticity. The Cenozoic Aged alluvial deposits typically comprise silt, very fine to medium grained, lithic to quartz rich sand and clay.

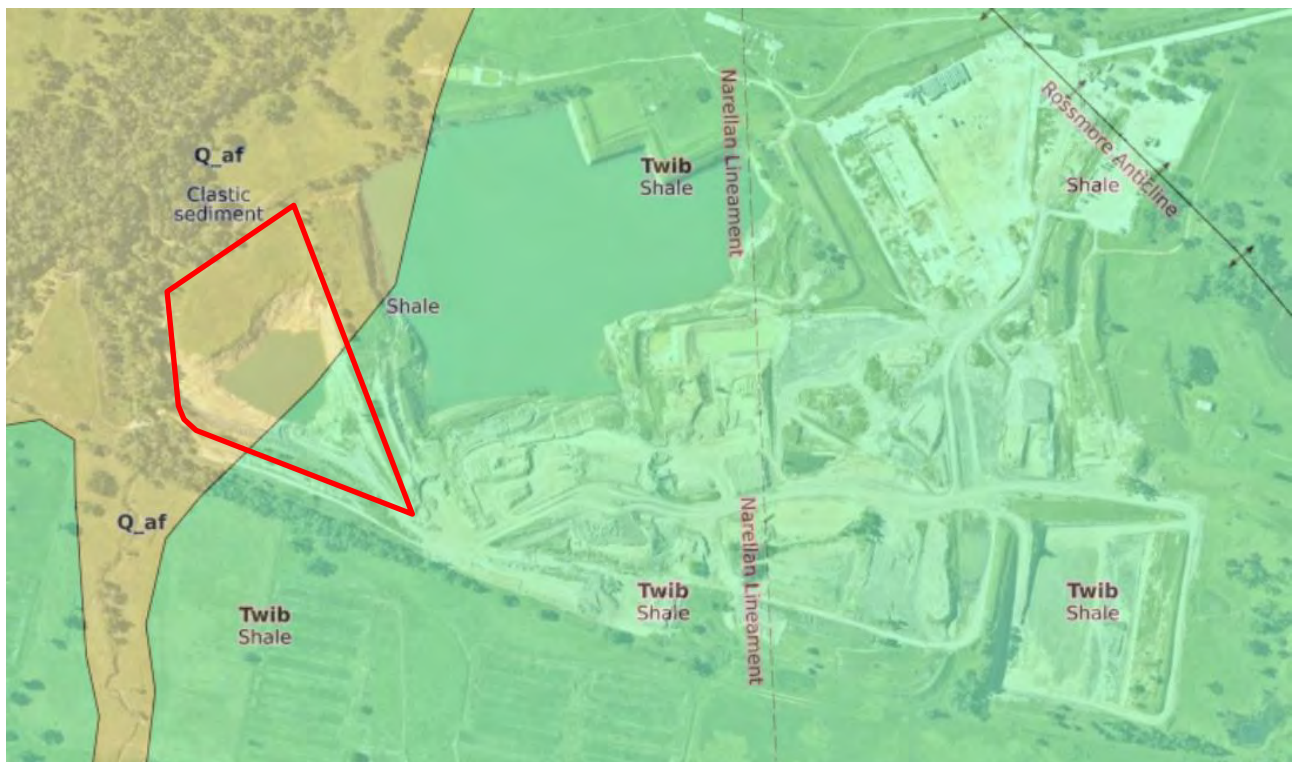


Figure 3: Site geology

4. Field work methods

Photographs of the Pit were captured using a high-resolution camera mounted on a quadcopter drone. The images were subsequently processed using computer based photogrammetry software to derive a millimetre resolution photorealistic 3D model of these areas, along with orthorectified aerial images of the site. The photogrammetry derivatives were georeferenced using ground control points located using a dGPS. It should be noted that Douglas makes no warranties or representation as to the accuracy of this information and has no liability to the client or other third parties relying on this model.

5. Field work results

The locations and descriptions of various site features identified during the inspection are provided in Drawings 1 and 2 attached to this report.

For referencing purposes, the sides of the excavations have referred to as shown in the below Figure 4.



Figure 4: Site feature referencing

It is noted that only the eastern and southern faces of the pit were exposed at the time of the assessment. The north western faces were covered with pit backfill that will be removed during the pit fill process.

5.1 Eastern Face

The exposed portion of the eastern face is approximately 260 m in length and is up to 20 m in height. The face is battered back to an approximate grade of 1.5H to 1V for a height of approximately 20 m. The batter comprises horizontally bedded weathered shale (interbedded siltstone with some sandstone bands). The ground surface above the exposed batter was grass covered with a row of small trees (see Figures 5 and 6).

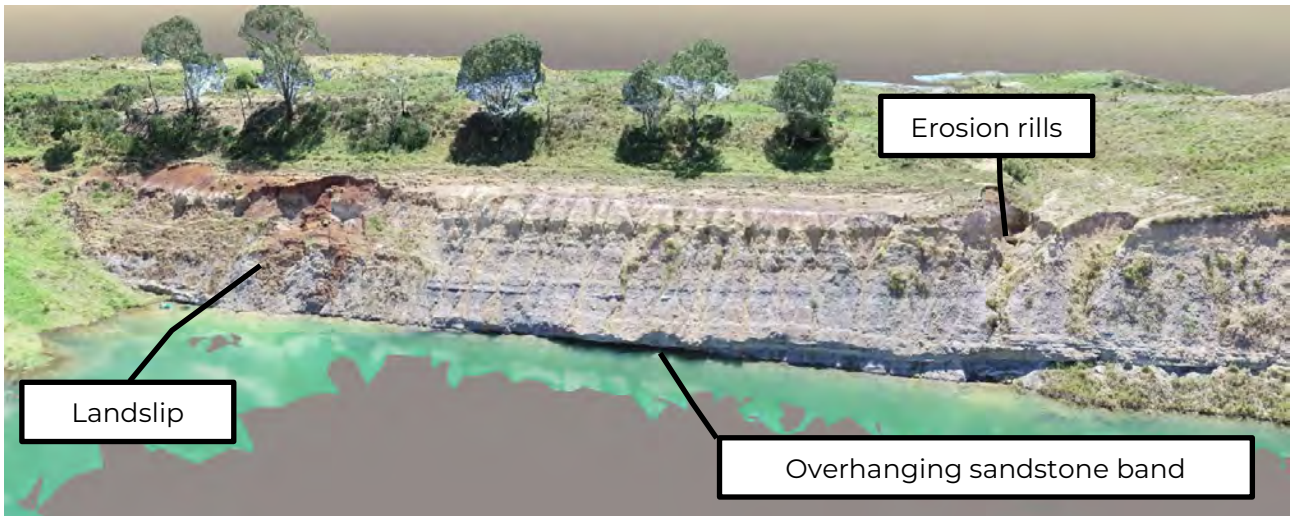


Figure 5: Eastern Face in 2020

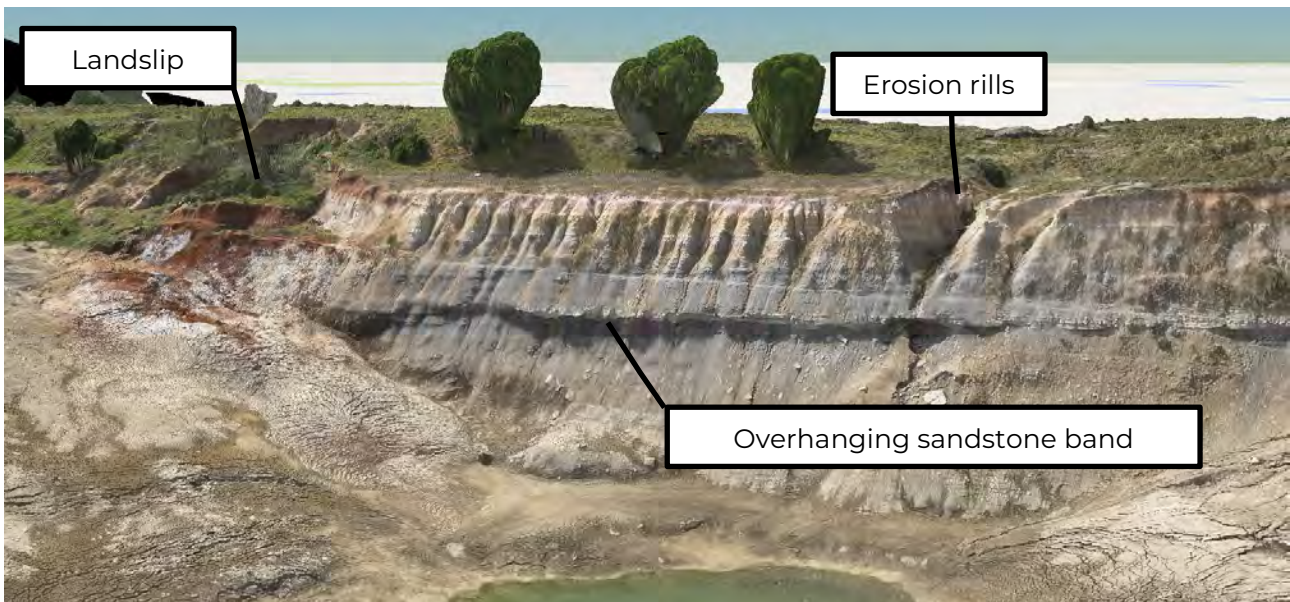


Figure 6: Eastern Face in 2024

The significant observations are summarised as follows:

- Other than near horizontal bedding planes, observations of discontinuities and joints were limited due to the highly weathered nature of the exposed shale and the covering of the faces with loose debris.
- The weathered surface of the batter was significantly scoured with two significant erosion rills up to about 4 m deep.
- A sandstone band approximately 0.5 m thick was observed about halfway up the batter. The siltstone below the stronger sandstone band has weathered and eroded away creating an overhang of up to about 0.5 m.
- A landslide was observed at the northern end of the exposed eastern face. The slip had a head scarp about 18 m wide and 3 m high. The recent survey indicates that the slip has continued to extend and the head scarp regressed up slope approximately 8 m between the initial survey in 2020 to the 2024 survey. (See Figures 7 and 8).



Figure 7: Landslip in eastern face in 2020



Figure 8: Landslip in eastern face in 2024

5.2 Southern face

The exposed portion of the southern face is approximately 250 m in length and is up to 25 m in height (see Figures 9 and 10). The upper 6 – 7 m of the battered is grass covered and laid back to a grade of 2H:1V. The lower portion of the battered face is exposed weathered shale battered back to an approximate grade of 1.5H to 1V. The weathered shale portion of the batter comprises interbedded siltstone with some sandstone bands.

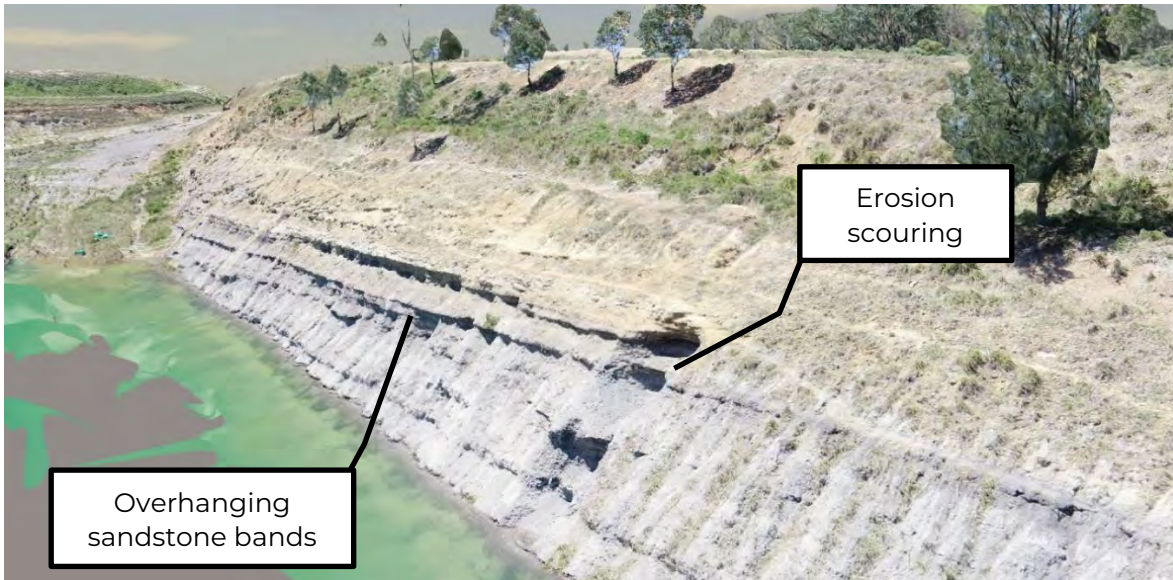


Figure 9: Southern face in 2020

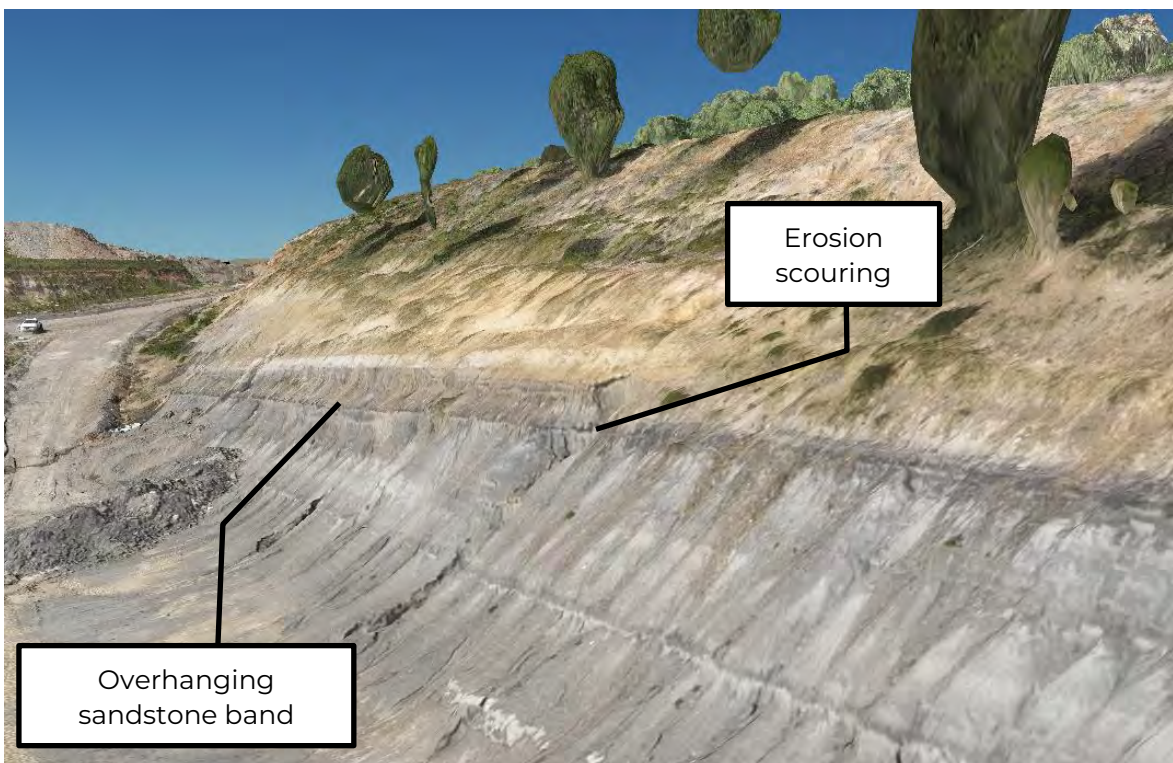


Figure 10: Southern face in 2020

The significant observations are summarised as follows:

- Other than near horizontal bedding planes, observations of discontinuities and joints were limited due to the highly weathered nature of the exposed shale and the covering of the faces with loose debris.
- The weathered surface of the batter was significantly scoured from concentrated water flows with two significant erosion rills, one up to about 2 m deep and the other about 1 m deep.
- Two sandstone bands approximately 0.2 m thick were observed about halfway up the batter. The siltstone below the stronger sandstone band has weathered and eroded away creating a minor overhang of up to about 0.2 m.
- Other than erosion and loose debris on the batter, no signs of instability were observed.

5.3 Internal backfill batters

The northern internal backfill batter is up to 10 – 12 m in height and comprise gravelly clay fill. The batters are at maximum grades of about 1.5H:1V with some sections that are locally steeper and flatter (see Figure 11).



Figure 11: Northern Internal fill batter face in 2024 following dewatering

The southern fill batter is similarly about 10 – 12 m in height comprising gravelly clay fill. The batters are at average grades of about 3H:1V (See Figure 12).



Figure 12: Southern Internal fill batter face in 2024 following dewatering

Evidence of significant movement and slumping of the batter material including headscarps, tension cracking and irregular debris lobes was present over most of the exposed batters which were previously under water.

6. Comments

6.1 Effect of dewatering

The following comments are based on the observations and comparisons of the imagery from before and after the dewatering of the pit:

- The dewatering process does not appear to have affected the stability of the rock batters. The features such as the landslide and erosion scouring have occurred above the previous water levels as a result of lack of drainage to divert water away from the batter faces.
- Notwithstanding, long term exposure of the cut faces to the water has accelerated the weathering and softening of the surficial Bringelly shale which is well known for weathering and breaking down quickly once excavated.
- The instability and movement of the fill batter material was most likely triggered by the dewatering due to a process known as rapid drawdown. It is noted that all the existing fill within the pit will be removed and replaced. Care must be taken in the removal of the fill batters as there is still risk of further instability of the fill batters. Further advice on the excavation of the fill batters is provided in Section 6.3.

6.2 Possible mechanisms for instability

- There is loose debris covering most of the batter faces. This loose debris could fall or roll down the batter due to continued erosion, vibration, feral goat tracks or weathering.

- Continuing, slow undercutting of the stronger sandstone bands has the potential for the release and fall/roll of the blocks down the batter.
- The erosion rills and scouring could continue and destabilise significant masses of the weathered rock.
- The landslide observed in the upper portion of the eastern batter may continue to move and expand. Similar instability could occur in other areas along the eastern batter.
- The fill batters could continue to slip due to the geometry of the batters and slow dewatering of the fill mass.

6.3 Hazard Reduction Recommendations

Prior to working in the Pit below any of the batter faces, the following hazard reduction measures are recommended:

Eastern Batter Face

- Lay back the upper soil portions of the batters to a grade of at least 2.5H:1V.
- Removal of the debris lobe from the landslide and cutting the headscarp back to a grade of 2.5H:1V.
- Scaling of the undercut sandstone bands and loose material.
- Reshaping (smoothing out) the severely eroded and scoured shale batter face.
- Restrict feral animal access to the ground surface above the cutting, such as improved fencing, to assist in reducing gravel and cobbles being dislodged.

Southern Batter Face

- Scaling of the undercut sandstone bands and loose material.
- Reshaping (smoothing out) the severely eroded and scoured shale batter face.
- Restrict feral animal access to the ground surface above the cutting, such as improved fencing, to assist in reducing gravel and cobbles being dislodged.

Fill Batters

Care will need to be taken during the excavation of the fill batters. Any excavation of the toe material will need to be carried out at a safe distance as removal of the toe material could trigger additional movement of the whole batter. Likewise, a top-down approach with a bulldozer may be the easiest way to flatten the batter however the bulldozer surcharge at the crest of the batter could trigger a significant slide within the batter material. The proposed methodology and machinery used should be discussed with Douglas so that risks can be managed appropriately.

6.4 General

Berms should be constructed around the perimeter of the pit to direct water flows away from the pit face batters.

The site should be inspected following hazard reduction measures to determine that the risks have been suitably reduced. Even following the hazard reduction measures there will still be a residual risk of minor instability including minor slumping, spalling of rock and dislodgement of cobbles and small boulders. An exclusion zone for personnel should be in place within 10 from the toe of the batter faces.

7. Limitations

Douglas Partners Pty Ltd (Douglas) has prepared this report for this project at 235 Martin Road, Badgerys Creek NSW in accordance with Douglas' proposal dated 16 September 2020 and acceptance received from Nelma Arancibia dated 2 December 2020. The work was carried out under Douglas' Engagement Terms. This report is provided for the exclusive use of CSR Building Products Limited for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of Douglas, does so entirely at its own risk and without recourse to Douglas for any loss or damage. In preparing this report Douglas has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the surface conditions on the site only at the time the work was carried out. Conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after Douglas' field testing has been completed.

Douglas' advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by Douglas in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations.

The assessment of atypical safety hazards arising from this advice is restricted to the geotechnical components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. Douglas cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by Douglas. This is because this report has been written as advice and opinion rather than instructions for construction.

Please contact the undersigned if you have any questions on this matter.

Yours faithfully

Douglas Partners Pty Ltd



Eric Riggle

Engineering Geologist

Reviewed by



Konrad Schultz

Principal

Attachments: About this Report
Drawings 1 & 2

Introduction

These notes are provided to amplify DP's inspection report in regard to the limitations of carrying out inspection work. Not all notes are necessarily relevant to this report.

Standards

This inspection report has been prepared by qualified personnel to current engineering standards of interpretation and analysis.

Copyright and Limits of Use

This inspection report is the property of DP and is provided for the exclusive use of the client for the specific project and purpose as described in the report. It should not be used by a third party for any purpose other than to confirm that the construction works addressed in the report have been inspected as described. Use of the inspection report is limited in accordance with the Conditions of Engagement for the commission.

DP does not undertake to guarantee the works of the contractors or relieve them of their responsibility to produce a completed product conforming to the design.

Reports

This inspection report may include advice or opinion that is based on engineering and/or geological interpretation, information provided by the client or the client's agent, and information gained from:

- an investigation report for the project (if available to DP);
- inspection of the work, exposed ground conditions, excavation spoil and performance of excavating equipment while DP was on site;
- investigation and testing that was carried out during the site inspection;
- anecdotal information provided by authoritative site personnel; and
- DP's experience and knowledge of local geology.

Such information may be limited by the frequency of any inspection or testing that was able to be practically carried out, including possible site or cost constraints imposed by the client/contractor(s). For these reasons, the reliability of this inspection report is limited by the scope of information on which it relies.

Every care is taken with the inspection report as it relates to interpretation of subsurface conditions and any recommendations or suggestions for construction or design. However, DP cannot anticipate or assume responsibility for:

- unexpected variations in subsurface conditions that are not evident from the inspection; and
- the actions of contractors responding to commercial pressures.

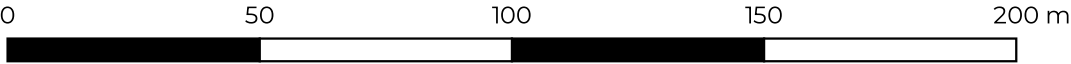
Should these issues occur, then additional advice should be sought from DP and, if required, amendments made.

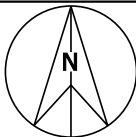
This inspection report must be read in conjunction with any attached information. This inspection report should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions from review by others of this inspection report or test data, which are not otherwise supported by an expressed statement, interpretation, outcome or conclusion stated in this inspection report.

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NOTE:
1. Base Drawing from aerial imagery dated 30 March 2024


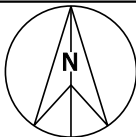


	TITLE: Site Plan				OFFICE: Macarthur	
	Quarry Pit Dewatering				DRAWN BY: ECR	
	235 Martins Road, Bradfield, NSW				DATE: 16.May.2024	
					SCALE: 1:1500 @A3	
CLIENT: CSR Building Products Limited	PROJECT No: 92442.00	DRAWING No: 1	REVISION: 0			



NOTE:
1. Base Drawing from aerial imagery dated 30 March 2024

0 50 100 150 200 m

	TITLE: Site Hazard Plan				OFFICE: Macarthur	
	Quarry Pit Dewatering				DRAWN BY: ECR	
	235 Martins Road, Bradfield, NSW				DATE: 16.May.2024	
					SCALE: 1:1500 @A3	
CLIENT: CSR Building Products Limited	PROJECT No: 92442.00	DRAWING No: 2	REVISION: 0			

Appendix K: Correspondence from DPE

NSW Planning ref: ENF-67160711

PGH Bricks & Pavers Pty Ltd
C/- CSR Limited
ACN 000 001 276
Level 6, 39 Delhi Road
North Ryde NSW 2113

13/02/2024

Attention: Nelma Arancibia, Major Projects Manager

Subject: **WARNING LETTER** – BREACH OF SECTION 4.2(1)(B) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Following an investigation, I, Samuel Condon, an authorised person for the purposes of the *Environmental Planning and Assessment Act 1979* (**Act**) have formed the opinion that PGH Bricks & Pavers Pty Ltd (**applicant**) has committed an offence against section 4.2(1)(b) of the Act by carrying out development at the Badgerys Creek Quarry and Brick Making Project (**project**) not in accordance with the conditions of development consent MP10_0014 as modified (**consent**).

Further details of the breach are set out below.

PARTICULARS OF THE BREACH

Schedule 2, Condition 12 of the consent states:

12. The Applicant must not exceed the total truck movements detailed in Table 2.

Table 2: Total Truck Movements

<i>Transport Route Stage</i>	<i>Development Phases</i>	<i>Day</i>	<i>Total truck movements*</i>
<i>Prior to the upgrade of the Martin Road-Elizabeth Drive Intersection</i>	<i>1, 2 and 3</i>	<i>Monday to Friday</i>	<i>120</i>
		<i>Saturday</i>	<i>40</i>
		<i>Sundays</i>	<i>40</i>
<i>Following completion of the Martin Road-Elizabeth Drive</i>	<i>1, 2 and 3</i>	<i>Monday to</i>	<i>800</i>

Intersection upgrade		Friday	
		Saturday	358
		Sundays	200
	4	Monday to Friday	366
		Saturday	98
		Sunday	0

* Note: each truck entering or exiting the site is counted as a separate movement.

On 8 September 2023, CSR Limited, on behalf of the applicant, submitted a non-compliance notification with Schedule 2, Condition 12 of the consent to the NSW Department of Planning, Housing and Infrastructure (**NSW Planning**).

The notification advised that the applicant had been made aware, as a part of their annual review process, that truck movements at the project had exceed the consent limits for the Transport Route Stage identified as 'prior to the upgrade of the Martin Road-Elizabeth Drive Intersection' during development phases 1, 2 and 3. The exceedances were also reported in the project's 2023 Annual Review.

The exceedances covered the 2022 and 2023 periods, totalling 8 days where limits were exceeded in 2022, and 6 days in 2023 as detailed at **Attachment 1**.

In reporting the exceedances, the applicant also provided confirmation that further management measures, including site closure procedures, had been implemented and would remain in place to prevent such exceedances from occurring in future.

Accordingly, NSW Planning has determined that PGH Bricks & Pavers Pty Ltd has committed an offence against Section 4.2(1)(b) of the Act by exceeding the project's truck moment limits on the occasions detailed above, in breach of Schedule 2, Condition 12 of the consent.

WARNING LETTER

The breaches have been assessed in accordance with the NSW Planning Compliance Policy and it has been determined to issue PGH Brick & Pavers Pty Ltd with a Warning Letter. In reaching this decision, NSW Planning has considered the particulars of the breaches set out above and the following matters:

- The applicant identified and notified NSW Planning of the breaches as soon as they were aware and have already implemented corrective site management measures to prevent such exceedances from occurring in future.
- While the exceedances did occur, the project's historical performance relating to truck movements have been good and NSW Planning has not received any direct concerns or complaints in relation to truck movements from the project.

A Warning Letter is an informal action taken where a breach has been established and NSW Planning has determined that no formal action is warranted under the circumstances.

The issue of a Warning Letter does not preclude NSW Planning from taking further enforcement action in relation to the breaches, should it become apparent that an alternative response is more appropriate.

Please note NSW Planning will retain a record of this Warning Letter, and will have regard to it, should it become necessary for NSW Planning to consider taking any further enforcement action against PGH Brick and Pavers Pty Ltd in the future.

Should you wish to discuss the matter further, please contact Samuel Condon, Senior Compliance Officer on (02) 8275 1169 or email compliance@planning.nsw.gov.au

Yours sincerely

A handwritten signature in black ink, appearing to be "S. Condon", written over a light blue horizontal line.

Samuel Condon
Senior Compliance Officer
Compliance

Authorised person under the Environmental Planning and Assessment Act 1979

Attachment 1: 2022/2023 Exceedances

Date	Limit	Actual movements	Exceedance
2022			
25/06/2022	40	60	20
27/06/2022	120	135	15
16/07/2022	40	43	3
20/08/2022	40	52	12
27/08/2022	40	72	32
15/10/2022	40	50	10
29/10/2022	40	56	16
19/11/2022	40	78	38
2023			
04/02/2023	40	60	20
11/02/2023	40	62	22
22/04/2023	40	74	34
03/06/2023	40	52	12
15/07/2023	40	54	14
22/07/2023	40	106	66

From: [Sam Condon](#)
To: [Arancibia, Nelma](#)
Subject: MP10_0014 - Badgerys Creek Brickworks Project - Sch 3 Condition 23 - Failure to conduct quarterly monitoring
Date: Thursday, 16 May 2024 1:30:37 PM
Attachments: [image002.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

[EXTERNAL]

Good afternoon Nelma,

Apologies for the delay in getting this to you, in relation to the project's previous 2022-2023 Annual Review (MP10_0014-PA-36) and our letter dated 29/11/2023.

NSW Planning has completed consideration of the non-compliance with Schedule 3, Condition 23 of MP10_0014 – the failure to conduct quarterly surface water monitoring, as detailed in Table 20 of the currently approved SWMP, and have determined to record the breach on this occasion with no further enforcement action.

In reaching this decision, I have considered the NSW Planning Compliance Policy and the following matters:

- That while not quarterly, monitoring was conducted bi-annually with the results being provided in the 2022-2023 Annual Review,
- The current risk of project operational impacts on nearby water courses is likely to be lessened due to the project's current low levels of activity; and
- The revised SWMP has been submitted to the Department, and is currently under assessment.

Please note that recording this breach does not preclude NSW Planning from taking alternative enforcement action, should it become apparent that an alternative response is more appropriate.

Given the revised SWMP has yet to be approved, please ensure all monitoring and reporting is conducted in accordance with the requirements of the currently approved SWMP, and that this is reflected in the project's conditioned reporting.

Please feel free to give me a call on (02) 8275 1169 if you have any questions.

Regards

Samuel Condon

Senior Compliance Officer

Compliance

Department of Planning, Housing and Infrastructure

E samuel.condon@planning.nsw.gov.au

dphi.nsw.gov.au

4 Parramatta Square

12 Darcy Street
Parramatta NSW 2124

Working days Monday to Friday, 9:00am - 5:00pm



I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time. If you are submitting a compliance document or request as required under the conditions of consent or approval, please note that the Department is no longer accepting lodgement via compliance@planning.nsw.gov.au.

The Department has upgraded the Major Projects Website to improve the timeliness and transparency of its post approval and compliance functions. As part of this upgrade, proponents are now requested to submit all post approval and compliance documents online, via the Major Projects Website. To do this, please refer to the instructions available [here](#).

Please consider the environment before printing this email.

From: Sam Condon

Sent: Tuesday, 13 February 2024 1:58 PM

To: Nelma Arancibia <NARANCIBIA@csr.com.au>

Subject: MP10_0014 - Badgerys Creek Brickworks Project - Truck movements exceedance

Good afternoon Nelma,

As discussed on the phone, the Department has considered the non-compliances relating to truck movements at the Badgerys Creek Quarry and Brickmaking Project and is issuing a Warning Letter – see attached.

If you have any questions, please give me a call on (02) 8275 1169.

Regards

Samuel Condon

Senior Compliance Officer

Compliance

Department of Planning, Housing and Infrastructure

E samuel.condon@planning.nsw.gov.au

dphi.nsw.gov.au

4 Parramatta Square
12 Darcy Street
Parramatta NSW 2124

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Please consider the environment before printing this email.

From: Nelma Arancibia <NARANCIBIA@csr.com.au>

Sent: Monday, 22 January 2024 4:04 PM

To: Sam Condon <Samuel.Condon@planning.nsw.gov.au>

Subject: RE: MP10_0014 - Badgerys Creek Brickworks Project - Truck movements exceedance

Thank you



Nelma Arancibia

Major Projects Manager | CSR Property

39 Delhi Rd Level 6, North Ryde, NSW, 2113, Australia

+61 2 9964 1305 | +61 424 186 127

NARANCIBIA@csr.com.au

Please consider the environment before printing this email.

This email is confidential. If received in error, please delete it from your system.

From: Sam Condon <Samuel.Condon@planning.nsw.gov.au>

Sent: Monday, January 22, 2024 3:56 PM

To: Nelma Arancibia <NARANCIBIA@csr.com.au>

Subject: RE: MP10_0014 - Badgerys Creek Brickworks Project - Truck movements exceedance

[EXTERNAL]

Good afternoon Nelma,

Thanks for the confirmation. We will be looking to finalise the outcome of the non-compliance and will be in contact as soon as is practicable.

Regards

Samuel Condon

Senior Compliance Officer

Compliance

Department of Planning, Housing and Infrastructure

E samuel.condon@planning.nsw.gov.au

dphi.nsw.gov.au

4 Parramatta Square
12 Darcy Street
Parramatta NSW 2124

Working days Monday to Friday, 9:00am - 5:00pm



I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time. If you are submitting a compliance document or request as required under the conditions of consent or approval, please note that the Department is no longer accepting lodgement via compliance@planning.nsw.gov.au.

The Department has upgraded the Major Projects Website to improve the timeliness and transparency of its post approval and compliance functions. As part of this upgrade, proponents are now requested to submit all post approval and compliance documents online, via the Major Projects Website. To do this, please refer to the instructions available [here](#).

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From: Nelma Arancibia <NARANCIBIA@csr.com.au>

Sent: Monday, 22 January 2024 3:53 PM

To: Sam Condon <Samuel.Condon@planning.nsw.gov.au>

Subject: RE: MP10_0014 - Badgerys Creek Brickworks Project - Truck movements exceedance

Hi Sam

That's correct, the measures put in place to prevent any further exceedances are in place until the project is completed.

Once the intersection works are completed the system will be adjusted to allow for a higher limitation as per the consent, but all measures noted are permanent until all works within the consent are completed or the consent is modified.

Let me know if you have any further questions, thanks.



Nelma Arancibia

Major Projects Manager | CSR Property

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NARANCIBIA@csr.com.au

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From: Sam Condon <Samuel.Condon@planning.nsw.gov.au>

Sent: Friday, January 19, 2024 3:27 PM

To: Nelma Arancibia <NARANCIBIA@csr.com.au>

Subject: MP10_0014 - Badgerys Creek Brickworks Project - Truck movements exceedance

[EXTERNAL]

Good afternoon Nelma,

Just a quick follow-up in relation to the non-compliance notification submitted to the Department on 8 September 2023 (MP10_0014-PA-35), to assist us in finalising our consideration of the matter.

On page 4 of the submission, you advise that the project has put measures in place to prevent further truck movement exceedances. While the notification letter does appear to advise that this is the case, for certainty can you please confirm that this measure is in place and will continue to be implemented?

Regards

Samuel Condon

Senior Compliance Officer

Compliance

Department of Planning, Housing and Infrastructure

E samuel.condon@planning.nsw.gov.au

dphi.nsw.gov.au

4 Parramatta Square
12 Darcy Street
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Beyond Compliance

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