



Newcastle Sand Environmental Monthly Report:

May 2026

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1. INTRODUCTION

This report has been prepared in accordance with the *Protection of the Environment Operations Act 1997* (POEO Act), Environment Protection Licence (EPL) 21264 and the reporting requirements of Development Consent SSD-6125 and associated management plans for the Cabbage Tree Road Sand Quarry. It provides a summary of environmental monitoring results and performance for the reporting month.

The monthly report includes noise, water and air monitoring required by EPL 21264 and internal monitoring undertaken and reported in accordance with:

- EPL 21264 (Conditions M1–M8, R1–R4)
- Development Consent SSD-6125 (Schedule 3 - 5)
- NSW EPA's 2013 *Requirements for publishing pollution monitoring data*
- DPE's (now DPHI) *Web-Based Reporting Guideline – State Significant Mining Developments (2023)*

A summary of the EPL licence details and Development Consent details for Cabbage Tree Road Sand Quarry are provided in **Table 1** and **Table 2** below. Tables throughout this report provide key monitoring information from the EPL and the Consent requirements, including:

- Location of monitoring.
- Pollutant.
- Unit of measurement.
- Monitoring frequency required.

Refer to NSW EPA publishing guidelines at <https://www.epa.nsw.gov.au/licensing-and-regulation/licensing/environment-protection-licences/licensing-under-poeo-act-1997/publishing-and-providing-pollution-monitoring-data> for details of licence reporting requirements.

Table 1 Licensee EPL Summary

Licence Details	
Licence Number	21264
Anniversary Date	31 July
Licence Review	2024
Licensee	Williamtown Sand Syndicate PTY LTD
Licensee Address	PO Box 186 Waratah NSW 2298
Premises	Cabbage Tree Road Sand Quarry, 398 Cabbage Tree Road WILLIAMTOWN 2318
Scheduled Activity	Crushing, grinding or separating. Extractive activities.
Fee Based Activity	Crushing, grinding or separating. Extractive activities.
Link to Licence (EPA)	EPL 21264

Table 2 Development Consent Summary

Development Consent Details	
Development	Cabbage Tree Road Sand Quarry
Consent Authority	The Independent Planning Commission NSW
Applicant	Williamtown Sand Syndicate
Applicant Number and Link to Consent	SSD-6125

Table 3 and **Table 4** below outline the Quarry hours of operation for quarrying, loading and dispatching limits.

Table 3 Hours of Operation – Quarry Operations

Hours of Operation
Quarrying Operations
7am – 5pm Mon – Fri
7am – 4pm Saturday
At no time on Sundays or public holidays

Table 4 Hours of Operation - Loading and Dispatching

Hours of Operation
Loading and Dispatching of laden trucks
6am – 6pm Monday to Friday
7am – 4pm Saturday
At no time on Sundays or public holidays

2. NOISE & VIBRATION MONITORING

Noise monitoring is undertaken quarterly in accordance with EPL 21264 (Condition M8.1) and Development Consent SSD-6125. Locations of the receivers surrounding the project area are provided within **Appendix 1**.

2.1 CRITERIA

Table 5 Noise EPL Monitoring Criteria

Receiver	Day LAeq(15min)	Shoulder LAeq(15min)	Shoulder LA Max(1min)
Any resident receiver	43	39	45

2.2 RESULTS

Noise monitoring is undertaken in accordance with the EPL which states in condition M8.1 that noise monitoring is to occur quarterly. Quarterly noise monitoring was not required for this reporting month. Monitoring is conducted in March, June, September, and December in accordance with EPL 21264 and the Noise Management Plan.

During the reporting period, no noise monitoring was completed. Previous noise monitoring occurred in the March reporting period, and the next noise reporting period will occur in June.

3. WATER MONITORING

Water monitoring is undertaken in accordance with EPL 21264 (Conditions M2 and M3), Development Consent SSD-6125 (Schedule 3 and 4) and the approved Soil and Water Management Plan (SWMP). This includes monthly groundwater sampling from a network of monitoring bores and, where applicable, surface water monitoring from sediment basins or natural watercourses. Parameters monitored are selected based on potential impacts to the Tomago Sandbeds and surrounding environments.

Monthly surface and groundwater results are compared to site-specific trigger levels from the Soil and Water Management Plan (SWMP, currently version 3 approved). Water monitoring locations are provided in **Appendix 2**. Surface water locations (SW1–SW4) are not listed in EPL 21264 and are therefore not subject to NSW EPA public reporting requirements. Monitoring at these locations is conducted to meet SSD-6125 and SWMP obligations and is reported internally and through the Annual Environmental Management Review (AEMR).

3.1 GROUNDWATER

In accordance with the SWMP, an exceedance of the trigger value does not necessarily indicate that there is an unacceptable risk on site, but rather a trigger for further investigation or evaluation of management options.

Table 6 EPL Groundwater Criteria and Monitoring Results and **Figure 1** Groundwater Level Monitoring Tarp Rules (Watershed HydroGeo, 2019) below present the results of the May groundwater monitoring period and the Trigger Action Response Plan associated. **Table 6** shows the groundwater monitoring results for May. No exceedances were recorded for this month.

Table 6 EPL Groundwater Criteria and Monitoring Results

Monitoring Well	Groundwater Quality						Groundwater Levels			
	Arsenic	Iron	Manganese	Field EC (µS/cm)	Field pH (pH units)	Field Turbidity (NTU)	Depth to Water (mbTOC)	GWE	Max inferred	Max inferred
Site Trigger Values	0.003	4.1	0.136	500	4.2-6.5	N/A	Refer to Figure 1			
BH2	<0.001	0.41	0.006	99	4.0	3.7	5.74	1.93	3.8	1.87
BH4	<0.001	0.04	0.010	196	4.70	0.9	1.94	1.12	3.0	1.88
BH6	<0.001	3.60	0.006	248	5.00	0.7	1.84	1.78	4.4	2.62
BH7	<0.001	0.45	0.020	108	4.80	0.8	1.89	1.09	3.7	2.61
BH9A	<0.001	0.39	0.020	122	4.60	7.4	9.52	1.23	4.0	1.77
BH11	<0.001	2.30	<0.005	177	4.70	3.2	3.02	3.61	5.5	1.89
MW239S	<0.001	0.39	<0.005	149	4.80	9.4	1.50	1.54	3.9	2.36

*Monitoring undertaken at BH9A as a proxy for EPL Point 5 (BH9).

Level	Trigger	Action and Response	Report / Response Actions
0	Groundwater levels more than 0.5 m below <i>inferred</i> maximum historical level.	Standard operations – monthly dipping of operational on-site monitoring bores.	N/A
1	Groundwater levels within 0.5 m below <i>inferred</i> maximum historical level at any on-site bore.	Weekly (or more frequent) monitoring (dipping) of groundwater levels until water level declines to below high frequency level bores.	Internal and environmental consultant. Include note in Annual Report.
2	Groundwater levels within 0.25 m of <i>inferred</i> maximum historical level at any on-site bore.	Weekly (or more frequent) monitoring (dipping) of groundwater levels. Re-analysis and review of Minimum Extraction Level (MEL).	WSS to issue letter to DPIE, documenting groundwater level and rainfall trends, review and make recommendations regarding MEL.
3	Groundwater levels within resource area rise above previously <i>inferred</i> maximum groundwater level.	Analysis of recent data by hydrogeologist, including site data and data from local HWC wells and local Defence wells (if available). Revision of MEL. Remediation of earlier excavations to revised MEL if required by DPIE.	WSS to issue letter to DPIE, DoI Water and HWC, documenting groundwater level trends, and revision (if necessary) of MEL. Letter to outline remedial options, considering access, vegetation condition in previously rehabilitated areas. Re-grading of previously rehabilitated areas if required by DPIE.

Figure 1 Groundwater Level Monitoring Tarp Rules (Watershed HydroGeo, 2019)

3.2 PFAS

PFAS (Per- and Polyfluoroalkyl Substances) monitoring is conducted in accordance with the requirements of the Soil and Water Management Plan (2021) and Development Consent SSD-6125. Routine water sampling was undertaken in May across the full monitoring suite, including:

- Groundwater bores
- Surface water sites
- Wash plant process water

Monitoring is carried out in accordance with relevant national standards, including the PFAS National Environmental Management Plan (HEPA NEMP 2.0) trigger values. PFAS monitoring at the wash plant fines was conducted in May and was below detection limits.

All PFAS analytes were below detection limits, with no exceedances recorded in any location during the sampling round. The results further demonstrate that the site's PFAS mitigation and management systems are operating effectively, with no risk posed to downstream water users or the surrounding environment.

3.3 TRIGGER VALUE ELEVATION

Surface water and groundwater monitoring was undertaken on 7 May 2026 in accordance with the Soil and Water Management Plan (SWMP). Investigation identified for pH at BH2 and WPW, and barium at BH12A. In addition, a slight increase in PFAS concentrations was observed at WPW, although concentrations remained well below applicable trigger values. A review of the results indicates that no exceedances constitute an EPL non-compliance, pollution incident or reportable environmental event.

Trigger investigations have been initiated and recorded. Actions include review of historical trends, assessment of recent site activities and verification through future monitoring events. At the time of reporting, no evidence has been identified to indicate a potential contamination issue requiring initiation of a Water Trigger Investigation under Section 5.8.4 of the SWMP. The following round of monitoring demonstrated all levels back within normal range.

4. AIR QUALITY

Air quality monitoring at the Newcastle Sand site is undertaken in accordance with EPL 21264 (Conditions M2 and M3) and the NSW *Approved Methods for Sampling and Analysis of Air Pollutants*. The focus is on particulate matter (PM10 and TSP) to assess compliance with ambient air quality criteria and to monitor potential off-site impacts.

Real-time data informs Trigger Action Response Plan (TARP) interventions, while HVAS results feed into compliance assessment and trend reporting.

4.1 AIR QUALITY CRITERIA

Table 7 EPL P1.1 Air Monitoring

EPL ID Number	Type of Monitoring	Location Description
13	Real-time PM10	BAM (RT1)
14	Real-time PM10	BAM (RT2)
15	HVAS	PM10
16	HVAS	TSP

Table 8 EPL Air Monitoring Requirements

Air Monitoring Requirements			
Point 13,14			
Pollutant	Unit of Measure	Frequency	Sampling Method
PM10	micrograms per cubic	Continuous	Australian Standard
Point 15			
Pollutant	Unit of Measure	Frequency	Sampling Method
PM10	micrograms per cubic	Every 6 days	AM-18
Point 16			
Pollutant	Unit of Measure	Frequency	Sampling Method
Total suspended	micrograms per cubic	Every 6 days	AM-15

4.2 AIR QUALITY RESULTS

Air quality for PM10 and TSP levels recorded for May were within compliance limits.

Table 9 HVAS Air Monitoring Results

Sample Date	HVAS 1 (PM10) Paddock	Rolling Average	HVAS 2 (TSP) Sampson	Rolling Average
	Criteria 50 µg/m³	Criteria 25µg/m³	-	Criteria 90 µg/m³
1 May 2026			25	38.3
7 May 2026	13	20.19	50	38.8
13 May 2026	7	20.26	15	38.9
19 May 2026	4	20.23	13	39.0
25 May 2026	8	20.23	25	39.1
31 May 2026	4	20.05	17	38.9

Table 10 BAM Monitoring Results

Month	RT1 24hr Rolling Average	RT2 24hr Rolling Average
May	10.58	0.97

High Volume Air Sampling - TSP and PM10

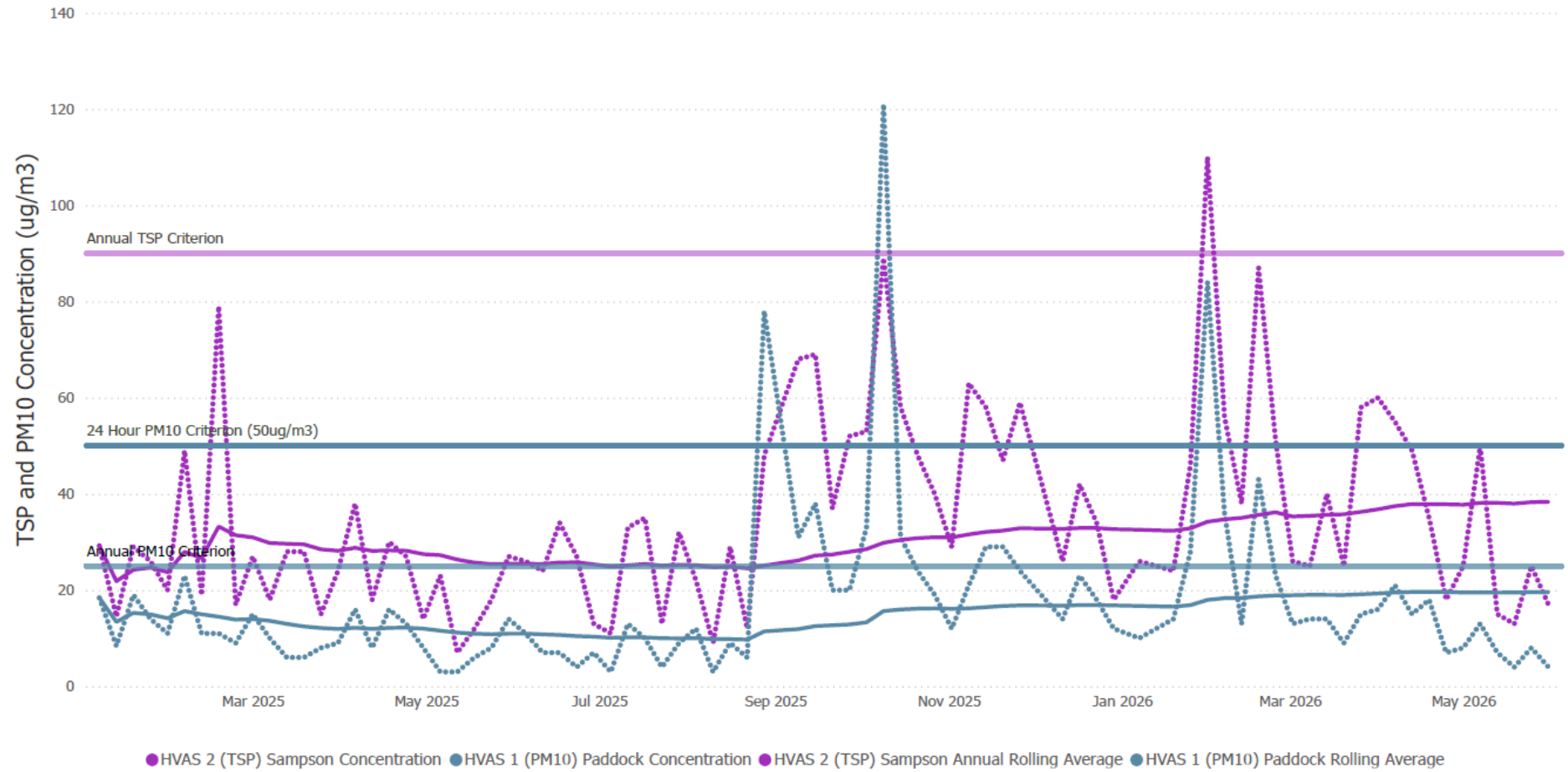


Figure 2 HVAS Long Term Results for TSP and PM10

Sampson (RT1) BAM - PM10

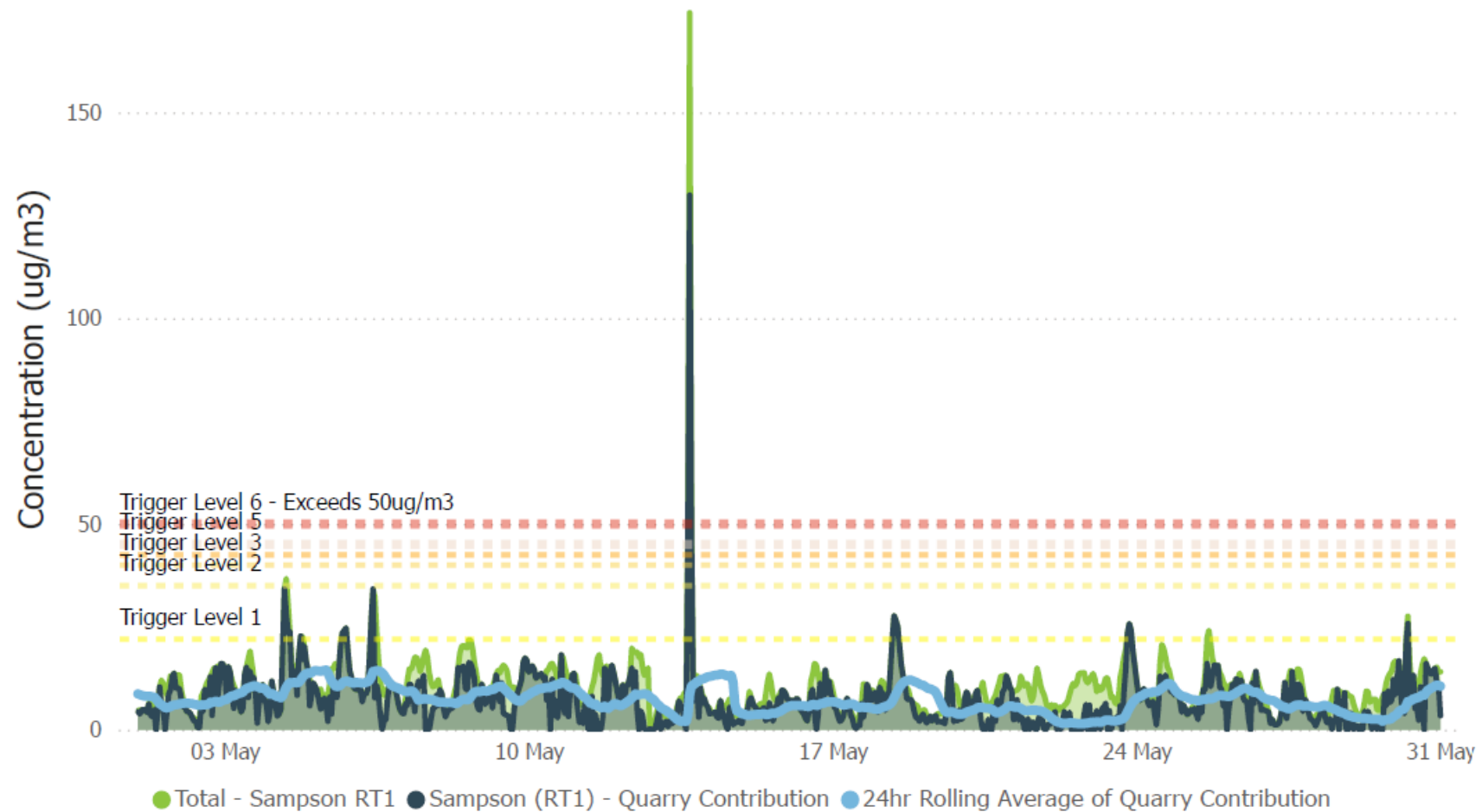


Figure 3 Sampson (RT1) BAM Long Term Results

Hardes (RT2) BAM - PM10 May 2026

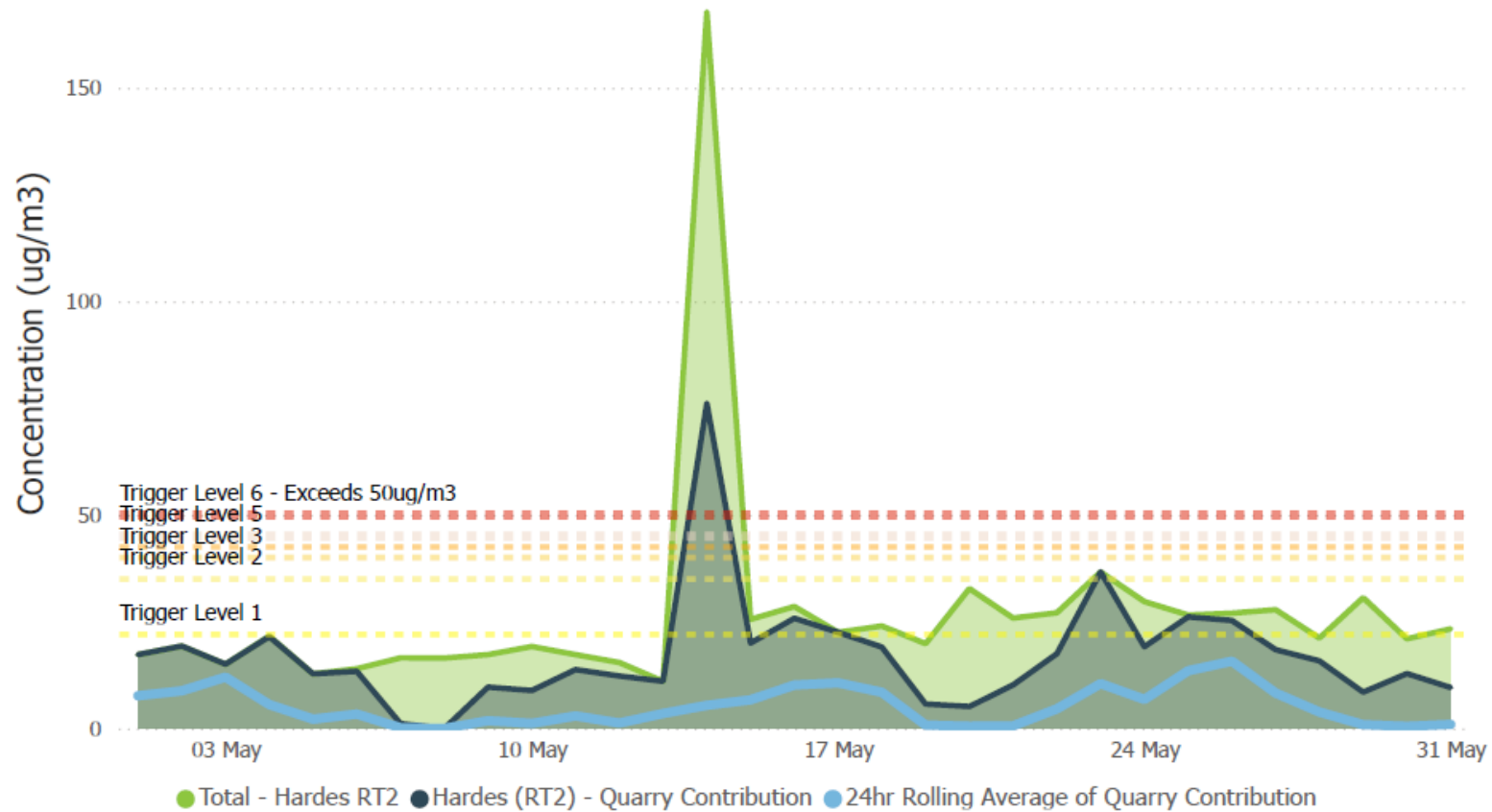


Figure 4 Hardes (RT1) BAM Long Term Results

Trigger Response Framework		
Trigger Stage	Conditions	Action
1	a) Wind towards residents. Where wind is directed towards surrounding residences,, that is the weather station indicates winds are blowing from the quadrants west (270°), THROUGH North (0°) to East (90°). OR b) PM10 above background. Continuous PM10 monitor shows rolling PM10 24-hour average exceeds the average background concentration of 22ug/m3.	Review operations and ensure water dust suppression is active (e.g. haul roads and stock-pile sprays)
2	a) Wind is directed toward surrounding residences; AND b) Rolling PM10 24-hour average exceeds 35ug/m3	No topsoil stripping or dozer pushing
3	a) Wind is directed toward surrounding residences; AND b) Rolling PM10 24-hour average exceeds 40ug/m3	No sand processing. In addition to Stage 1 & 2 actions.
4	a) Levels continue to increase after two hours since last action; AND b) Wind is directed towards surrounding residences; AND c) Rolling PM10 24-hour average exceeds 42.5 ug/m3	Suspend sand extraction. In addition to Stage 1, 2, & 3 actions.
5	a) PM10 levels continue to increase after two hours since last actions; AND b) Wind is directed towards surrounding residences; AND c) rolling PM10 24-hour average exceeds 45ug/m3	Suspend loading trucks (i.e. no machinery operating - except water carts and product haulage trucks already loaded). In addition to Stage 1, 2, 3 & 4 actions.
6	a) Rolling PM10 24-hour average exceeds 50ug/m3.	<u>All activities suspended (except dust control measures)</u> Complete Incident Notification to DPE within 24 hours. Complete Incident Investigation and Corrective Action Report.

Table sourced: Newcastle Sand, Air Quality Management Plan, 26th March, 2019, Ref: Air QMP V3 20190326

Figure 5 Air Quality Trigger Framework (AQMP, 2019)

5. METEOROLOGICAL

5.1 METEOROLOGICAL CRITERIA

Meteorological observations for May 2026 were sourced from the Williamstown RAAF station (ID: 061078), located approximately 7.5 m above ground level and representative of local conditions at Newcastle Sand.

Table 11 and **Table 12** below outline the location and criteria associated with EPL 21264 (Condition M4), the Air Quality Management Plan (AQMP), and the NSW EPA Approved Methods for Sampling of Air Pollutants (2016) require data to be used to support the validity of air and noise monitoring events and inform real-time responses to dust risks via the AQMP Trigger Action Response Plan (TARP).

Table 11 Meteorological Monitoring Location

EPL ID number	Type of Monitoring	Location description
17	Meteorological	Williamstown Bureau of Meteorology Station

Table 12 Meteorological Monitoring Criteria

Parameter	Sampling method	Units of measure	Averaging period	Frequency
Temperature at 2 meters	AM-4	Degrees Celsius	1 hour	Continuous
Wind direction at 10 meters	AM-2 & AM-4	Degrees	15 minutes	Continuous
Wind speed at 10 meters	AM-2 & AM-4	Meters per second	15 minutes	Continuous
Sigma Theta	AM-2 & AM-4	Degrees	15 minutes	Continuous
Rainfall	AM-4	Millimetres	15 minutes	Continuous
Relative Humidity	AM-4	Percent	1 hour	Continuous

5.2 METEOROLOGICAL RESULTS

Rainfall data was obtained from the Bureau of Meteorology Williamtown RAAF AWS (Station No. 061078, Williamtown, NSW - Daily Weather Observations (bom.gov.au). A total of 193.6 mm of rainfall was recorded over the May period.

Meteorological conditions during the month were typical for the season. Wind direction is used to assess the relevance of elevated PM10 events recorded by BAM. No anomalies were observed in rainfall or humidity that would invalidate monitoring results.

Table 13 Meteorological Results

Month	Max mean temperature at 2 meters (Degrees Celsius)	Wind direction at 10 meters (Degrees)	Highest wind speed at 10 meters (Km/h)	Rainfall (Millimetres)	Mean Relative Humidity at 3pm (Percent)
May	21.9	262.48	5.89	193.6	66

6. TRAFFIC

The May monthly traffic movements are compliant as per Schedule 3 Condition 26 of Development Consent. The weighbridge and ticketing system is routinely calibrated and managed by an accredited external business to ensure the sale and transport of sand from the quarry is consistent with approved haulage limits and operational times. Full daily vehicle logs are retained on-site and are available for inspection upon request.

6.1 TRUCK MOVEMENT CRITERIA

Truck movements are monitored daily at the site entry point. The data ensures compliance with the approved hourly vehicle limits under Development Consent and supports broader compliance with noise and air quality management objectives. The maximum approved haulage as per Condition 23 of Consent SSD 6125 is outlined in **Table 14** below.

Table 14 Approved Movement Criteria

Time Period	Limits (Trucks/Hour)
6:00am – 7:00am	6
7:00am – 6:00pm (Monday to Friday)	10
7:00am – 4:00pm (Saturday)	10
Sundays / Public Holidays	No truck movements permitted

7. COMMUNITY & COMPLIANCE

7.1 COMPLAINTS

There were two complaints recorded within the reporting period. On the 2 and 16 May 2026 a member of the community reported an early truck arrival between 6:40 am and 7:00am. These complaints were investigated and was discovered the trucks arrived at the site prior to 7:00am however were not authorised beyond the weighbridge or into operational quarry prior to the approved operating hours. In consultation with DPHI no breaches of the development consent occurred, and the complaints were closed out.

The last community complaint was on the 21 April 2026 regarding truck movements. The matter has since been resolved and closed out, details of this can be found on the Newcastle Sand website: <https://www.newcastlesand.com.au/complaints-register/>

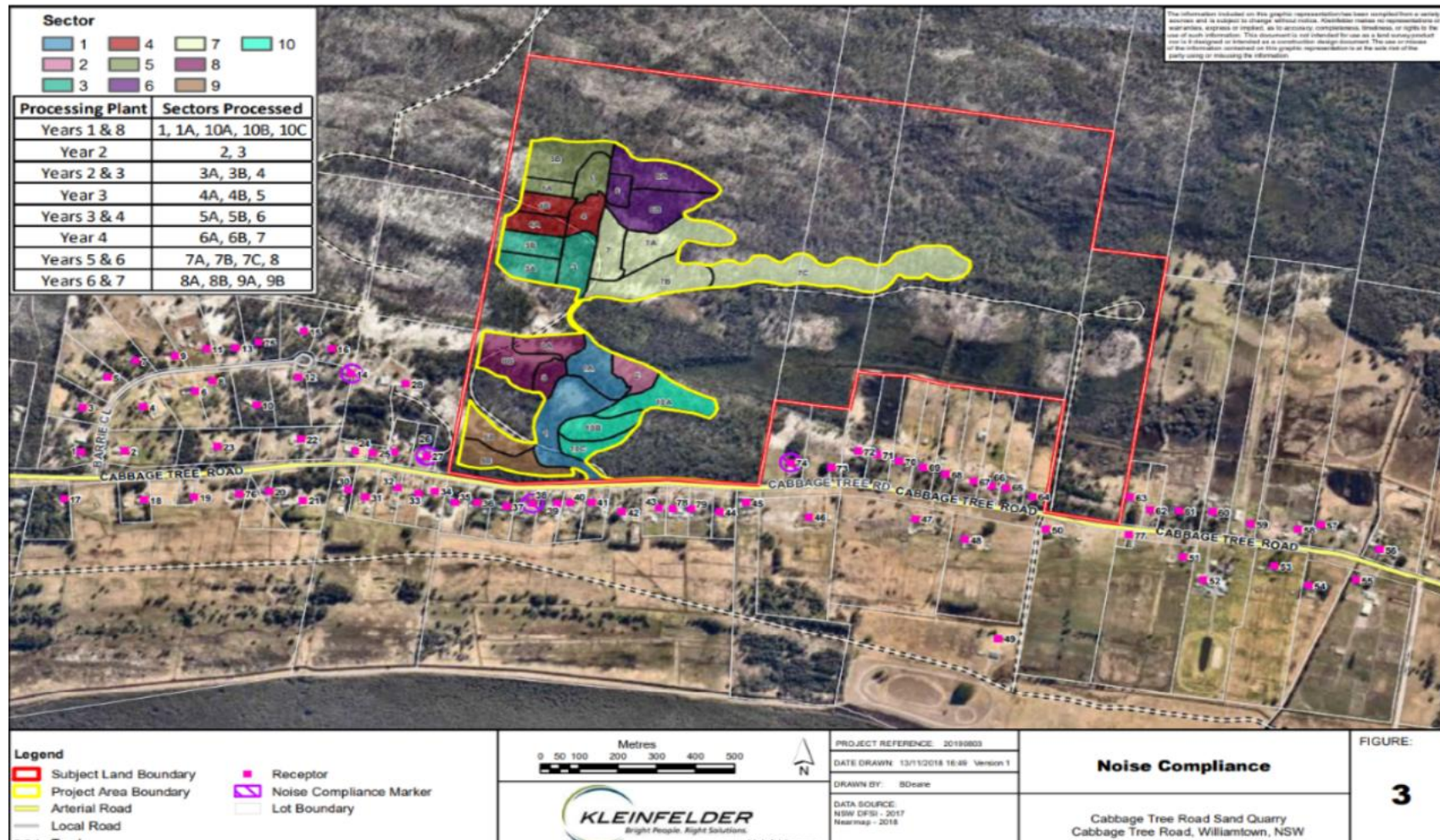
7.2 INCIDENTS

There were no incidents in the reporting period.

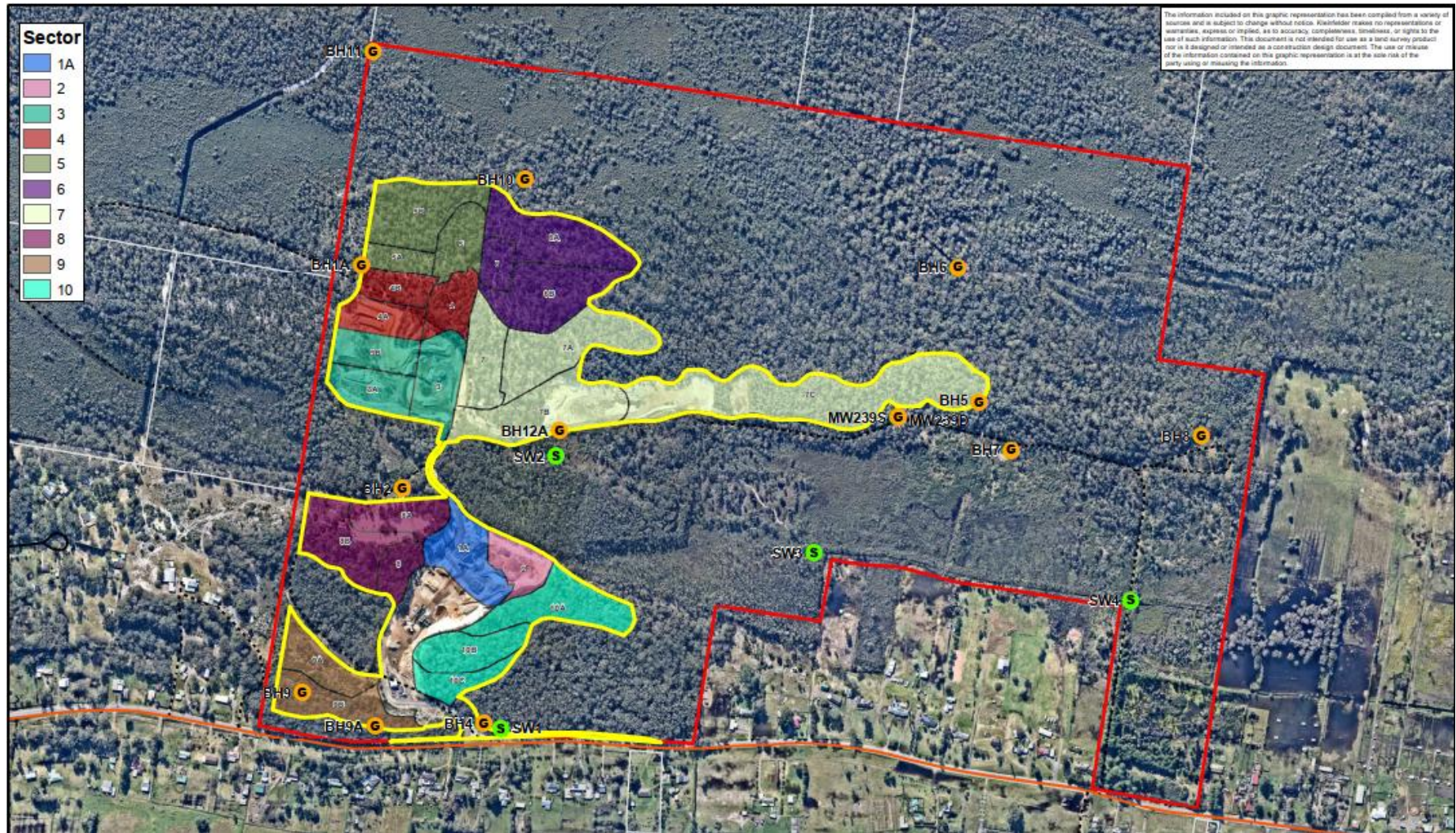
7.3 NON-COMPLIANCES

There were no non-compliances within the reporting period.

APPENDIX 1. Noise Monitoring Locations (NMP, 2019)



APPENDIX 2. WATER MONITORING LOCATIONS (SWMP, 2021)



APPENDIX 3. AIR MONITORING LOCATIONS (AQMP, 2019)

