Environmental Performance Report Q3: January to March 2025

Woodlawn Copper Zinc Project

Document Review/Change History

Date	Summary of review and changes	Revision No.	Authors	
			Drafted by	Reviewed by
15/04/2025	All monitoring data received from laboratory	A	-	-
04/05/2025	Document finalised	0	KC	KC

Contents

TABLES

Graphs

Appendices

1. INTRODUCTION

1.1. EPL License information

Details of the EPL licence holder are summarised in Table 1-1.

Table 1-1 EPL details

Environment Protection License Number	**20821**
Licensee	Tarago Operations Pty Ltd
Licensee address	Woodlawn Mine 507 Collector Road TARAGO NSW 2580
Link to full licence on the EPA website	19 December 2023 Version: https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEONotice.aspx?DOCID=-1&SYSUID=1&LICID=1635655

1.2. Background

The Woodlawn Zinc-Copper mine (the Project) is located approximately 7 km northwest of Tarago in New South Wales (NSW) within Special (Crown and Private Land) Mining Lease 20 (SML20). The original Woodlawn mine operated from 1978 to 1998 and processed 13.8Mt of ore from the Woodlawn open pit, underground and minor satellite deposits. Following its prolonged closure, the Project was acquired by ASX-listed Heron Resources who secured Project Approval in July 2013 following the public exhibition of an Environmental Assessment (EA). Heron completed the construction of the project and developed the new underground mine in accordance with the Project Approval before it was put on care and maintenance in March 2020. Heron was placed in administration in July 2021. Develop Global Limited (DEVELOP) completed its acquisition of the Project in May 2022 and Tarago Operations Pty Limited which holds Special Mining Lease (SML) 20 and (EPL) 20821. Veolia operates an eco-precinct, including a licensed landfill, within SML20 but separated from the project and has separate EPL's as per Plan 1 in **Error! Reference source not found.**.

Monthly reports were produced up until March 2025 when quarterly reports were subsequently introduced to align with the updated Environmental Management Strategy and the quarterly sampling frequency for water sampling. The quarters are as follows:

- Q1: July to September
- Q2: October to December
- Q3: January to March
- Q4: April to June

1.3. Purpose

The purpose of this environmental performance report is to provide regular updates of monitoring data in accordance with the requirements of NSW Environmental Protection License (EPL) 20821, Section 66(6) of the Protection of the Environment Operations Act 1997 (POEO Act) and the mining lease, SML 20. Copies of the key regulatory documents are provided on DEVELOP's website: https://www.develop.com.au/woodlawn-sustainability/

A complaints register is available on the same website (under the link '*community documents')* and is updated monthly.

2. MONITORING SITES AND LIMITS

2.1. Monitoring sites with limits

The monitoring sites associated with prescribed limits are summarised in Table 2-2. The locations of these are presented on Plan 2, Appendix 1. For privacy reason's specific locations of residential receivers are not included on this plan. Residence A is located west and residence B is located northwest of the project. Residence C is located in the vicinity of DG28.

Table 2-2 Summary of monitoring results and limits

Pollutant	Units of measure	Monitoring frequency	Monitoring sites	Limit
Deposited dust	g/m^2/ month	Monthly	DG28	4[a]: Maximum total deposited dust level 2[b]: Maximum increase in deposited dust level
TSP	$\mu g/m^3$	24 hrs every six days	High Volume Air Sampler (HVAS)	90[c]: annual average
PM10	$\mu g/m^3$	24 hrs every six days	HVAS	30[d]: annual average 50[d]: 24 hour average
Noise	LAeq, 15 min	Monthly	Residence A Residence B	35: day, evening, night
	LA1(max)		Residence C	45: night
Airblast[f]	dB(Lin Peak)	-	-[f]	Anytime: 120 (0% allowable exceedance) Day: 115 (5% allowable exceedance of the total number of blasts over a period of 12 months)
Ground vibration	mm/s	-	-[g]	Anytime: 10 (0% allowable exceedance) Day: 5 (5% allowable exceedance of the total number of blasts over a period of 12 months) Evening: 2 (5% allowable exceedance of the total number of blasts over a period of 12 months) Night and all day on Sundays and public holidays: 1 (0% allowable exceedance)

Explanation of units of measurement

- g/m^2/month: grams per square metre per month
- $\mu g/m^3$: micrograms per cubic metre mg/m^3: milligrams per cubic metre
- LAeq, 15 min: The equivalent continuous sound pressure level over 15 minutes using a filter which makes the measurement more representative of how humans perceive sound.
- dB: decibels
- mm/s: millimetres per second

[a] Total impact (i.e. Incremental increase in concentrations due to the project plus background concentrations due to all other sources).
[b] Incremental impact (i.e. incremental increase in concentrations due to the project on its own)
[c] Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method.
[d] Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fog, fire incidents or any other activity agreed by the Director-General.
[e] Total impact (i.e. Incremental increase in concentrations due to the project plus background concentrations due to all other sources).
[f] Only applicable to surface blasting which DEVELOP does not currently undertake
[g] Limit is only applicable to residences on any privately owned land. Due to distance from site there are currently no monitoring sites established. DEVELOP maintains an internal network of ground vibration monitors as further detailed in the Blast Management Plan available on the website.

2.2. Monitoring sites without limits

The monitoring sites that are required to be monitored by the EPL but are not associated with any prescribed limits are summarised in Table 2-3. In general the annual analytes required are typically collected in Q1.

Table 2-3 Summary of monitoring sites not associated with limits

Medium	Monitoring sites	Monitoring analytes	Units of measure	Monitoring frequency
Deposited dust	DG22, DG33, DG34	Deposited dust	g/m^2/ month	Monthly
Surface water	115, 105, 100, 109, 300, TSF4	BOD, conductivity, dissolved oxygen, nitrogen (ammonia), potassium, TDS, TOC	mg/L	Quarterly
		pH	-	Quarterly
		Redox potential	mV	Quarterly
Groundwater	MB4, MB5, MB6, MB8, MB11, MB12, MB13, MB14, MB15, MB16, MB17	Alkalinity (as calcium carbonate), aluminium, arsenic, barium, cadmium, calcium, chloride, chromium (total), cobalt, copper, fluoride, lead, magnesium, manganese, mercury, nitrate, nitrite, nitrogen (ammonia), potassium, sodium, sulfate, total dissolved solids, total organic carbon, zinc	mg/L	Quarterly
		pH	-	Quarterly
		Standing water level	Metres	Quarterly
		Benzene, chromium (hexavalent), ethyl benzene, organochlorine pesticides, organophosphate pesticides, polycyclic aromatic hydrocarbons, toluene, total petroleum hydrocarbons, total phenolics, xylene	mg/L	Annually

Explanation of units of measurement
- g/m^2/month: grams per square metre per month
- mg/L: milligrams per litre
- mV: millivolts

3. MONITORING RESULTS

3.1. Meteorological data

Site weather is obtained from the meteorological station located at the EPL 11436 premises. A summary of the weather data is shown in Table 3-4.

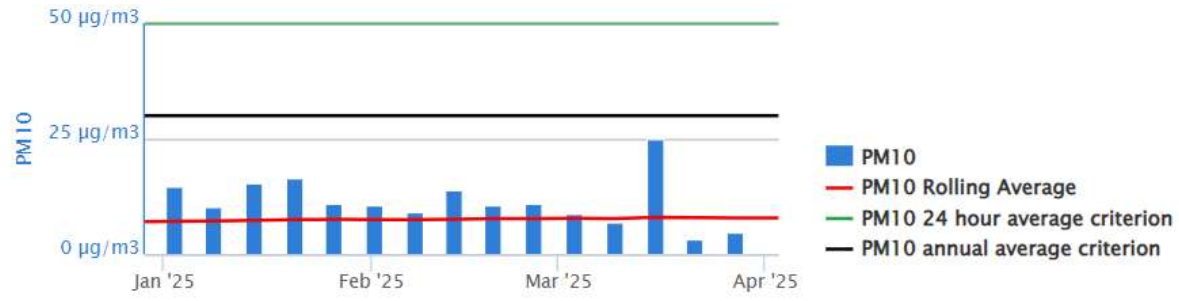
Table 3-4 Weather station summary

Month	Average Temp min (°C)[1]	Average Temp max (°C)[1]	Total Rain (mm)	No. of wet days (total)	Avg wind speed (m/s)	Avg wind direction (deg)	Total evapo transpiration (mm)
January	6.44	33.46	78.00	12	13.1	131	128.07
February	4.66	31.13	63.50	6.0	10.4	131	130.76
March	6.70	31.32	41.50	9.0	12.1	122	81.29

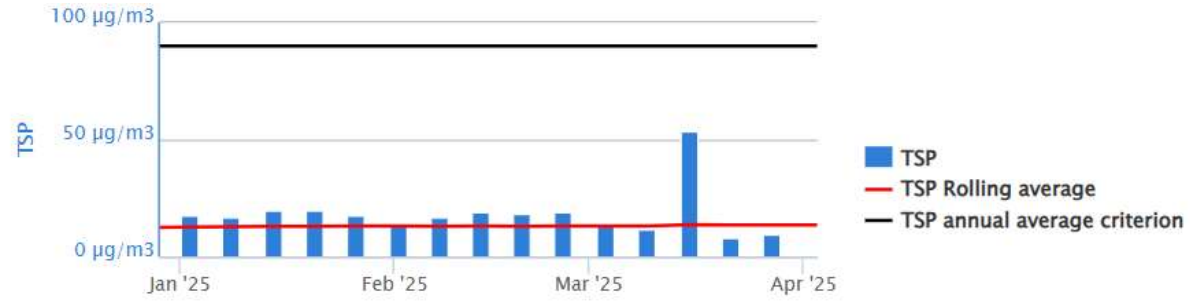
The wind rows for each month are presented in Appendix 2 which depicts the wind speed and direction recorded at 10 m above ground level.

3.2. Analytical results

The quarterly results are presented in Appendix 3 for each location monitored and sampled. Locations are either sampled once (in the case of groundwater or surface water) or three times (in the case of deposited dust and noise monitoring). The High Volume Air Sampler (HVAS) results for the quarter are presented in Graph 1 for the Particulate Matter less than 10 microgram per cubic meter (PM10 µg/m^3) and Graph 2 for the Total Suspended Particulate matter (TSP). The graphs also display the annual rolling average (red line) and any applicable criteria as described in Section 2.1.



Graph 1 PM10 quarterly results and the rolling average compared to the applicable criterion



Graph 2 TSP quarterly results and the rolling average compared to the applicable criterion

3.3. Compliance summary

The results of the quarterly monitoring have been compared to the limits identified Section 2.1 and summarised in Table 3-5.

Table 3-5 Compliance summary

Pollutant	Monitoring sites	Compliant with limits	Comments
Deposited dust	DG28	Yes	In January the insoluble solids results were greater than the limit, however the ash content (which is more indicative of project related impacts) remained below the criteria. In addition, the wind direction experienced during this month (refer to Section 3.1) was a strong easterly compared to this dust jars location south west of the project. Therefore, this increase is not attributable to project activities.
PM10	HVAS	Yes	Below 24 hour and annual average criterion.
TSP	HVAS	Yes	Below criterion for entire quarter.
Noise	Residence A	NA	The site was not operational; therefore no noise monitoring was completed during the quarter
	Residence B	NA	
	Residence C	NA	

Appendix 1 Plans

732000 736000 740000

6120000

6116000

SML 20 (The Woodlawn Site)

Enviroment Protection Licences

- EPL 20436 (Infigen Energy)
- EPL 20821 (Tarago Operations)
- EPL 20476 (Veolia MBT)
- EPL 11436 (Veolia Bioreactor)
- Woodlawn Windfarm Turbines
- Drainage Catchment Boundary

Local Government Area

- GOULBURN MULWAREE COUNCIL
- QUEANBEYAN-PALERANG REGIONAL COUNCIL
- Railways

ALLIANCE/VIGA CREEK

GOULBURN MULWAREE LGA

LAKE GEORGE CATHMENT

EVAP. DAM 2 (ED2)

EVAP. DAM 1 (ED1)

Woodlawn Farm

CRISPS CREEK

COLLECTOR ROAD

Paste Plant

Veolia Bioreactor

Box Cut

Rehabilitated Waste Rock Dump

Processing Plant

Tailings Dam (TSF 4)

Tailings Dam North (TDN)

Tailings Dam West (TDW)

Tailings Dam South (TDS)

HAWKESBURY CATHMENT

BONGARALABY CREEK

BRAIDWOOD ROAD

Tarago

GOULBURN STREET

MULWAREE R...

Pylara Homestead

CRISPS CREEK

BUNGENDORE ROAD

MULWAREE RIVER

QUEANBEYAN-PALERANG REGIONAL LGA

SYDNEY

SML20

CANBERRA

1 2 km

Scale: 1:32,000 MGA94 (Zone 55)

VTX-JOB-0386-MAP-01

Date: 2024-11-19 | Rev: 03 | @A3

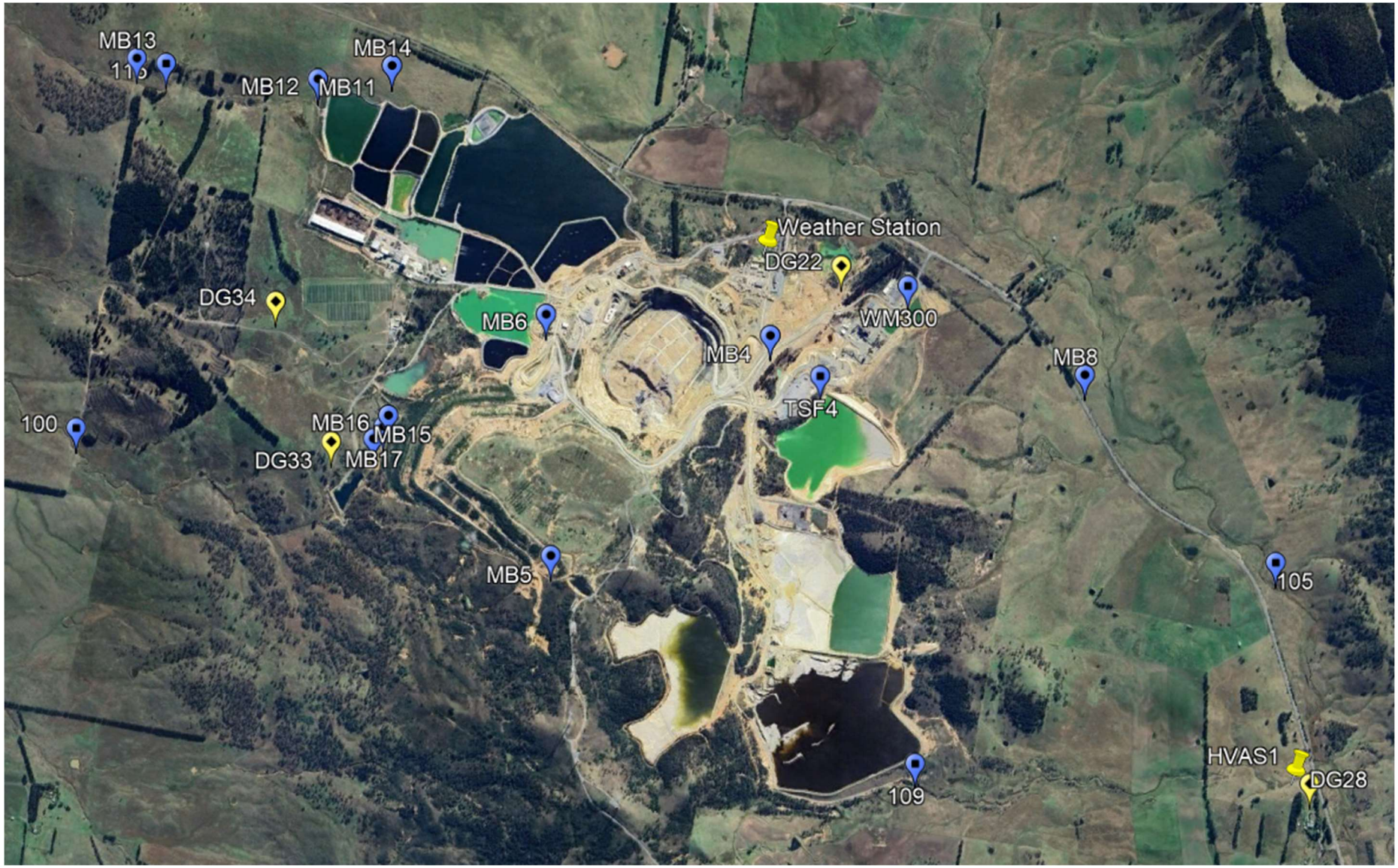
DEVELOP

Author: M Hinton | Requested By: K Crook

WOODLAWN ZINC COPPER PROJECT

Site Plan

Plan 2 EPL sample locations



Appendix 2 Monthly Wind Rows

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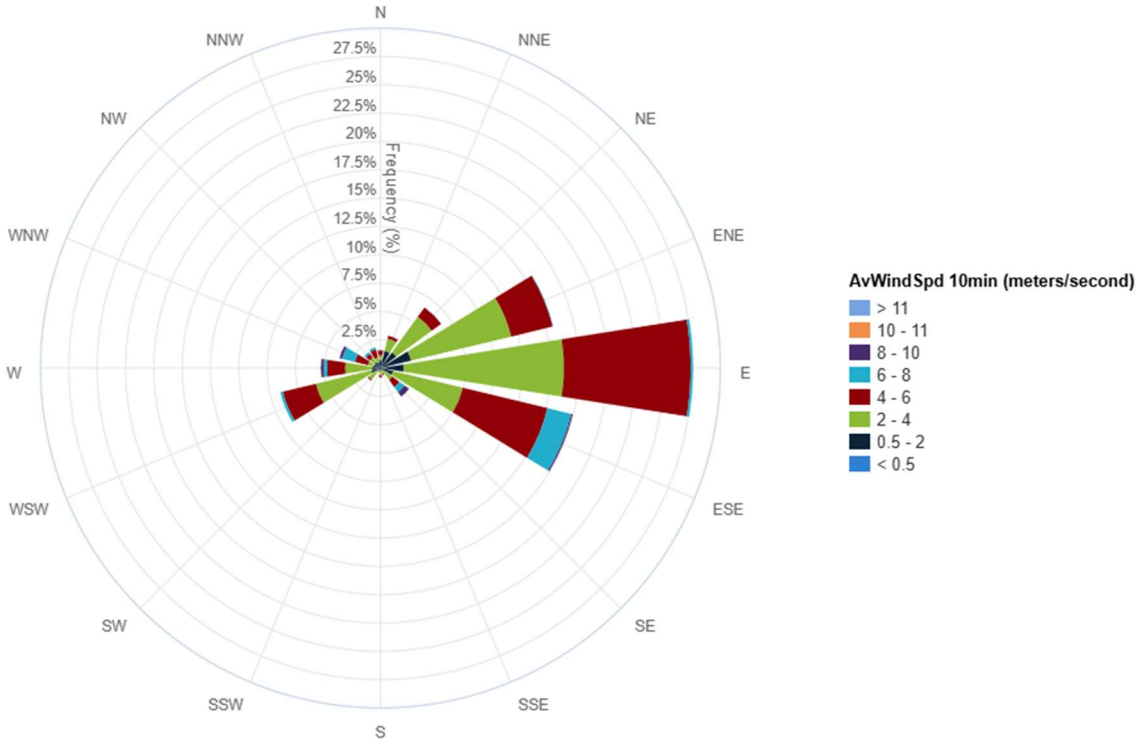

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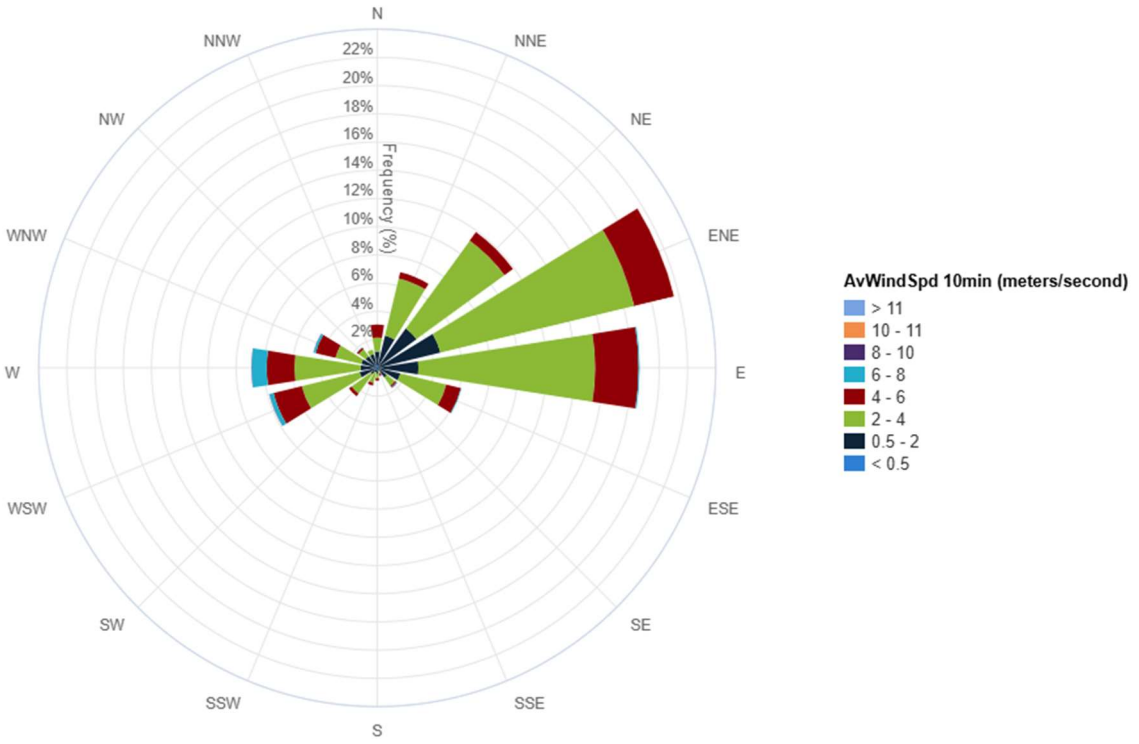

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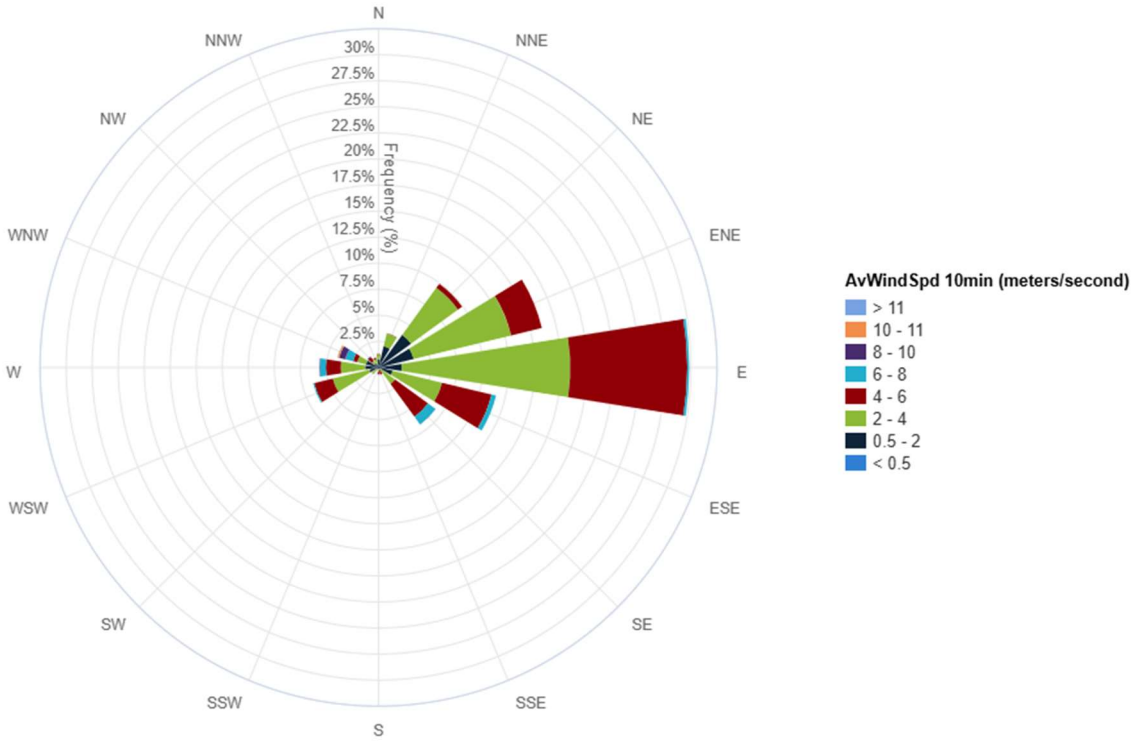

Appendix 3 Monitoring Data

	Analyte	PM10
	FRACTION	N
	Unit	µg/m3
Location	Sample Date	Result
PM10	2/01/2025	14.6
PM10	8/01/2025	10.3
PM10	14/01/2025	15.4
PM10	20/01/2025	16.4
PM10	26/01/2025	11.2
PM10	1/02/2025	10.6
PM10	7/02/2025	9.3
PM10	13/02/2025	14.1
PM10	19/02/2025	10.6
PM10	25/02/2025	11
PM10	3/03/2025	9
PM10	9/03/2025	6.9
PM10	15/03/2025	25.1
PM10	21/03/2025	3.4
PM10	27/03/2025	4.9
TSP	2/01/2025	17.9
TSP	8/01/2025	17.1
TSP	14/01/2025	20.1
TSP	20/01/2025	20.2
TSP	26/01/2025	17.8
TSP	1/02/2025	13.7
TSP	7/02/2025	17.2
TSP	13/02/2025	19.2
TSP	19/02/2025	18.6
TSP	25/02/2025	18.9
TSP	3/03/2025	13.3
TSP	9/03/2025	12.1
TSP	15/03/2025	53.9
TSP	21/03/2025	8.3
TSP	27/03/2025	9.8

	Analyte	Ash Content	Total Insoluble Matter
	FRACTION	N	N
	Unit	g/m².month	g/m².month
Location	Sample Date	Result	Result
DG22	2/01/2025	0.74	4.2
DG22	3/02/2025	1.5	3.4
DG22	6/03/2025	0.87	1.4
DG28	2/01/2025	0.28	1.4
DG28	3/02/2025	1.63	4.2
DG28	6/03/2025	1.05	3.1
DG33	2/01/2025	0.68	6
DG33	3/02/2025	1.13	2
DG33	6/03/2025	0.59	0.9
DG34	2/01/2025	0.32	4.9
DG34	6/03/2025	0.5	1

Analyte	FRACTION	Unit	Location	MB11	MB12	MB13	MB14	MB15	MB16	MB17	MB4	MB5	MB8
			Sample Date	14/01/2025	14/01/2025	14/01/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025	20/03/2025	24/03/2025	24/03/2025
Aluminium	D	mg/L	Result	333	376	0.04	0.03	0.05	2760	0.65	0.16	37.9	0.04
Arsenic	D	mg/L	Result	0.028	0.029	0.001	0.001	0.003	0.209	0.01	0.001	0.014	0.002
Barium	D	mg/L	Result	0.0203	0.0186	0.0275	0.0027	0.0155	0.05	0.0191	0.0353	0.0029	0.0776
Cadmium	D	mg/L	Result	22.7	24.1	0.00026	0.00013	0.0119	31.8	0.0103	0.00313	0.203	0.0001
Calcium	D	mg/L	Result	414	385	151	133	490	572	437	10.1	173	99.1
Chromium	D	mg/L	Result	0.036	0.037	0.002	0.002	0.002	0.114	0.004	0.002	0.002	0.002
Cobalt	D	mg/L	Result	11.4	12.7	0.0002	0.0002	0.0323	21.7	0.586	0.0229	1.23	0.0004
Copper	D	mg/L	Result	119	137	0.005	0.003	0.013	200	0.052	0.09	0.045	0.003
Lead	D	mg/L	Result	0.0104	0.0495	0.0004	0.0002	0.0055	0.399	0.024	0.0043	0.0049	0.0031
Magnesium	D	mg/L	Result	4720	4210	189	137	1220	8900	4920	114	974	121
Manganese	D	mg/L	Result	433	432	0.0051	0.0009	7.81	561	54.9	0.0358	37.2	0.0123
Mercury	D	mg/L	Result	0.001	0.001	0.0001	0.0001	0.0003	0.01	0.001	0.0001	0.0003	0.0002
Potassium	D	mg/L	Result	12.3	15.2	5.5	2.9	27.8	6.2	55.7	4.2	12.9	4.4
Sodium	D	mg/L	Result	1680	1560	276	148	322	132	854	236	436	410
Zinc	D	mg/L	Result	3290	3230	0.102	0.02	4.74	8960	94	1.06	259	0.018
Ammonia as N	N	mg/L	Result	0.5	0.6	0.1	0.1	0.1	6.8	0.1	0.1	0.1	0.1
Benzene	N	mg/L	Result	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Chloride	N	mg/L	Result	803	760	503	52.7	342	102	291	508	399	633
Electrical Conductivity @ 25°C	N	µS/cm	Result	28000	27600	3590	2180	8120	34600	17100	2390	8040	3470
Ethylbenzene	N	mg/L	Result	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Fluoride	N	mg/L	Result	0.51	0.45	0.62	1.04	0.37	0.18	0.37	0.21	0.23	0.82
Nitrate as N	N	mg/L	Result	15.6	14.2	1.8	14.4	0.1	0.9	0.1	0.33	0.2	4.24
Nitrite as N	N	mg/L	Result	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
PH - LAB	N	pH Unit	Result	4.11	3.82	7.72	7.23	6.89	3.11	5.9	5.16	4.47	7.1
Phenols (Total)	N	mg/L	Result	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Sulfate	N	mg/L	Result	22100	21300	75.6	845	5480	56400	14400	157	5530	66.6
Sum of polycyclic aromatic hydrocarbons	N	mg/L	Result	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Toluene	N	mg/L	Result	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Total Alkalinity as CaCO3	N	mg/L	Result	1	1	639	256	484	1	215	9	1	554
Total Dissolved Solids 180°C	N	mg/L	Result	49400	49600	2360	1680	9620	87800	24900	1400	9240	2040
Total Organic Carbon (as NPOC)	N	mg/L	Result	9	8	2	2	4	22	8	1	3	2
Total Xylenes	N	mg/L	Result	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Aluminium	T	mg/L	Result	364	400	0.07	0.04	4.58	2880	0.86	0.18	39	0.03
Arsenic	T	mg/L	Result	0.03	0.031	0.001	0.001	0.004	0.221	0.01	0.001	0.014	0.002
Barium	T	mg/L	Result	0.0796	0.0214	0.0283	0.0027	0.0341	0.05	0.0222	0.0363	0.0029	0.08
Cadmium	T	mg/L	Result	24.1	25.8	0.00065	0.00015	0.0136	33.4	0.0108	0.00341	0.204	0.0001
Calcium	T	mg/L	Result	432	410	153	138	508	598	442	10.6	182	104
Chromium	T	mg/L	Result	0.047	0.038	0.002	0.002	0.002	0.129	0.007	0.002	0.003	0.002
Cobalt	T	mg/L	Result	12.3	14.1	0.0003	0.0002	0.0345	23.1	0.631	0.0237	1.24	0.0004
Copper	T	mg/L	Result	128	147	0.01	0.004	0.086	212	0.079	0.094	0.045	0.003
Hexavalent Chromium	T	mg/L	Result	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lead	T	mg/L	Result	0.0138	0.0536	0.0038	0.0002	0.151	0.424	0.0388	0.0048	0.0056	0.0032
Magnesium	T	mg/L	Result	4950	4490	193	173	1300	9310	5230	136	1070	148
Manganese	T	mg/L	Result	462	463	0.0125	0.0009	8.22	588	59.6	0.0379	37.3	0.0138
Mercury	T	mg/L	Result	0.0021	0.001	0.0001	0.0001	0.0003	0.01	0.001	0.0002	0.0003	0.0002
Potassium	T	mg/L	Result	13.7	16.6	5.5	2.9	28.7	6.6	56.4	4.6	13	4.6
Sodium	T	mg/L	Result	1730	1670	277	148	327	140	862	249	441	417
Zinc	T	mg/L	Result	3420	3460	0.151	0.021	5.19	9540	94.1	1.13	280	0.012

Analyte	FRACTION	Unit	Location	100	105	109	115	TSF4	WM300
			Sample Date	10/02/2025	10/02/2025	10/02/2025	10/02/2025	15/01/2025	12/03/2025
Aluminium	D	mg/L	Result	0.08	0.08	0.04	0.05	153	28.9
Arsenic	D	mg/L	Result	0.001	0.001	0.001	0.001	0.007	0.01
Barium	D	mg/L	Result	0.0274	0.0221	0.0404	0.0487	0.0042	0.0331
Cadmium	D	mg/L	Result	0.0113	0.00018	0.0158	0.00017	2.19	1.07
Calcium	D	mg/L	Result	7.78	43.8	24	166	254	134
Chromium	D	mg/L	Result	0.002	0.002	0.002	0.002	0.015	0.008
Cobalt	D	mg/L	Result	0.001	0.0002	0.0005	0.0005	1.51	0.268
Copper	D	mg/L	Result	0.063	0.012	0.039	0.004	17.6	27.8
Lead	D	mg/L	Result	0.0004	0.0003	0.0003	0.0002	0.586	1.39
Magnesium	D	mg/L	Result	21.8	43	31.1	241	701	105
Manganese	D	mg/L	Result	0.146	0.0065	0.163	0.0643	43.4	6.31
Mercury	D	mg/L	Result	0.0001	0.0001	0.0001	0.0001	0.0002	0.001
Potassium	D	mg/L	Result	3.3	3.3	2.6	9.3	12.7	7.3
Sodium	D	mg/L	Result	21.8	23.3	52.9	49	200	147
Zinc	D	mg/L	Result	3.21	0.217	2.1	0.059	429	242
Ammonia as N	N	mg/L	Result	0.1	0.1	0.1	0.1	7	16.8
Biochemical Oxygen Demand	N	mg/L	Result	2	2	2	2	2	2
Chloride	N	mg/L	Result	20.5	116	60.3	377	166	262
Dissolved Oxygen - Field	N	mg/L	Result	5.894031	5.407317	6.904415	5.419095	6.642219	6.728973
Electrical Conductivity @ 25°C	N	µS/cm	Result	402	872	704	3310	7810	3470
Nitrate as N	N	mg/L	Result	0.1	0.1	0.1	0.1	2.2	1.26
Nitrite as N	N	mg/L	Result	0.05	0.05	0.05	0.05	0.05	0.05
PH - LAB	N	pH Unit	Result	7.03	6.94	6.67	7.59	3.06	2.96
Redox Potential	N	mV	Result	347	354	364	350	544	688
Sulfate	N	mg/L	Result	90.1	135	139	1160	4670	1580
Total Alkalinity as CaCO3	N	mg/L	Result	30	71	45	134	1	1
Total Dissolved Solids 180°C	N	mg/L	Result	323	667	507	2870	9760	2950
Total Organic Carbon (as NPOC)	N	mg/L	Result	6	15	6	20	4	4
Aluminium	T	mg/L	Result	0.97	0.14	0.54	0.09	161	29.5
Arsenic	T	mg/L	Result	0.001	0.001	0.001	0.001	0.008	0.012
Barium	T	mg/L	Result	0.0334	0.0234	0.0424	0.0509	0.0052	0.0376
Cadmium	T	mg/L	Result	0.0122	0.00019	0.0169	0.0002	2.27	1.18
Calcium	T	mg/L	Result	8.19	46.2	25.6	178	262	138
Chromium	T	mg/L	Result	0.002	0.002	0.002	0.002	0.02	0.008
Cobalt	T	mg/L	Result	0.0013	0.0002	0.0005	0.0006	1.61	0.294
Copper	T	mg/L	Result	0.119	0.013	0.055	0.004	18.8	30.4
Lead	T	mg/L	Result	0.0107	0.0006	0.0017	0.0002	0.609	1.54
Magnesium	T	mg/L	Result	22.4	45	32.7	255	708	127
Manganese	T	mg/L	Result	0.158	0.0266	0.173	0.0906	45.3	7
Mercury	T	mg/L	Result	0.0001	0.0001	0.0001	0.0001	0.0002	0.001
Potassium	T	mg/L	Result	3.6	3.4	2.7	9.6	13.3	7.4
Sodium	T	mg/L	Result	23.7	54.1	50.8	199	203	150
Zinc	T	mg/L	Result	3.46	0.231	2.22	0.064	449	246