



Pollution Monitoring Report July 2023 M12 Motorway West

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1 Introduction

1.1 Background

Western Sydney's population is anticipated to increase from 2.5 million in 2021 to 3 million by 2036, which is an average of 46,000 additional residents per year. This strong forecast growth is driven by a number of transformational changes in the region, including the Western Sydney International Airport (WSIA), South West Growth Area, Western Sydney Employment Area and Western Sydney Aerotropolis. Additional travel demand associated with these planned developments is expected to put significant pressure on the existing transport network and negatively impact traffic efficiency and road safety in the region.

The M12 Motorway will connect The Northern Road at Luddenham and the M7 Motorway at Cecil Hills, over a distance of about 16 km. The M12 Motorway project will provide the main access from the WSIA at Badgerys Creek to Sydney's motorway network and must be opened to traffic six months before the opening of the WSIA.

The M12 Motorway will provide the capacity to meet traffic demand generated by Western Sydney urban development, provide a high standard connection to WSIA to meet future freight and passenger needs and will support and integrate with the broader transport network. The M12 Motorway Project objectives include:

- Provide direct access from the M7 Motorway to the planned Western Sydney airport at Badgerys Creek, and from the M4 via The Northern Road.
- Provide sufficient road capacity to meet traffic demand generated by the planned Western Sydney urban development.
- Provide a road which supports and integrates with the broader transport network.
- Support the provision of an integrated regional and local public transport system.
- Provide active local transport within the east-west corridor.

Approval for the Project under the EP&A Act was granted by the Minister for Planning on 23 April 2021. Approval for the Project under the EPBC Act was granted by the Federal Minister for the Environment on 3 June 2021. The project must be carried out in accordance with the terms of the NSW and Federal Approvals.

2 Project Details

2.1 M12 Motorway West Project Details

The M12 Motorway West Project involves construction of a new approximately 6km of dual carriageway motorway predominantly through greenfield area between The Northern Road, Luddenham and approximately 250m east of Badgerys Creek, including WSIA Interchange and Elizabeth Drive Interchange. The works are within the Liverpool and Penrith City Councils (Council) local government areas (LGA).

Features of these Works include:

- Construction of 6km of dual carriageway motorway predominantly through greenfield area between The Northern Road, Luddenham and approximately 250m east of Badgerys Creek.
- Construction of 11 bridges.
- A grade-separated interchange referred to as the Western Sydney International Airport interchange, including a dual-carriageway four-lane airport access road (two lanes in each direction for about 1.5 kilometres) connecting with the Western Sydney International Airport Main Access Road.
- Connection to the signalised at grade intersection at The Northern Road with provision for grade separation in the future as part of the future Outer Sydney Orbital.
- Realignment and duplication of approximately 1,500m of Elizabeth Drive with a new bridge over the Airport Access Road and Metro Rail corridor including associated utility adjustments.
- A four-way signalised intersection east of Airport Access Road.



- A left-in/left-out intersection west of Airport Access Road.
- A signalised single point interchange with north facing ramps from Elizabeth Drive to M12 and south facing ramps from Elizabeth Drive to Airport Access Road.

Activities included in the Works:

- site establishment
- control of traffic including the provision of approved Traffic Management Plans to facilitate the construction of the works
- provision for pedestrians and cyclists
- provision of site accommodation for the Principal
- searching for and protecting public utility services
- maintenance of the existing roadways
- drainage works (both surface and subsurface)
- permanent and temporary erosion and sedimentation controls
- removal and disposal of some existing roads, kerbs, gutters, footpaths, stormwater and other minor structures
- demolition of structures including houses and sheds
- earthworks including clearing and grubbing, removal and stockpiling of topsoil, excavation of cuttings, placing of general fill, management of potentially/ actually contaminated materials, possible off-Site disposal of spoil material, foundation treatments, placement of upper zone material and Selected Material Zone using imported materials
- construction of rigid pavements including lean-mix concrete sub-base, continuously reinforced concrete pavement, dense grade asphalt intermediate and wearing courses
- flexible sub-base and base pavements
- ancillary works, including new kerbs and/or gutters and paving of cycleways/footpaths
- construction of bridges
 - Bridge over Luddenham Road (BR01)
 - Bridge over Cosgroves Creek (BR02)
 - Bridge over Airport Access Road (AAR) on Elizabeth Drive (BR04A)
 - Bridge over Sydney Metro on Elizabeth Drive (BR04B)
 - Bridge over Western Sydney Airport (WSA) Channel on Northbound Off Ramp (BR04C)
 - Bridge over WSA Channel on Southbound On Ramp (BR04D)
 - Twin Bridges over Badgerys Creek (BR05)
 - Bridge over M12 Motorway and Airport Access Road Ramps (BR21)
 - Bridge over M12 (BR22)
 - Bridge over M12 Motorway on ramp (BR24)
- construction of a RCBC as a stock underpass
- construction of precast arch structures as a shared use path underpass
- construction of retaining walls
- construction of reinforced soil walls
- design development and installation of pits and conduits for an underground Intelligent Transport System cableway including supply and installation of Closed-Circuit Television Cameras, Electronic Message Signs, Emergency Telephones, Vehicle Detection Sites and Permanent Automatic Weather Stations
- relocation of existing and installation of new (or upgraded) public utilities
- property access and property adjustments
- Road furniture
- pavement marking and raised pavement markers





- signposting including sign structures
- opening to traffic
- revegetation and landscaping of exposed new works and of areas disturbed by construction activities
- clean up and restoration of work areas and the areas disturbed by utility authorities in carrying out adjustments within the Site
- preparation of "work-as-executed" drawings and asset acceptance documentation
- all other work which CPBGG JV are obliged to undertake by the terms of the Contract.

CPB Contractors Pty Limited and Georgiou Group Joint Venture (CPBGG JV) were engaged by Transport for New South Wales (TfNSW) to construct the M12 Motorway West Package.





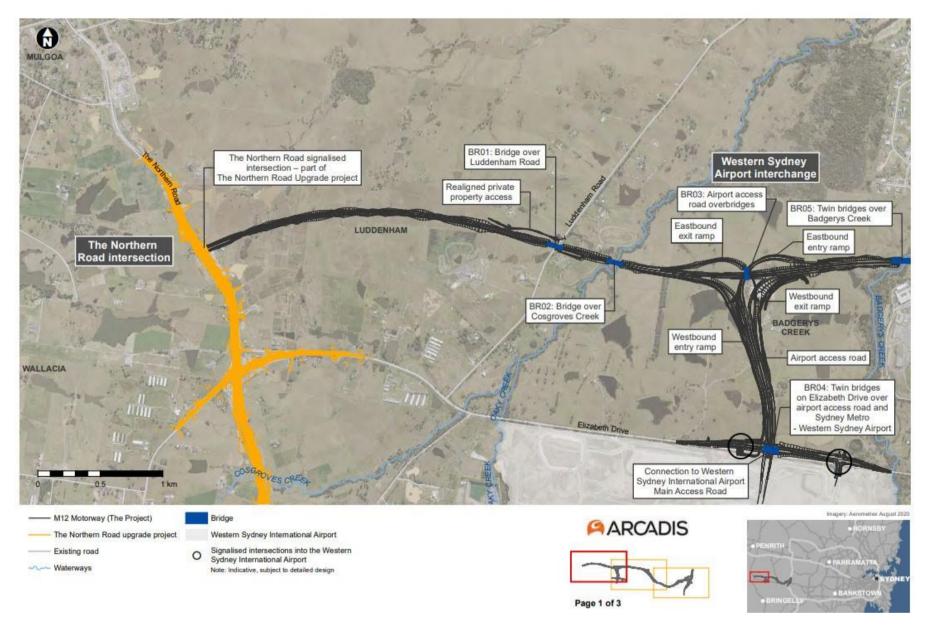


Figure 2-1 Keys features of the M12 Motorway West Project





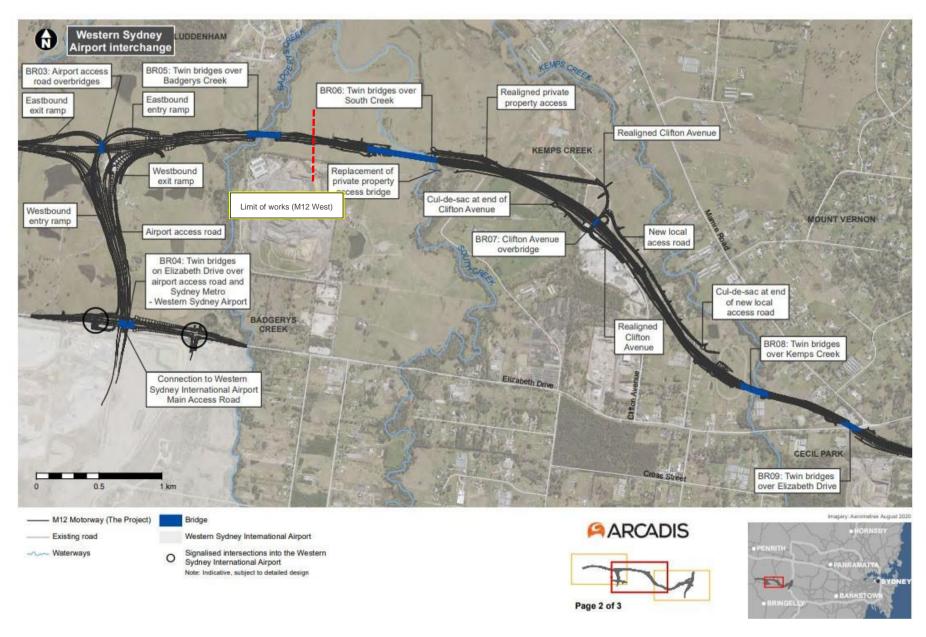


Figure 2-2 Keys features of the M12 Motorway West Project



3 Scope of this Report

Transport for New South Wales (TfNSW) were issued an Environmental Protection Licence (EPL21595) from the NSW Environment Protection Authority (EPA) on 21 March 2021 under Schedule 1 of the *Protection of the Environment Operations Act 1997* (POEO Act) for the M12 Motorway West package. This EPL was transferred to CPB Contractors Pty Limited on 17 June 2022.

The EPL applies to the works approved under the Infrastructure Approval SSI-9364 associated with the delivery of the M12 Motorway project.

This EPL Pollution Monitoring Report provides the results of all pollution monitoring required to be measured or monitored by the licensee of EPL 21595 as required by Section 66 of the *Protection of the Environment Operations Act 1997* (POEO Act) and with reference to EPA Publication Requirements for publishing pollution monitoring data (Environment Protection Authority, 2013).

Table 3-1 provides a summary of the pollution monitoring requirements of EPL 21595.

Table 3-1 Licence Details

Licence D	Licence Details									
Number	21595									
Copy of Licence	https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=257133&SYSUID=1&LICID=21595									
Anniversary Date	21 March									
Licensee	CPB Contractors Pty Ltd									
Premises	The M12 Motorway Project – West Package, Elizabeth Drive, Penrith NSW 2740									
Scheduled Activity	Road Construction (>=50,000T & road to be constructed <10km)									



4 Reporting Requirements

Under the POEO Act, holders of environment protection licences (licensees) must publish or make pollution monitoring data available to members of the public.

The POEO Act Section 66 requires:

"66 Conditions requiring monitoring, certification or provision of information, and related offences

- (1) Monitoring The conditions of a licence may require—
 - (a) monitoring by the holder of the licence of the activity or work authorised, required, or controlled by the licence, including with respect to—
 - (i) the operation or maintenance of premises or plant, and
 - (ii) discharges from premises, and
 - (iii) relevant ambient conditions prevailing on or outside premises, and
 - (iv) anything required by the conditions of the licence, and
 - (b) the provision and maintenance of appropriate measuring and recording devices for the purposes of that monitoring, and
 - (c) the analysis, reporting and retention of monitoring data.
- (2) False or misleading information A holder of a licence who supplies information, or on whose behalf information is supplied, to the appropriate regulatory authority under the conditions of the licence is guilty of an offence if the information is false or misleading in a material respect."

The primary objective of the pollution monitoring reporting requirements is that members of the public have access to the results of all pollution monitoring (which a licence specifies must be carried out) in a way that is meaningful to them. Data for the M12 Motorway West Works is presented on a monthly sampling period.

The monitoring data that must be published and/or made available on request is any data that is obtained as a result of a monitoring condition on a licence that relates to air, water (surface or groundwater), noise and/or land pollution. The data to be published or provided is limited to data that relates to pollutants generated, discharged, or emitted from the licensed premises.

The data is provided in tabular format that is easy for the general public to understand. Tables definitively display raw data values, while graphs and charts are useful for overviews and visualisation of long-term trends. Raw data will be provided upon request.

An upfront note will be included on the licensee's website or in this report to explain why any data may appear to be missing because there is no discharge or the level of pollutant being below the detection level of the measurement instrument.

It's possible from time to time that incorrect data may get published in good faith. As soon as practicable after the licensee becomes aware that the published pollution monitoring data is incorrect or misleading, licensees must then publish a correction log to correct this data that is incorrect or misleading (refer to Section 6).

Table 4-1 provides a summary of the pollution monitoring requirements of EPL 21595

Table 4-1 EPL 21595 Pollution Monitoring Requirements

EPL Condition	Requirement	Report Reference
M5.1	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.	Section 5.1 Appendix A1
L5.6	Monitoring to validate the noise predictions for works undertaken outside of the standard construction hours as per the construction noise impact assessment	Section 5.2 Appendix A2





EPL Condition	Requirement	Report Reference
M2.2	Discharge of pollutants to water from nominated discharge points	Section 0 Appendix A3
M4.4	Noise and vibration monitoring as directed by an authorised officer of the EPA	Section 5.2 AppendixA2
M7.6	Noise and vibration monitoring of noise and vibration complaints	Section 5.2 AppendixA2
L2.5	Discharge from sediment basins solely as a result of rainfall measured at the premise the rainfall depth value	Section 0 Appendix A3



5 Monitoring

Section 5 presents summaries of the monitoring programs completed in the reporting period from 1^{st} July $2023 - 31^{st}$ July 2023.

Detailed monitoring results for each program are presented in the Appendices.

5.1 Weather Monitoring

EPL Condition M 5.1 requires CPB to collect and store meteorological data. Meteorological data is not considered to be pollution data and therefore does not have to be published. However, the meteorological data is published with the pollution monitoring data to provide additional context to the water discharge pollution.

The meteorological observations are based on Badgerys Creek AWS (station 067108) and supported by M12 West AWS observations from 1st July 2023 – 31st July 2023.

The total rainfall (days with >1mm of rain) for the reporting period:

• July was 4.8mm with five (5) rain days

Rainfall did not exceed the 85th percentile (32.2mm) design rainfall events. Detailed weather observations are presented in Appendix A-1.

A summary of the reporting period's monthly meteorological observations summarised in Table 5-1. A comparison between long term monthly means and recorded values can be found in Figure 5-1 for rainfall.

Table 5-1 Weather Summary and Trigger Weather Events during July 2023

Weather Event – July 2023	M12W Project AWS	Badgerys Creek BOM AWS
Minimum temperature	-0.1°C	-0.9°C
Maximum temperature	26.04°C	25.8 °C
Total Rainfall	4.8 mm	6.8 mm
Number of days with rain (>1mm)	2 days	2 days
>25km/hr wind	10 days	17 days
>50km/hr wind	1 day	1 days

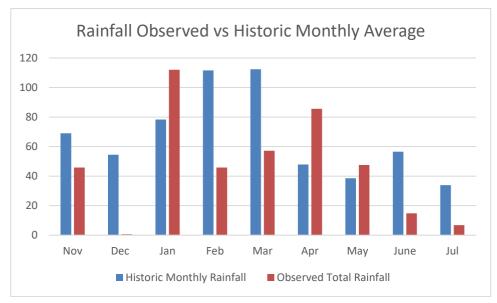


Figure 5-1 Rainfall received compared to historic monthly averages (Source BOM & M12 West AWS)



5.2 Noise and Vibration

Attended noise monitoring was conducted during the reporting period for the use of new equipment and out of hours works. One validation noise assessment was required for out of hours works, in accordance with EPL condition L5.6. The noise monitoring results are outlined below in Table 5.1 and detailed noise and vibration monitoring results are presented in Appendix A2.

Noise and vibration monitoring was not directed by an authorized officer of the EPA during the reporting period, in accordance with EPL condition M4.4.

No complaints pertaining to noise or vibration were received during the reporting period to required investigation/ verification monitoring, in accordance with EPL condition M7.6.

Real-time unattended noise monitoring is undertaken during day, evening and night periods via SiteHIVE hexanode locations at main alignment (Luddenham Road) and EDR/AAR (Elizabeth Drive). Noise monitoring results capture a range of activities including utilities/drainage, earthworks, piling, concreting and bridge works. No exceedances of the Highly Noise Affected criteria of 75dB(A) or predicted levels occurred during construction within the reporting period.

No vibratory compaction activities have occurred within 50m of residential buildings during the reporting period. Nor have any activities occurred within the safe working distances for cosmetic damage.

Table 5-1 Summary of Attended Noise Monitoring during July 2023

Date	Monitoring Location	Description
5/07/2023	Utilities Installation– Elizabeth Drive	Background noise monitoring for utilities installation works on Elizabeth Drive. Attended monitoring confirmed that equipment noise level was below the predicted levels within the Transport for NSW construction noise calculator.
07/07/2023	Cut 1	Background noise monitoring confirmed that the use of the trencher was inaudible at the nearest receiver
07/07/2023	Bridge 2	Background noise monitoring for Bridge 2 girder installation. Attended monitoring confirmed that equipment noise level was below the predicted levels within the Transport for NSW construction noise calculator.
20/07/2023	Utilities Installation– Elizabeth Drive	Background noise monitoring for utilities installation works on Elizabeth Drive. Attended monitoring confirmed that equipment noise level was below the predicted levels within the Transport for NSW construction noise calculator.

5.3 Discharge to Water

The EPL discharge criteria apply to the sediment basins referred to in condition P1.3 are the active basins and discharge points identified and located in the document titled "M12 Motorway West Sediment Basins Schedule 3July2023" and maintained on electronic file EF21/13233. The active basins and discharge points during the reporting period are summarised in Appendix A3.

There were no discharges from active monitoring / discharges points from manual or due to no significant rainfall during the reporting period. Water is extracted from sediment basins for dust suppression or transferred for reuse during construction activities where possible.





6 Correction Log

It's possible from time to time that incorrect data may get published in good faith.

As soon as practicable after the licensee becomes aware that the published pollution monitoring data is incorrect or misleading, licensees must then publish a correction log to correct this data that is incorrect or misleading.

There are no matters included in the correction log for this reporting period.





Appendices

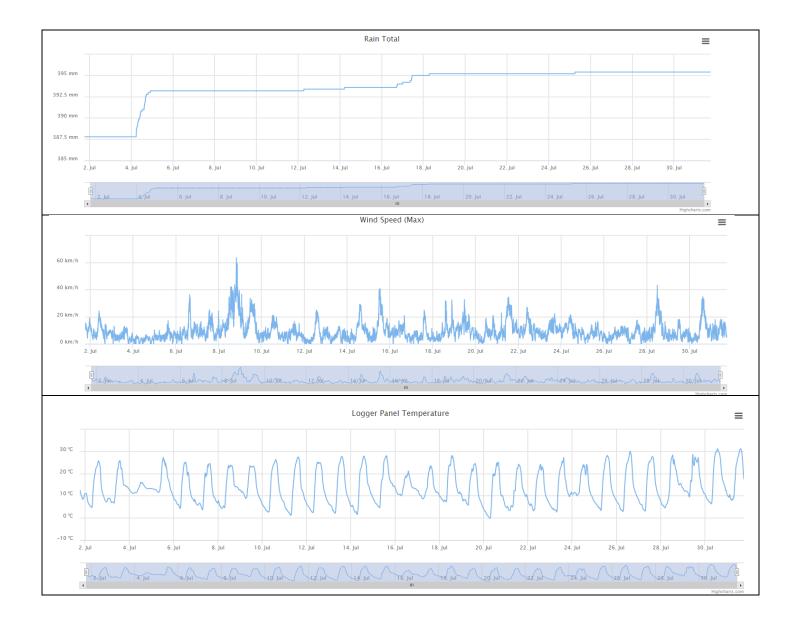




Badgerys Creek, New South Wales July 2023 Daily Weather Observations

		Ten	nps	Д.	_	_	Max	wind	gust			9	am				3 pm					
Date	Dav			Rain	Evap	Sun				Temp	RH			Spd	MSLP	Temp	RH		.	Spd	MSLP	
	1	°C		mm	mm	hours		-	local	°C		8 th		km/h	hPa	°C		8 th		km/h	hPa	
1	Sa	1.5	17.9	0			wsw	39	13:25	7.5	79		SE	4	1021.2	17.4	43		WSW	22	1019.9	
2	Su	4.9	18.4	0			SW		10:07	10.3			SW		1031.8	17.6	39		NW		1029.3	
3	Мо	6.1	18.7	0			SE	15	16:46	11.7	75			Calm	1031.6	18.0	56		NNE		1027.0	
4	Tu	10.3		1.8			ESE		23:38	11.9			ESE		1021.3	13.9			ENE		1015.5	
5	We	10.7	20.5	2.4			SW	17	14:34	11.2	100		SW	2	1012.9	20.1	55		SW	11	1010.9	
6	Th	4.4	17.8	0			S	35	14:39	10.6	84		SW	6	1014.7	15.9	43		S	24	1010.3	
7	Fr	2.3	17.8	0.2			SW	31	13:24	8.3	86		SW	4	1011.6	17.2	41		SSW	15	1010.7	
8	Sa	5.1	19.4	0			S	70	19:54	10.6	64		ENE	9	1013.7	18.4	36		S	31	1010.4	
9	Su	10.7	18.1	0			SSW	50	11:24	15.0	47		SE	11	1017.5	17.4	43		SSW	22	1016.7	
10	Мо	2.4	19.3	0			S	30	13:06	9.2	78		ENE	4	1023.1	19.0	40		WSW	13	1020.5	
11	Tu	1.4	20.5	0			W	20	13:18	7.7	77		Е	4	1026.3	19.6	34		SW	7	1024.4	
12	We	1.6	20.2	0			ENE	28	14:05	8.9	97		(Calm	1031.1	19.2	42		ENE	19	1027.0	
13	Th	1.1	20.6	0			ENE	13	14:56	6.7	99		(Calm	1028.4	20.2	38		ENE	9	1024.4	
14	Fr		23.4	0.2			SE	30	15:01	7.5	97		SSE	2	1025.4	22.4	34		SE	20	1020.6	
15	Sa		24.0	0.2			SSE		13:44	10.6	80		SSW	4	1021.7	22.8			SSE	19	1018.6	
16	Su	8.7	18.5	0			NW	22	15:59	13.2	75		SW	7	1028.3	17.2	67		WNW	7	1027.6	
17	Мо	6.9	18.7	8.0			Е	28	15:02	10.9	100		(Calm	1031.1	17.9	65		Е	19	1027.7	
18	Tu	6.3	22.3	0.6			S	33	14:17	11.3	100		Е	2	1024.3	20.3	32		SW	13	1018.6	
19	We	6.7	17.3	0			WSW	39	11:21	10.3			SW	9	1023.8	16.8			W	7	1022.0	
20	Th	-0.9		0			S		19:59	5.4					1021.9	17.7			ENE	4	1014.7	
21	Fr		18.8	0			S		11:36	10.3			SW		1018.0	17.9	30		SSW		1015.7	
22	Sa		17.5	0			SW		09:39	10.1			SW		1023.2	15.7			W		1020.4	
23	Su		20.0	0			WSW		13:31	10.0	73		SW		1024.0	17.2			NW		1022.5	
24	Мо	9.5	18.8	0			WSW		09:34				WSW		1029.6	18.4			NNE		1028.3	
25	Tu		20.0	0.2			ENE		13:54	9.9			WSW		1036.1	19.4			Е		1034.5	
26	We		21.1	0.2			ENE		12:13		100		N		1036.5	20.4			ENE		1030.9	
27	Th		20.5	0			Е		11:57	9.5					1032.6	20.1			ENE		1026.3	
28	Fr		24.1	0			SSE		12:00	12.4			ESE		1022.2	21.7			SW		1019.5	
29	Sa		23.3	0			ENE		12:35	12.8	-		ENE		1023.7	21.8			ENE		1019.8	
		4.9		0			SSW		15:24						1021.3				SSW		1016.3	
							SW	26	21:34	15.1	53		SE	7	1023.2	23.0	29		ENE	9	1020.3	
Statis				2023										-	400 : -	45.5				1		
		4.6								10.4					1024.3						1021.0	
		-0.9		0							47				1011.6				#		1010.3	
		10.7	25.8	2.4			S	70		15.1	100		#	15	1036.5	24.9	99		S	31	1034.5	
	Total			6.8		A 1170				2000												

Badgerys Creek AWS #067108 – July 2023

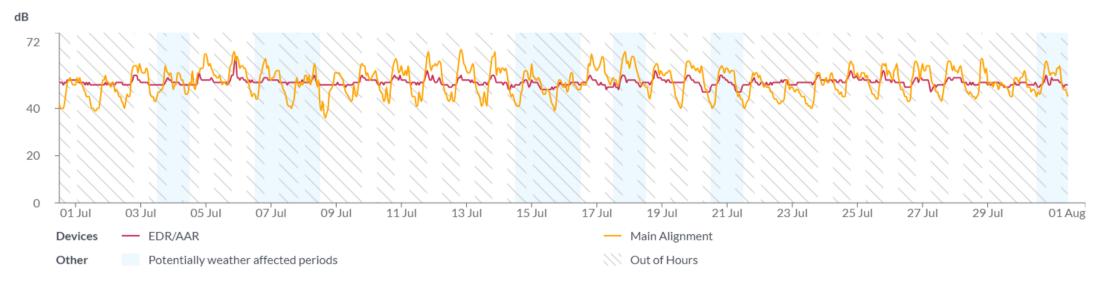






Appendix A2 – Noise and Vibration Monitoring Results

Monitor ing Ever No ▼	D	late 	Time	Perio	Site	Location	Zone 🔻	< 500 m from resident	Leq	La- m∵	La- mi-		La-15 mir-	NML ~	Predic te	Exceeda nce of NM +	La- gr	Comments	by	Equipme nt	Veighti ng Filte →	Time Veighti ng 🚽	Time (mi-3	Receiver Numbe	Constructio n Phas	Actions carried out in the event of an exceedance.
26	5	107/2023	831 pm	Evening	M12 West	Elizabeth Drive, Southern End	NCA08	т	80	82	N/A	N/A	36	44	N/A	N/A	N/A	Background noise during screening community traffic – Background 55 dB[A] Leq Background noise no plant operating 40 dB Measured distance from equipment is 10 from Vacuum truck on full power in for Crans and 50 m for EWP. Crans operating for full 15 mins EWP operating for half of time. Lead 15 mins is based on location of nearest receiver 500 m west LAcq 15 mins at the nearest receiver is 56 dB[A]LAcq15mins which is insudible in comparison to the Res	AB	Rion NL	N/A	15	15	N/A	Utilities	M/A
27	7.	1/07/2023	10 am	Daytim	s M12 West	Cut 1 - Trencher	NCA10	F	69.9	83	N/A	N/A	28	36	N/A	N/A	N/A	Background noise no plant operating 60 dB Measured distance from equipment is T m equipment running consistently for full 15 mins. LAcq 15 mins is based on location of nearest receiver 800 m north LAcq 15 mins at the nearest receiver is 28 dB(A)LAcq15 mins which is insudible in comparison to the Roy.	AB	Rion NL	N/A	15	15	N/A	Earthworks	N/A
28	7.	1/07/2023	11am	Daytim	e M12 West	Bridge 2 - Super T Lift	NCA10	F	69.9	83	N/A	N/A	37	44	N/A	N/A	N/A	Background noise no plant operating 53 dB Messared distance from equipment is 20 m for Crans and 50 m for EWP. Crans operating for full 15 mine EWP operating for half of time. LAcq 15 min is 1 based on location of nearest receiver 370600 m north LAcq 15 mine at the nearest receiver is 37 dB(A)LAcq 15 mine which is inaudible in comparison to the RB.	AB	Rion NL	N/A	15	15	N/A	Structures	N/A
29	20	1/07/2023	8.30pm	Daytime	: M12 West	Utilities Installation	NCA08	F	79	-	N/A	N/A	34	44	N/A	N/A	N/A	Background noise presumed tr = Background 33 dB(A) Leq (NVIS) Messared distance from equipment is 10 m for Excavotor with hammer and 10 m from Vac truck Excavator with hammer used for a conservative? minutes during 15 min period. Forken line of site between residence and works area LAcq 15 mins is based on location of nearest receiver (Lot 1 DP 1287112) LAcq 15 mins is the nearest receiver is 3 dB(A)(A)(A)(S)(min) which is within the RBL + 5 dB recommendations in the NVIS for evening shift outside of Standard hours.	AB	Rion NL	N/A	15	15	N/A	Utilities	M/A



Appendix A3 – Active Discharge Points

Sediment Basin Sizing based upon "Soils and Construction - Volume 1 - 4th Edition - March 2004"

	quation (RUSLE) Coefficients:
R=	2500
P=	1.3
C=	1

Settling Zone Parameters:										
Cv=	0.64									
R	%ile	80	85							
2 day	mm	15.0	20.3	Blacktown						
5 day	mm	24.6	32.2	Blacktown						
Rainfall Erosivity factor - From map given in Appendix B of Blue Book										
		Based on 1	Type D soils:							

All licenced discharge points are located at the spillway of the associated basin.

Discharge Criteria (EPL#21595 condition	рН	Turbidity (NTU)	Oil and Grease
12.4)	6.5-8.5	50	Not visible

Desilting and dewatering managed in accordance with approved CSWMP and EWMS.
Basins removed from the licence (and onsite) are shown with the font strikethrough option used.

Basin Name	Basin Type	Chainage / Location	Date Constructed	Catchment area	Rainfall Intensity	Percentile	Design Rainfall Depth	Required Sediment Storage (soil) Volume	Required Settling (water) Volume	Required Total Volume	Non designed volume sump / excavation	Discharge Point Coordinates (MGA)		Active	Comments / Recommendations
				(ha)	day	%	mm	m³	m³	m³		Easting (m)	Northing (m)	Y/N	
SB10925E	Т	10925	-	2.09	5	85	32.2	111	431	542	-	287112.160	6251486.779	N	Temporary sediment basin removed to facilitate permanent drainage and landscaping
SB11150E	т	11150	-	3.19	5	85	32.2	203	657	860	-	287348.797	6251563.857	N	Temporary sediment basin removed to facilitate permanent drainage installation.
SB11655E	Т	11655	·	1.29	5	85	32.2	96	266	362	-	287839.726	6251654.770	N	Temporary sediment basin removed to facilitate permanent drainage and landscaping
SB12100E	Т	12100	,	0.7	5	85	32.2	52	144	196	-	288271.213	6251666.295	N	Temporary sediment basin removed to facilitate permanent drainage and landscaping
SB12500E	Т	12500	-	0.75	5	85	32.2	60	155	215	-	288739.035	6251618.550	N	Temporary sediment basin removed to facilitate permanent drainage and landscaping
SB12550E	Т	12550	•	3.0	5	85	32.2	222	618	840	-	288700.547	6251608.234	Y	Currently not discharging off site

Basin Name	Basin Type	Chainage / Location	Date Constructed	Catchment area	Rainfall Intensity	Percentile	Design Rainfall Depth	Required Sediment Storage (soil) Volume	Required Settling (water) Volume	Required Total Volume	Non designed volume sump / excavation	Discharge Point Coordinates (MGA)		Active	Comments / Recommendations
				(ha)	day	%	mm	m³	m³	m³		Easting (m)	Northing (m)	Y/N	
SB13000W	т	13000	-	1.25	5	85	32.2	93	258	351	-	289207.554	6251436.058	Y	Currently not discharging off site
SB13350W	Т	13350	-	2.37	5	85	32.2	176	488	564	-	289547.743	6251336.070	Y	Currently not discharging off site
SB13800E	т	13800	-	1.61	5	85	32.2	119	332	451	-	289945.705	6251275.233	Υ	Currently not discharging off site
SB13825W	т	13825	-	1.11	5	85	32.2	82	229	311	-	289953.598	6251216.021	Υ	Currently not discharging off site
SB14550A	т	14550	-	2.23	5	85	32.2	142	460	602	-	290719.632	6251247.275	Y	Currently not discharging off site
SB14650A	Т	14650	-	3.99	5	85	32.2	254	822	1076	-	290770.284	6251255.682	Y	Currently not discharging off site
SB14650B	Т	14650B	-	9.76	5	85	32.2	622	2011	2633	-	290803.487	6251202.105	Y	Currently not discharging off site
SB14650C	Т	14650	-	12.07	5	85	32.2	769	2487	3256	-	290810.182	6251033.341	Y	Currently not discharging off site
SB15900S	т	15900	-	0.98	5	85	32.2	73	202	275	-	292033.039	6251179.298	Y	Currently not discharging off site
SB16500E	Т	16500	-	1.59	5	85	32.2	101	328	429	-	292648.484	6251264.859	Y	Currently not discharging off site
SB1629	Т	1629	-	1.42	5	85	32.2	9	103	112	-	291340.049	6250482.677	Y	Currently not discharging off site
SB1700	т	1700	-	1.74	5	85	32.2	105	293	398	-	291348.192	6250344.778	Y	Currently not discharging off site
SB2150	Т	2150	-	2.93	5	85	32.2	67	604	671	-	291445.615	6249899.417	Y	Currently not discharging off site
SB125	т	125	-	2.19	2	85	32.2	22	285	307	-	291223.210	6249814.564	N	Temporary basin removed to allow for permanent construction to occur
SB1600	т	1600	-	10.34	5	85	32.2	766	2131	2897	-	292135.594	6249645.845	Υ	Currently not discharging off site
AF02 Stage 1	т	AF02	20/08/2022	5.14	5	85	32.2	90	1059	1149	-	291013.354	6249852.803	Υ	Currently not discharging off site
AFO2 Stage 2	т	AF02	-	3.65	5	85	32.2	64	752	816	-	291247.773	6249848.331	Υ	Currently not discharging off site
AF02 Stage 2 Laydown	т	AF02	01/09/2022	1.58	5	85	32.2	36	326	362	-	290998.102	6250129.015	Υ	Currently not discharging off site
AF11 Stage 1	Т	AF11		1.36	5	85	32.2	17	280	297	-	-	-	N	Not yet constructed
AF11 Stage 2	T	AF11		2.21	5	85	32.2	85	455	540	-	-	-	N	Not yet constructed
SB Dam 9 Footprint	Т	AF02		13	5	85	32.2	227	2679	2906		291629.729	6249868.001	Y	Currently not discharging off site

Notes:

• T - Temporary Sediment Basin (Type D)