DUST MONITORING REPORT (OCTOBER TO DECEMBER 2023)

CONCRUSH FACILITY, TERALBA

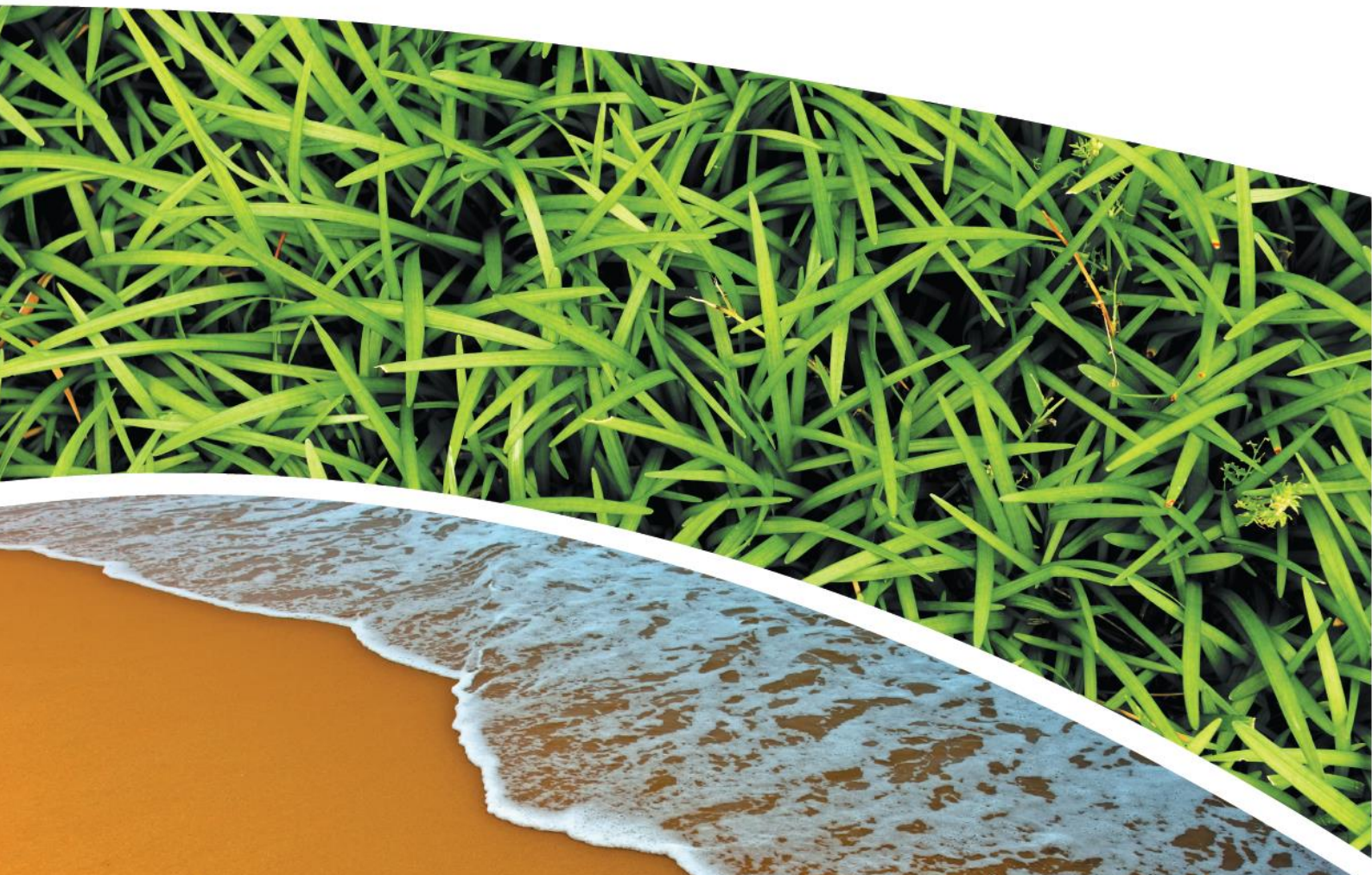
Prepared for CONCRUSH PTY LTD

Prepared by RCA AUSTRALIA

RCA ref 13589a-223/0

JANURY 2024

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL



RCA AUSTRALIA
ABN 53 063 515 711

92 Hill Street, CARRINGTON NSW 2294

Telephone: +61 2 4902 9200

Email: administrator@rca.com.au
Internet: www.rca.com.au

DOCUMENT STATUS						
Rev No	**Comment**	**Author**	**Reviewer**	**Approved for Issue (Project Manager)**		
				Name	**Signature**	**Date**
/0	Final	M Hayyat	F Brooker	F Brooker		25.01.2023

DOCUMENT DISTRIBUTION				
Rev No	**Copies**	**Format**	**Issued to**	**Date**
/0	1	Electronic (email)	Concrush Pty Ltd – Kevin Thompson – kevin@concrush.com.au Helen Milne – helen@concrush.com.au	25.01.2023
/0	1	Electronic report	RCA – job archive	25.01.2023

Contents

RCA ref 13589a-223/0

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

Geotechnical Engineering
Engineering Geology
Environmental Engineering
Hydrogeology
Construction Materials Testing
Environmental Monitoring
Noise & Vibration
Occupational Hygiene

25 January 2024

Concrush Pty Ltd
21 Racecourse Road
Teralba NSW 2284

Attention: Mr Kevin Thompson
CC: Helen Milne

DUST MONITORING REPORT (OCTOBER TO DECEMBER 2023)
CONCRUSH FACILITY, TERALBA

1 INTRODUCTION

This report presents the findings of dust monitoring undertaken at the Concrush resource recovery facility, situated in Teralba that covers the period between 29th September 2023 and 2nd January 2024.

The site is an operational facility over the entirety of the monitored area for the reporting period. Some construction is ongoing in the northern portion of the site for Sediment Basin 1 and the weighbridge.

The monitoring undertaken has been detailed in an Operational Air Quality Management Plan (OAQMP, Ref [1]).

2 SITE IDENTIFICATION AND DESCRIPTION

The site is described as 21 Racecourse Road, Teralba and part Lot 2, DP 220347. Additional site details are shown in **Table 1** and the site extent is shown in **Figure 1** below.

Table 1 *Site Details*

Current zoning (Ref [2])	IN1 – General Industrial.
Current use	Concrush resource recovery facility.
Size of site	Approximately 4.8ha.
Surrounding land use to the: North	Lot 1 DP220347. Industrial – storage yard for pre-cast concrete panels operated by others.
South	Part of Lot 2 DP220347. Industrial – scrap metal recycling yard operated by others.
East	Racecourse Road and then Cockle Creek.
West	Main Northern Rail line and then wetlands.
Nearest sensitive receptor (human health)	Residential housing located approximately 360m southeast across Cockle Creek.
Nearest sensitive receptor (environmental)	Cockle Creek located approximately 35m east and wetland approximately 30m west.

Figure 1 *Project Site Location and Layout (aerial as of 23 May 2023)*

3 MONITORING DETAILS

A total of five (5) monitoring locations are situated on site as shown in **Figure 2** below. At four (4) of these locations (DG1A-DG4A) there are dust depositional bottles situated on stands installed[1] in accordance with the relevant Australian Standard (Ref [3]). An additional dust gauge (DG5A) is situated on the southern portion of the roof of the office adjacent to the weigh station along with the real time dust monitor.

Figure 2 *Approximate Placement of Dust Deposition Gauges and Real Time Monitor (aerial as of 23 May 2023).*

3.1 GUIDELINES

The NSW EPA guidelines (Ref [4]) nominates the criteria for depositional dust as detailed in **Table 2** below.

Table 2 *Depositional Dust: Impact Assessment Criteria*

Average Period	Maximum increase in deposited dust level	Maximum total deposited dust level	Sampling Frequency
Annual	2g/m^2 /month	4g/m^2/month	Monthly

The NSW EPA guidelines (Ref [4]) nominate additional criteria:

- $PM_{2.5}$ daily average 0.025mg/m^3, annual average 0.008mg/m^3.

[1] It is noted that DG3A may be partially obscured by the nearby maintenance building depending on the wind direction and particle size.

- PM_{10} daily average 0.05mg/m^3, annual average 0.025mg/m^3.
- TSP annual average 0.09mg/m^3.

It is noted that there is no relevant Australian Standard for the methodology employed by the real time monitor, nor is the methodology included in the NSW EPA guidelines (Ref [5]); however, concentrations recorded by the real time monitor are considered appropriate for comparative purposes to trigger a review of dust control measures.

The Environmental Impact Statement (EIS) for the expansion of the Concrush resource recovery facility to incorporate the southern portion of the site, refer **Figure 1**, included air quality monitoring and provided predicted values of $PM_{2.5}$ and PM_{10}. Extracts of the modelled contours are presented in **Figure 3** below noting that the contours are presented in μg/m^3.

Based on the modelled contours, the daily averages at the location of the real time dust monitor have been predicted as:

- $PM_{2.5}$ >0.01mg/m^3.
- PM_{10} 0.045mg/m^3.

Figure 3 *Predicted Daily $PM_{2.5}$ and PM_{10} Impacts with Location of Real Time Dust Monitor Marked with Blue Diamond.*

3.2 WEATHER

The real time dust monitors recorded conditions every five (5) minutes continuously through the monitoring period. The monitor provides data with regards to wind direction and speed, air temperature, relative humidity, and air pressure.

It is noted that some data were not recorded due to an unknown reason (however presumed due to power / internet interruption).

- Tuesday, 3 October: between 13:35 and 13:40, 13:55 to 14:00 (10 minutes).
- Tuesday, 28 November 2023: between 12:25 and 12:30 (5 minutes).
- Tuesday, 12 December 2023: between 13:40 and 13:50 (5 minutes).
- Saturday, 16 December 2023: between 12:55 and 14:05 (5 minutes).

A summary of the results for the monitoring of three (3) months is presented in **Table 3** and **Figure 4** below.

Table 3 *Weather Summary of Available Data within Monitoring Period*

	Maximum (date and time)	**Minimum (date and time)**
Wind Speed (m/s)	8.57 at 17:10, 16th October 2023	0 at multiple occasions
Air Temperature (°C)	43.30 at 13:55 and 14:00, 9th December 2023	6.90 at three occasions 5:10, 10:15, and 5:45, 9th October 2023
Relative Humidity (%)	99.00 at between 5:05 and 5:15, 30th November 2023	15.80 at 13:30, 16th December 2023
Air Pressure (mBar)	1032.20 at 8:05 and 8:30, 8th October 2023	998.30 at 15:15, 29th November 2023

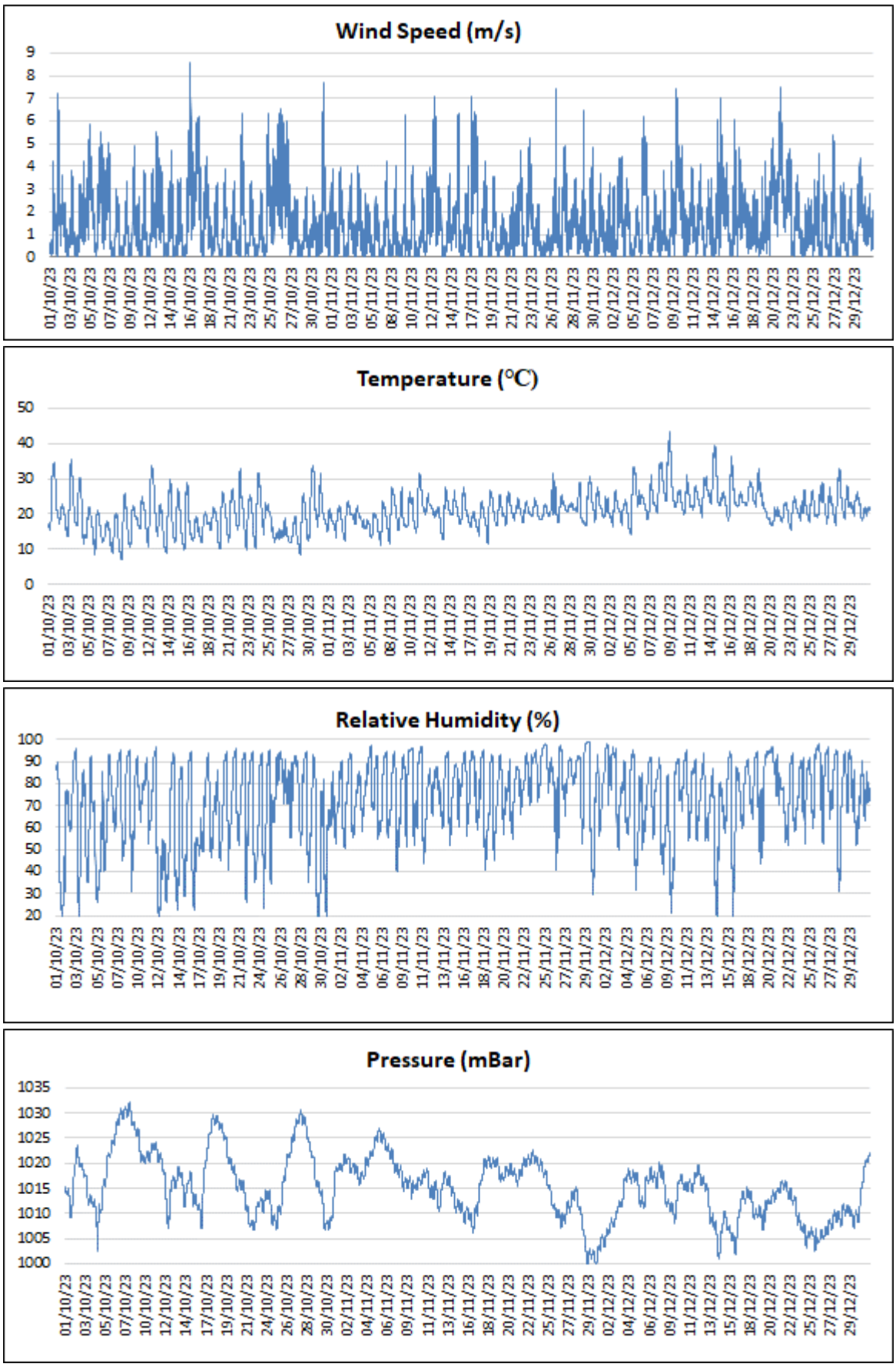


Figure 4 *Weather Summary for Available Data within Monitoring Period*

The wind speed was below the 5m/s (18km/h, Ref [1]) threshold for application of dust suppression measures for the majority of the monitoring period, with the exception of 542 five-minute intervals (~45.16 hours):

- Sunday, 1st October: between 22:25 and 23:55.
- Monday, 2nd October: between 0:10 and1:30.
- Thursday,5th October 2023: at 10:05, 10:20, 10:30 to 10:35, 11:10, 11:20 to 11:35, 12:20 to 12:50, 13:00, 13:15 to 13:20, 14:00, and 14:25.
- Friday, 6th October: at 16:00 and 18:05.
- Saturday, 7th October: at 13:35 and 14:00.
- Thursday, 12th October: at 20:35, 22:05, 23:00, 0:25 to 0:35, and 0:55.
- Monday, 16th October: at 12:25, 12:45, 12:55,13:25 to 13:30, 13:45 to 13:50, 14:25 to 15:15, 15:30, 16:10, and 16:35 to 18:55.
- Tuesday, 17th October: between 9:20 and 9:40, 10:00, 10:15, 10:30, 10:55 to 11:25, 11:50, 12:10, 12:20 to 12:40, 13:00 to 13:35, 13:50 to 13:55, 14:20 to 14:30, 14:40 to 14:55, 15:20, 15:30, 15:45, 16:00, 16:20, 16:30, 16:45, and 17:30.
- Sunday, 22nd October: at 9:35, 11:40, and 12:10.
- Wednesday, 25th October 2023: at 8:25, 8:30, 8:40, 8:50 to 9:45, and 9:55 to 11:25.
- Thursday, 26th October 2023: at 10:10, 15:15, 12:05, 13:00, 14:00, 14:20 to 14:45, 15:10,15:20 to 15:35, 17:10, 18:05, 18:10, 19:00, 19:05, 19:20, and 20:25.
- Friday, 27th October 2023: at 1:05, 1:10 to 1:25, 2:35, 4:20, 10:05 to 10:10, 12:55, 13:55, and 16:30.
- Tuesday, 31st October 2023: between 10:45 and 11:10, 11:20, 12:10, 12:15, 13:55, 14:05 to 15:55, and16:15 to 16:20.
- Thursday, 9 November 2023: between 15:25 and 15:40, and 15:50.
- Sunday, 12 November 2023: between 12:20 and 20:45, 21:20 to 21:25, 21:40, 21:50 to 22:55, and 23:15 to 23:35.
- Monday, 13 November 2023: at 1:35, and 1:45 to 1:50.
- Wednesday, 15 November 2023: at 13:40, 14:10 to 14:20, 14:30 to 14:55, 15:05 to 15:35, 15:45 to 15:50, and 16:05 to 16:15.
- Friday, 17 November 2023: at 2:00, 2:10, 2:15, 2:25 to 2:35, 3:00 to 3:05, 3:15 to 4:05, 4:45 to 4:50, 7:40, 7:50, 8:15, 8:50, 8:55, 9:05 to 9:15, 9:25 to 9:45, 10:15 to 10:55, 11:15 to 11:20, 11:35 to 11:40, 12:05, 12:20 to 12:40, 12:55 to 13:15, 13:35, 15:35, and 16:45.
- Thursday, 23 November 2023: at 15:25, 15:35, and 15:55.
- Sunday, 26 November 2023: at 13:35.
- Wednesday, 29 November 2023: at 15:50.
- Wednesday, 6 December 2023: at 5:05, 7:10, 7:25, 7:40 to 7:50, 8:00 to 8:20, 9:00, 9:10 to 9:15, 10:05 to 10:10, 10:45, 12:00, 14:40, 15:15, and 15:20.
- Saturday, 9 December 2023: between 22:00 and 22:25, and 22:55 to 23:55.

- Sunday, 10 December 2023: between 0:05 and 2:40, and 3:35.
- Thursday, 14 December 2023: at 15:00, 21:45 to 21:55, 22:15 to 22:30, 22:45, 22:50, 23:15 to 23:30, 23:40, and 23:55.
- Friday, 15 December 2023: between 0:05 and 0:10, 0:55, 1:10 to 1:10, and 1:45.
- Saturday, 16 December 2023: at 11:50, 12:15 to 12:20, and 12:30.
- Wednesday, 20 December 2023: at 17:05, 17:20 to 17:25, 17:35, 17:55, and 18:05.
- Thursday, 21 December 2023: at 11:00, 11:45 to 12:20, 12:30 to 12:40, 13:55 to 16:45, 17:15 to 17:20, 17:35, 18:30 to 18:50, and 19:00 to 19:15.
- Wednesday, 27 December 2023: between 12:40 and 12:50, and 15:55.

Calm winds occurred for a total of 11.55%, 16.16% and 10.24% of the monitoring period for October, November, and December respectively. During the rest of the time, the wind speeds of between 0.5 to 2.5m/s were recorded at 63.1%, 67.5%, 66.4% frequency respectively, 2.5 to 5m/s were recorded 22.2%, 14.7%, 21.2% frequency respectively, and 5 to 7.5m/s were recorded 3.1%, %, 1.6%, 2.1% frequency respectively. The winds were mainly from north southerly for the quarter, however winds direction not consistent throughout the monitoring.

The wind roses for the monitoring period is shown as **Figure 5**, **Figure 6** and **Figure 7**. It is noted that differences of average wind speed and frequency group of 7.5-10m/s between actual data and simulated results in the figures are due to the software (WRPLOT View Freeware 8.0.2) requiring data to be rounded off to the nearest whole number.

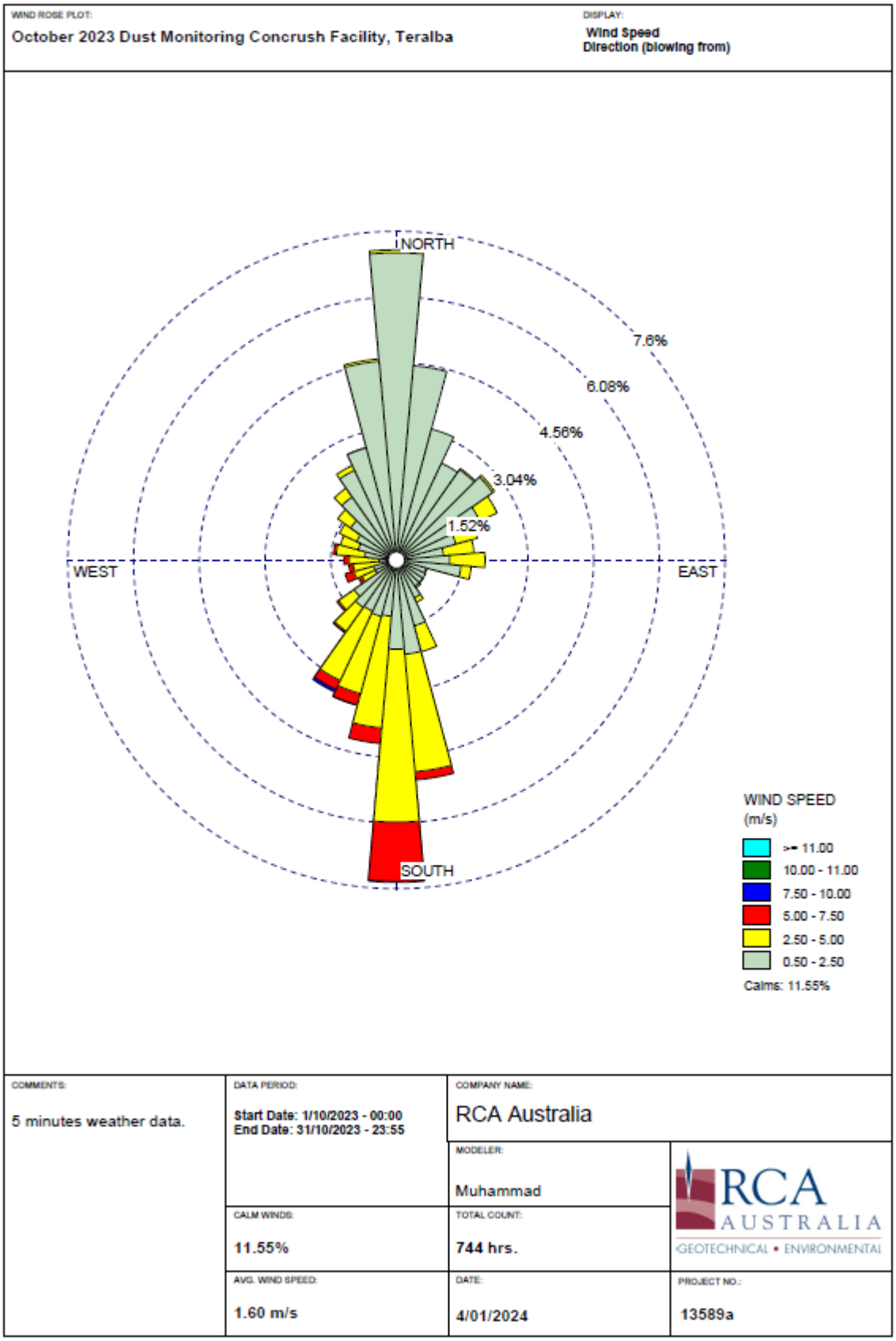


Figure 5 *Wind Rose Plot for October 2023*

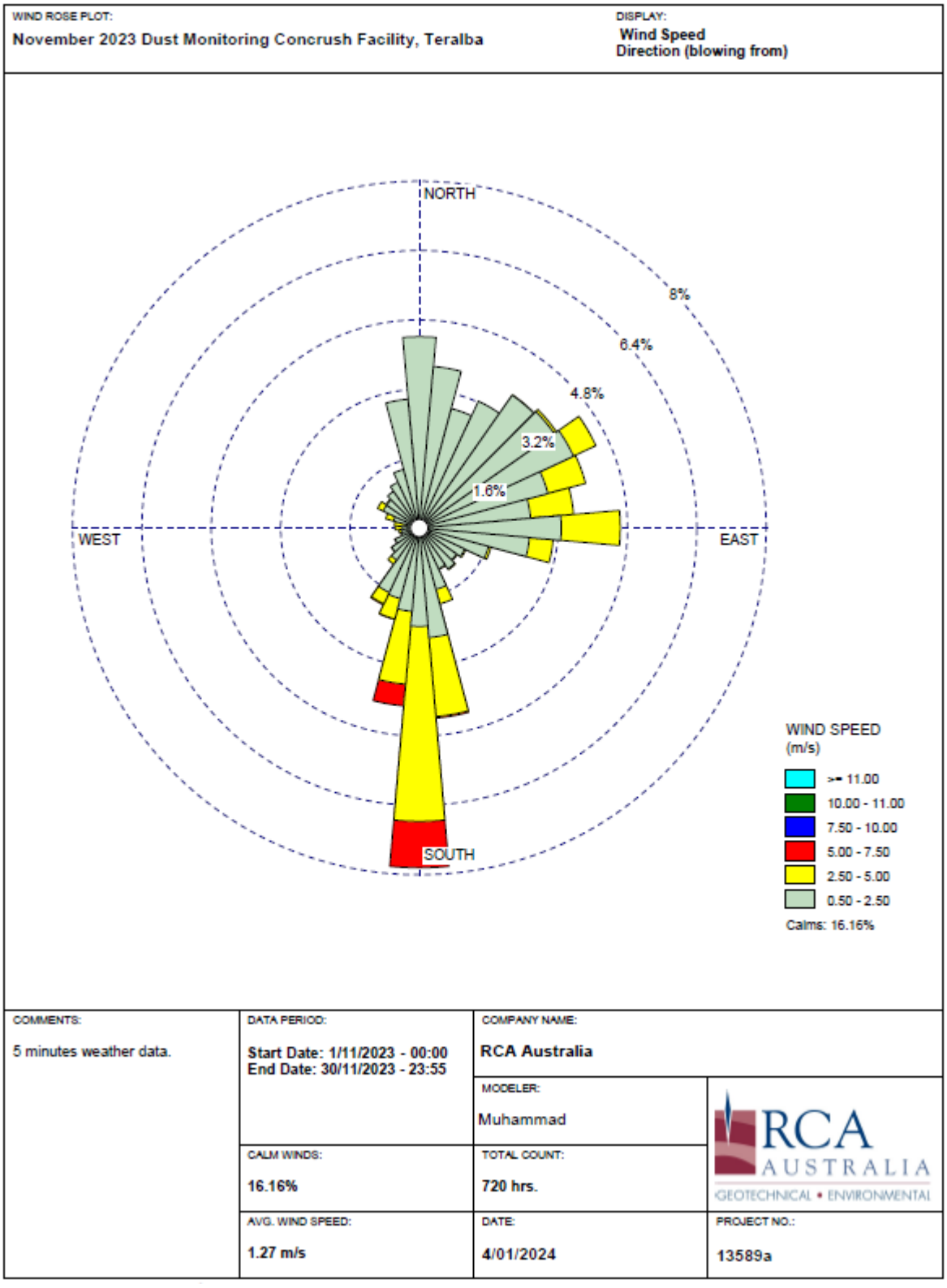


Figure 6 *Wind Rose Plot for November 2023*

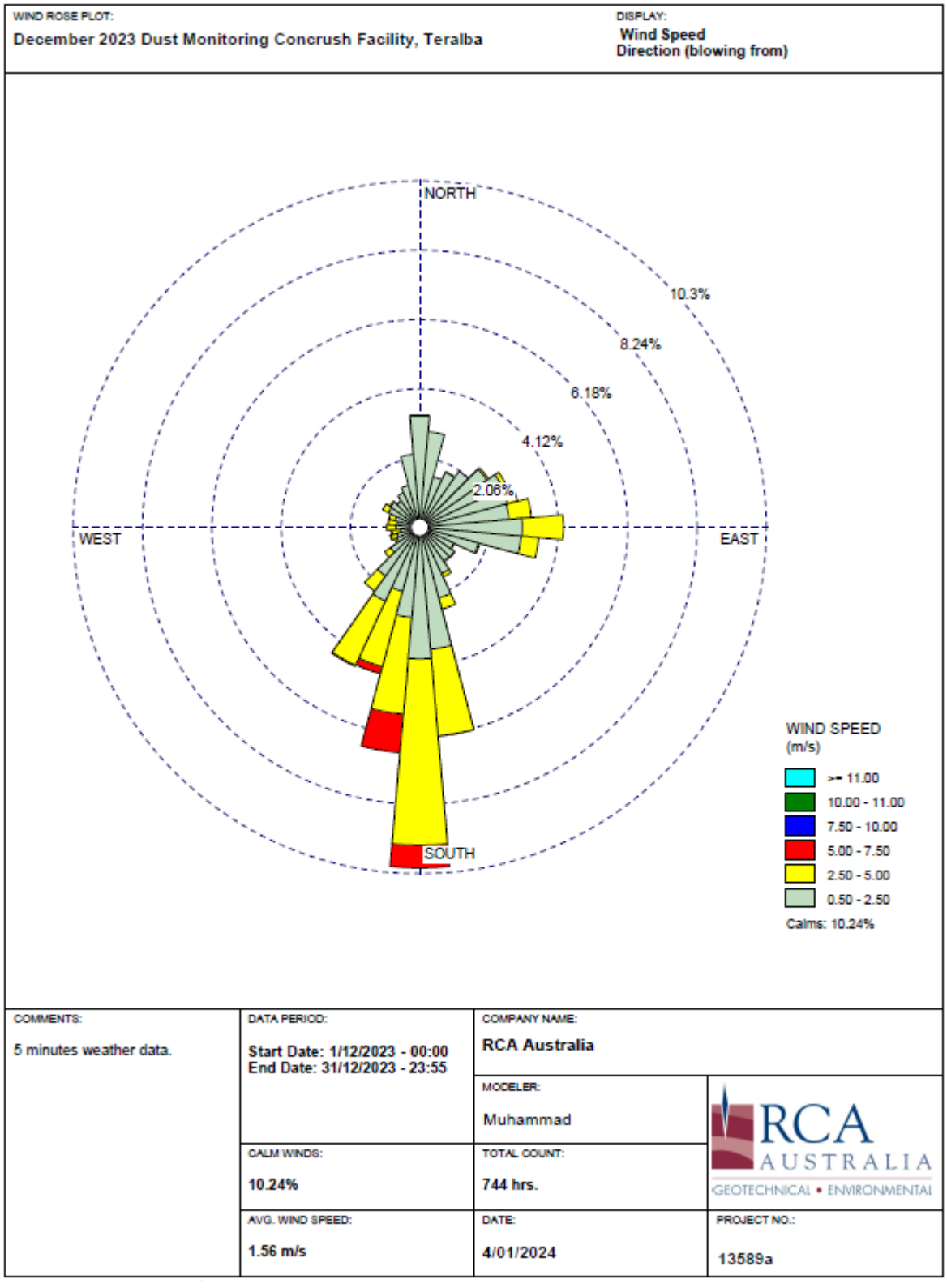


Figure 7 *Wind Rose Plot for December 2023*

4 MONITORING RESULTS

4.1 DEPOSITIONAL DUST GAUGES

Depositional dust bottles were collected following replacement monthly by RCA staff on 31st October 2023, 30th November 2023, and 2nd January 2024. All gauges and funnels were intact and unbroken. The field sheets are included as **Appendix A**.

The results of the monitoring at each of the locations for this quarter and the twelve (12) month rolling average at the end of the quarter are presented below in **Table 4**. Laboratory report sheets are included in **Appendix B**.

All results were either less than the previous month or were increased by less that the NSW EPA criterion of 2g/m^2/month with the exception of the November 2023 results of DG1, DG3 and December 2023 result of DG2, which were above to the NSW EPA criterion 2g/m^2/month compared to the October and November results respectively.

The 12-month rolling annual average, noting that the period from October 2022 to March 2023 represents a construction period in the southern portion of the site, for all five (5) dust gauges are below the annual criterion of 4g/m^2 (Ref [4]).

Table 4 *Dust Monitoring Results for Quarter*

	Water Volume (mL)			Insoluble Solids (g/m^2)			Ash (g/m^2)			Combustible Matter (g/m^2)			12-Month Rolling Average Insoluble Solids (g/m^2)
	29/09/23 – 31/10/23	31/10/23 – 30/11/23	30/11/23 – 2/1/24	29/09/23 – 31/10/23	31/10/23 – 30/11/23	30/11/23 – 2/1/24	29/09/23 – 31/10/23	31/10/23 – 30/11/23	30/11/23 – 2/1/24	29/09/23 – 31/10/23	31/10/23 – 30/11/23	30/11/23 – 2/1/24	
DG1A (east)	1400	2150	1400	2.9	5.7	3.0	2.1	3.8	1.9	0.8	1.9	1.1	2.1
DG2A (south)	1600	2150	1400	3.4	5.0	7.5	2.6	3.8	6.3	0.7	1.4	1.2	2.7
DG3A (west)	1400	2250	1500	2.1	5.9	2.2	1.0	4.2	1.3	1.1	1.7	0.9	3.1
DG4A (north)	1600	2150	1400	2.5	3.7	4.9	2.0	2.8	4.8	0.5	0.9	1.0	2.1
DG5A (roof)	1400	2100	1400	2.2	2.5	3.5	1.5	1.7	2.7	0.7	0.8	0.8	2.0

BOLD identifies where results are in excess of annual average criterion (Ref [4]) which does not apply to individual monthly results.

Underline identifies where results are greater than the criterion for increase from the previous month.

The majority of detected insoluble solids are related to 'ash' which comprises non-combustible matter and would include the types of particles that may originate from the Concrush site however would also be present in dust from other sources. Some coal dust, such as may be originating from adjacent sites, may also remain in the 'ash' component of the sample. The monthly insoluble solids and ash results are shown for the previous twelve (12) months in **Figure 8** and **Figure 9** below.

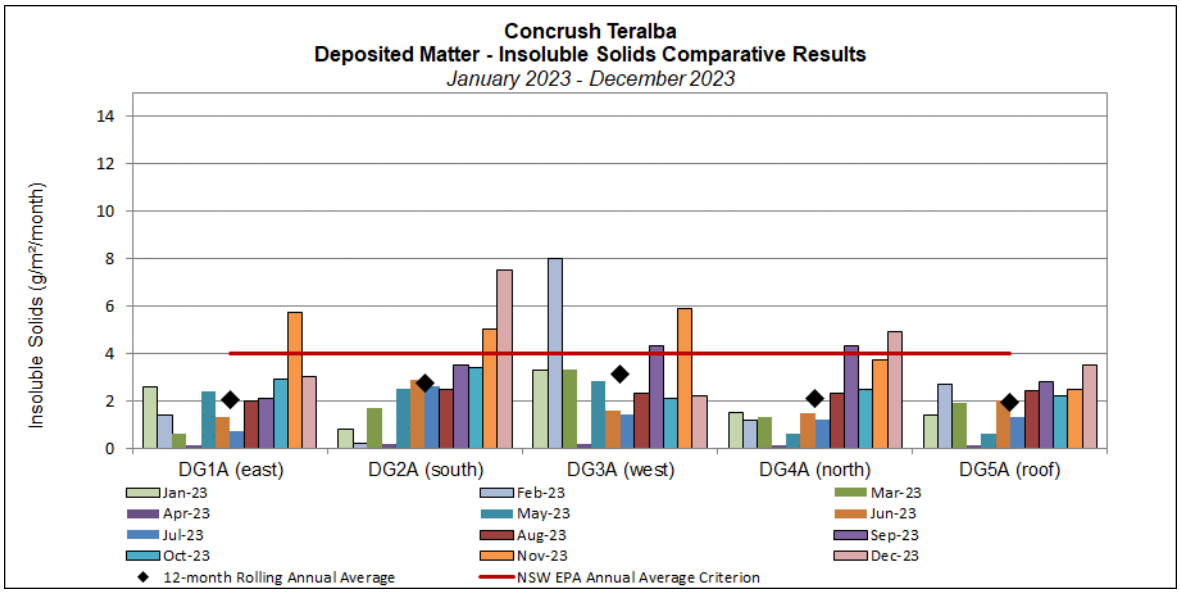


Figure 8 *Dust Monitoring Results (Insoluble Solids) for the Past 12 Months*

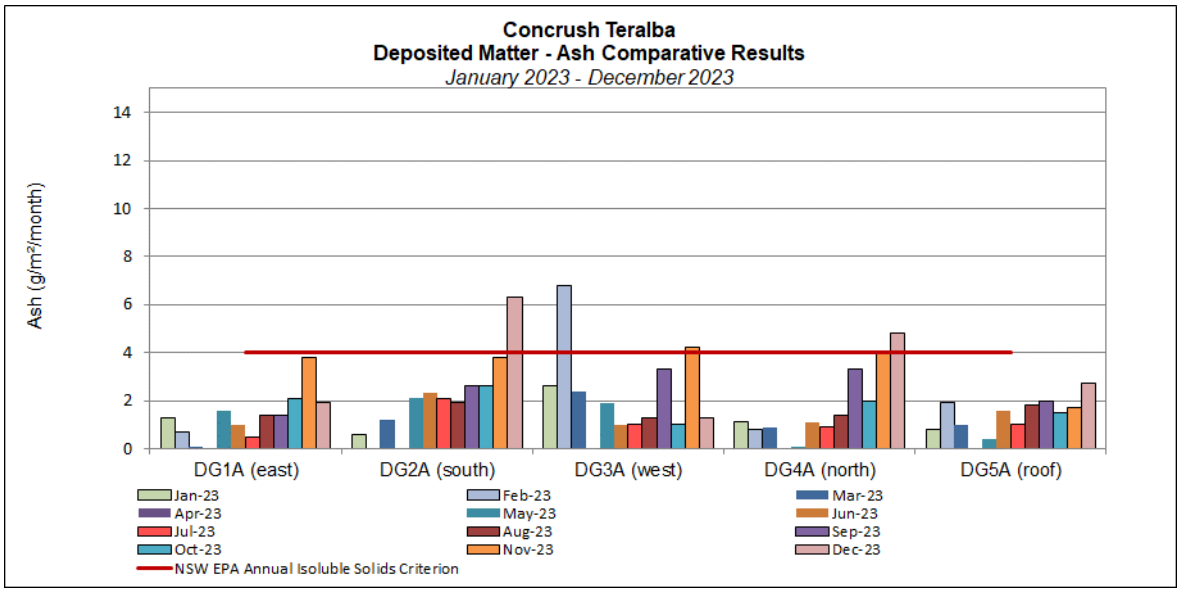


Figure 9 *Dust Monitoring Results (Ash) for the Past 12 Months*

4.2 REAL TIME DUST MONITOR

The real time dust monitors recorded conditions every five (5) minutes continuously during the monitoring period: as detailed in **Section 3.2**. The monitor provides data with regards to $PM_{2.5}$, PM_{10} and PM_{total}. The PM_{total} concentration has been compared to the TSP annual average criterion.

A summary of the monthly results is presented in **Table 5** and **Figure 10** below. Noting that the results have not been obtained by a listed approved method for air quality (Ref [5]) and are not considered directly comparable with criteria (Ref [4]):

- The daily average of $PM_{2.5}$ is below the relevant criterion (Ref [4]).
- The daily average $PM_{2.5}$ concentration is above the predicted impact concentration on sixteen (16) days of the ninety-two (92) days within the monitoring period. With the exception of one day, 12th November 2023, all were on working days at the site.
- The daily average of PM_{10} is above the relevant criterion (Ref [4]) on twenty-two (22) occasions within the monitoring period. It is noted that the maximum daily average recorded on 16 October 2023.
- The daily average PM_{10} concentration is above the predicted impact concentration on twenty-eight (28) days of the ninety-two (92) days within the monitoring period. All were on working days at the site

Table 5 *Particle Summary of Available Data Within Monitoring Period*

	Maximum (date and time)	**Minimum (date and time)**	**Maximum Daily Average**
$PM_{2.5}$	0.222 (at 16:45, Monday 16th October 2023)	0.000 (Multiple occasions)	<u>0.020</u> (Monday 2nd October)
PM_{10}	4.411 (at 16:45, Monday 16th October 2023)	0.001 (Multiple occasions)	**<u>0.159</u>** (Monday 16th October 2023)
TSP	5.759 (at 16:45, Monday 16th October 2023)	0.001 (14:15 Wednesday 20th December, and at 10:40 and 11:25 Thursday 21st December 2023)	0.212 (Monday 16th October 2023)

Concentrations in mg/m^3.

BOLD identifies where results are in excess of criteria (Ref [4]).

<u>Underline</u> identified where results are in excess of the predicted concentration at the real-time dust monitor location.

Noting that there hasn't been a year's worth of data of the fully operational site, and that there are further data omissions such that there is no valid calculation for an annual average of results, the average of the available $PM_{2.5}$ data is below the annual average criterion whereas the averages of the available data for PM_{10} and TSP are in excess of the annual average criteria.

$PM_{2.5}$ is the dominant particle size of those monitored by the real time monitor (noting the different scales of the axes in **Figure 10**).

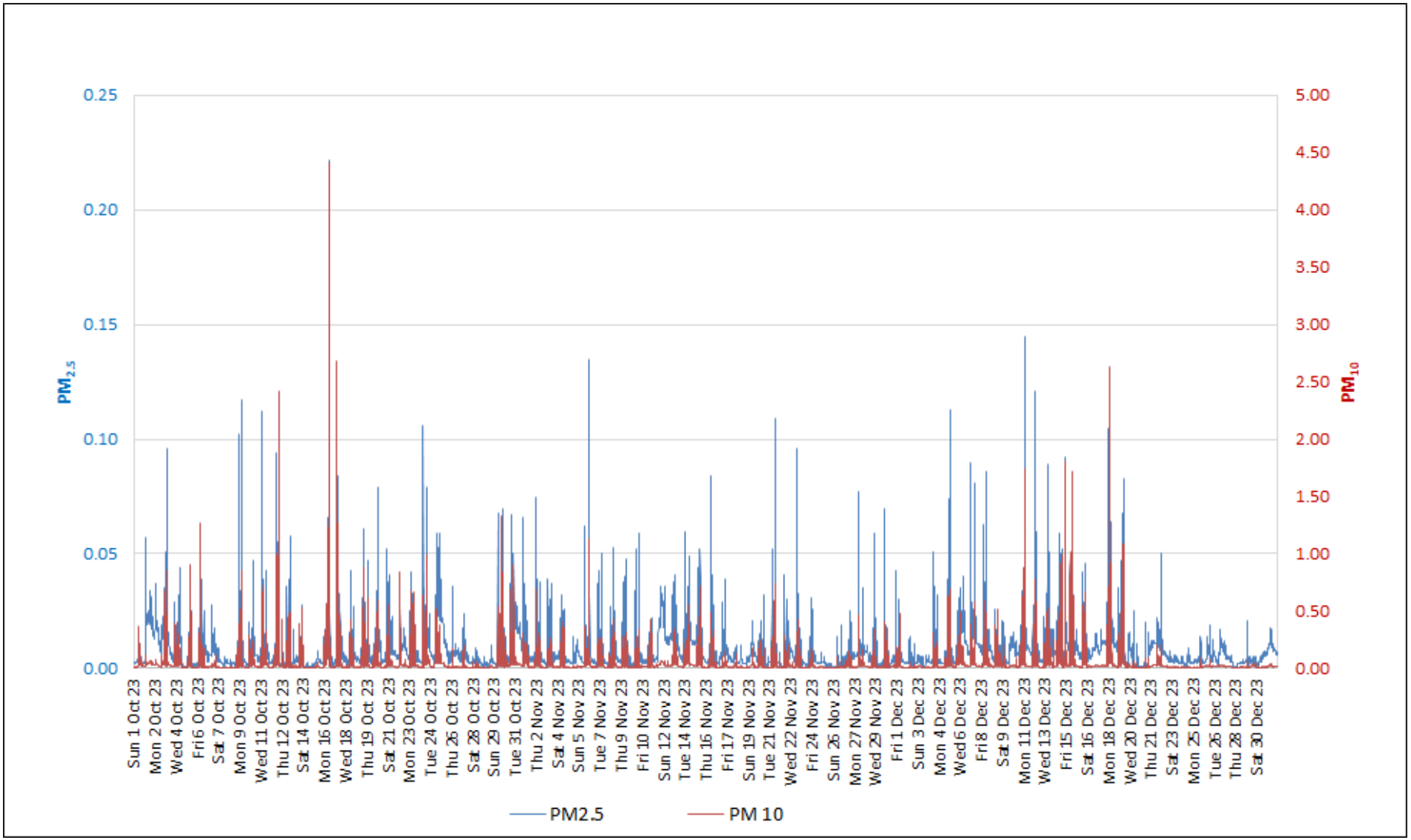


Figure 10 *Daily $PM_{2.5}$ and PM_{10} for the Available Data within the Monitoring Period*

A summary of the monitoring period's PM_{10} results in 15-minute increments is presented in **Figure 11** noting that this increment correlates with the alarms set to notify Concrush of:

- PM_{10} >0.05 mg/m^3 over a 15-minute period.
- Wind speed >5m/s.

In regards to the results:

- The highest PM_{10} 15-minute average is 2.519mg/m^3, identified on Monday 23rd October 2023.
- The average PM_{10} 15-minute average is 0.038mg/m^3.
- The highest $PM_{2.5}$ 15-minute average is 0.149mg/m^3, identified on Monday 23rd October 2023.
- The average $PM_{2.5}$ 15-minute average is 0.007mg/m^3.

The 15-minute average PM_{10} data shows that the 0.05mg/m^3 real-time monitoring notification threshold is being exceeded on all working days, except for six (6) Fridays out of thirteen (13) and one (1) Thursday. The 0.05mg/m^3 real-time monitoring notification threshold was exceeded on all Saturdays and Sundays, except Sunday, 2nd October 2023, and Saturday, 31st December 2023. Since Concrush does not operate on Sundays, these readings are considered representative of background particles.

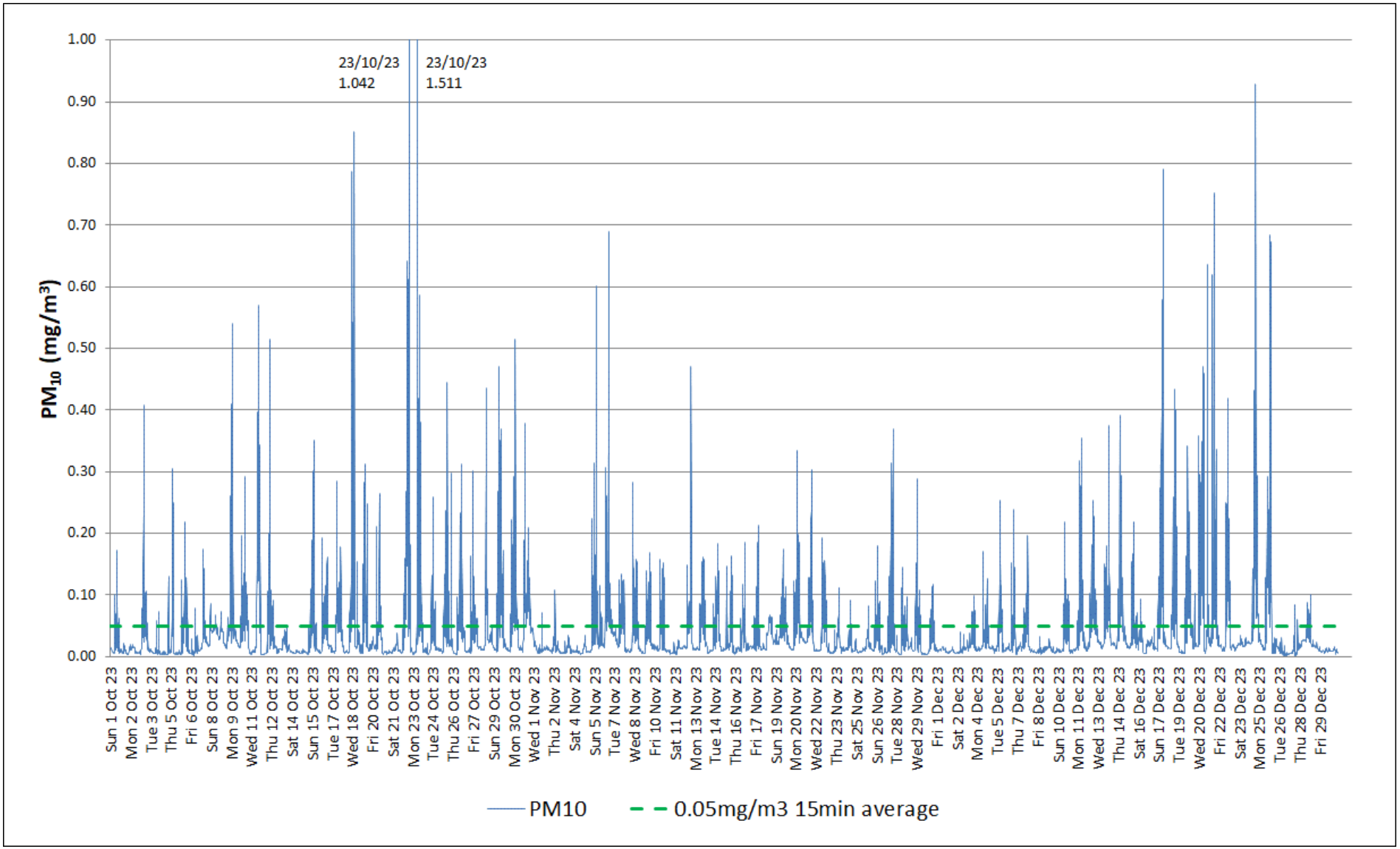


Figure 11 *PM_{10} 15-minute Average for the Available Data within the Monitoring Period*

Rainfall data obtained from the Bureau of Meteorology weather station at Cooranbong indicated a total rainfall of 286.2mm within the monitoring period (96.8mm in October, 52.8mm in November, 136.6mm in December).

The available PM_{10} data has been graphed for a ten-hour workday from 7 a.m. to 4 p.m. and a twenty-four (24) hour average against average windspeed and daily rainfall in **Figure 12** to **Figure 15** below.

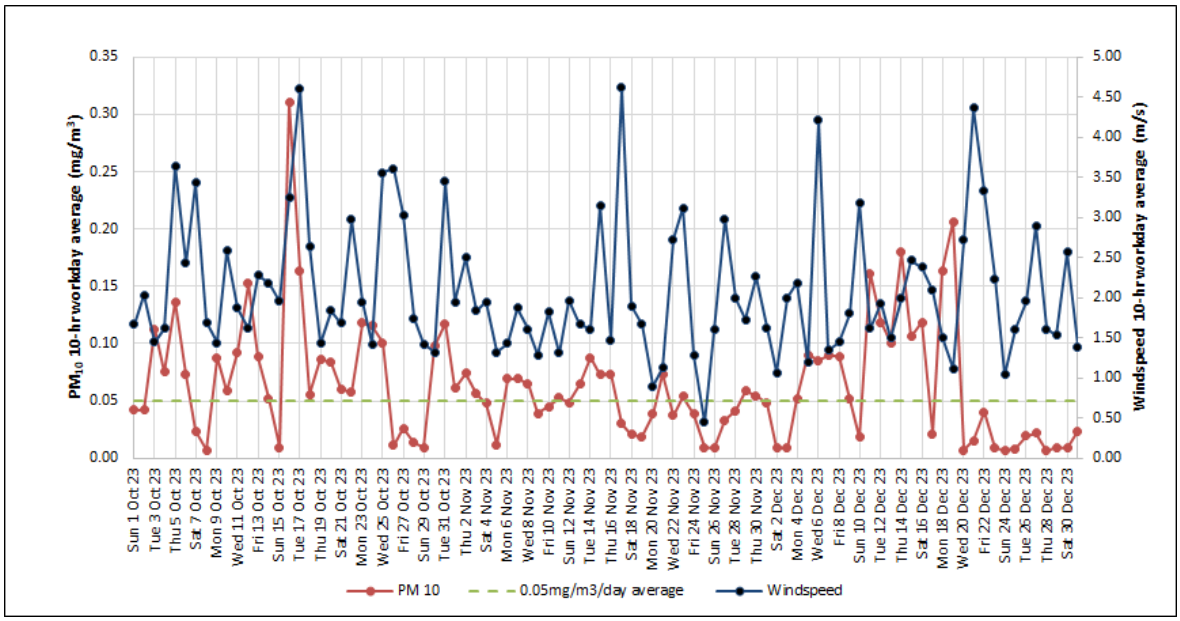


Figure 12 *PM_{10} 10-hr Average and Windspeed for the Available Data within the Monitoring Period*

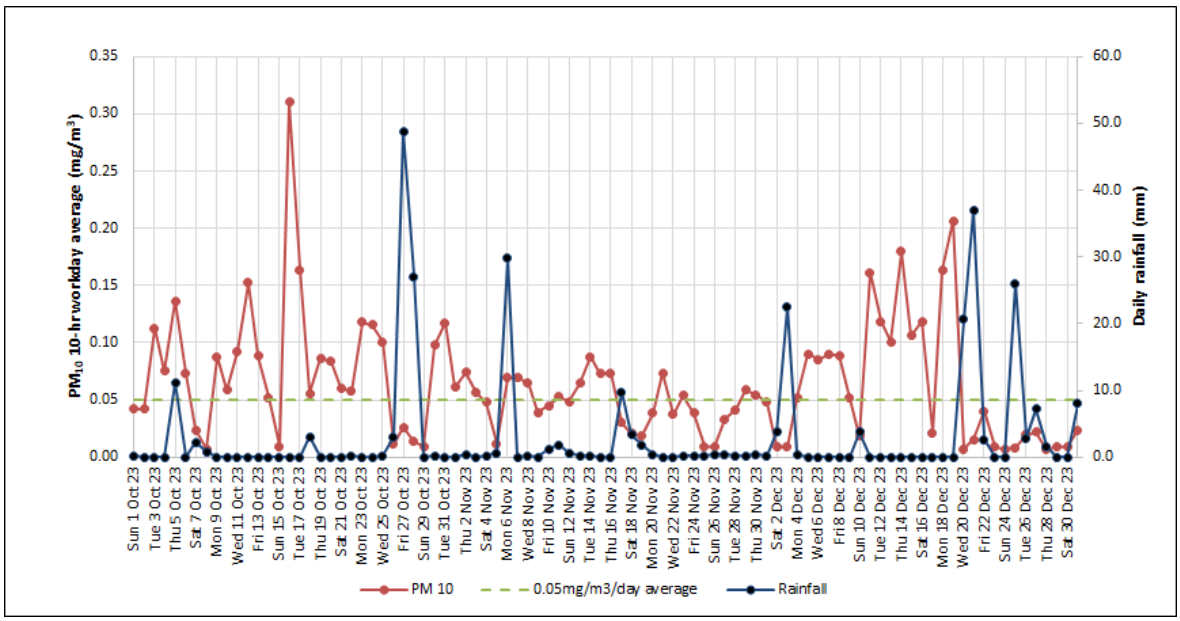


Figure 13 *PM_{10} 10-hr Average and Daily Rainfall for the Available Data within the Monitoring Period*

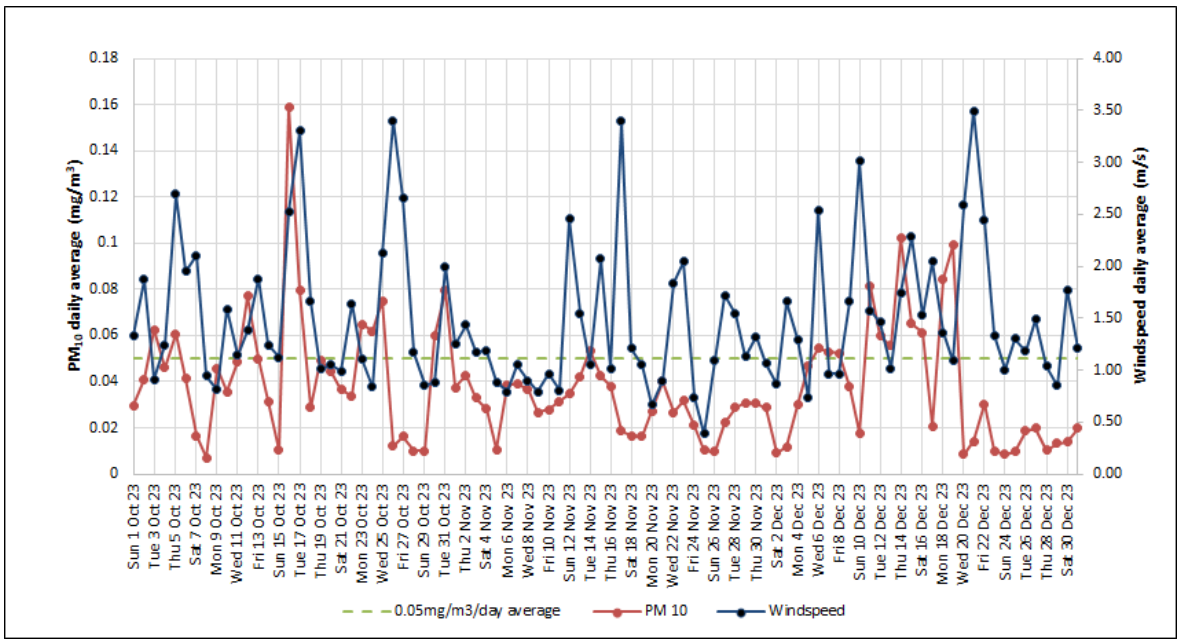


Figure 14 *PM_{10} daily Average and Windspeed for the Available Data within the Monitoring Period*

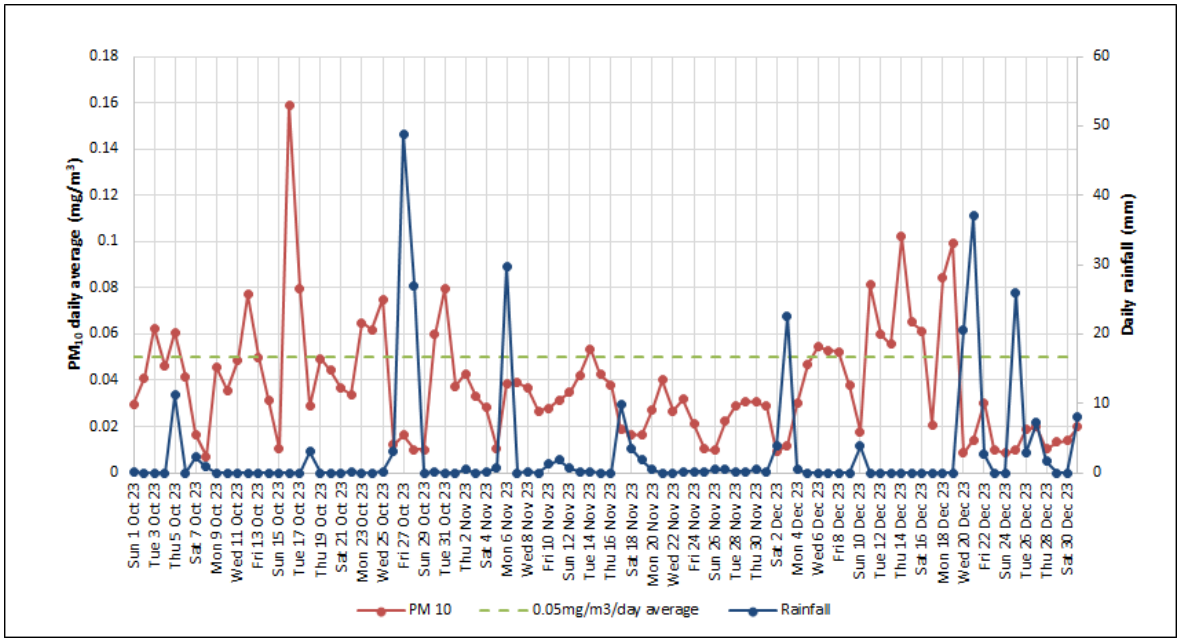


Figure 15 *PM_{10} Daily Average and Daily Rainfall for the Available Data within the Monitoring Period*

No significant correlation was identified between wind speed and PM_{10} daily average; high wind speeds do not consistently correlate with high particle concentrations. It is noted that there is no consistent correlation between rainfall and particle concentrations. It is considered that the activities undertaken at the site should be considered as the dominant factor that influence the monitored dust levels beyond wind directions, wind speed and rainfall.

5 ASSESSMENT OF DUST MANAGEMENT EFFECTIVENESS

The quarterly monitoring data indicates issues with effectiveness of site dust controls. It is noted that the OAQMP (Ref [1]) has been implemented since the works on the expansion component has been completed.

The real time monitor, which does not use a NSW EPA approved (Ref [5]) sampling methodology, indicated that PM_{10} were in excess of the 24hr average criterion (Ref [4]) during twenty two (22) out of the ninety-two (92) monitoring periods and that concentrations of $PM_{2.5}$ and PM_{10} were in excess of the predicted values for approximately 17% and 30% of the monitoring period. It is noted that the concentrations observed from this monitor may not wholly reflect the site conditions depending on the wind direction.

RCA's observations on the sampling days (31st October 2023, 30th November 2023 and 2nd January 2024) regarding site activities that are associated with dust generation and suppression were:

- Excavators and crusher were operating at the time of all site inspections with exception of 2nd January 2024.
- Sprinklers were in operation at the time of all site inspections however not on all stockpiles.
- Watering truck was operating during all the site inspections.
- Customers' vehicles were observed during all the site inspections.
- RCA observed at least localised dust during the time of all site inspections.

RCA's photographs during the time of fieldwork are shown in **Figure 16** below.

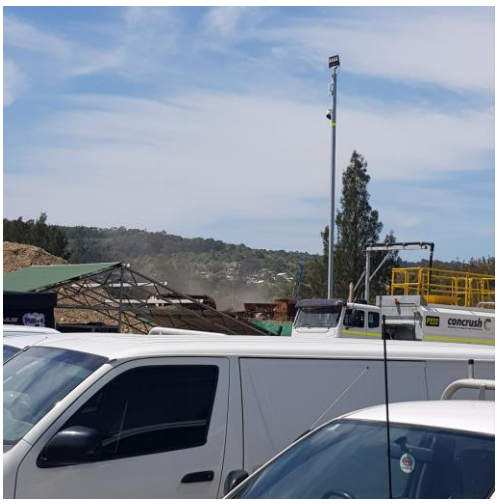
	
Dust visible to south of site, 31st October 2023.	**Localised dust only from crusher, 31st October 2023.**
	
Excavator in operation looking west to east, 30th November 2023.	**Southern Portion looking north to south, 30th November 2023.**
	
Machinery in operation looking east to west, 2nd January 2024.	**Machinery in operation looking north to south, 2nd January 2024**

Figure 16 *Site Photographs during sampling and inspections*

RCA recommends that dust suppression measures should be carried out whenever rain is not actively falling, particularly during warm or windy weather such that evaporation effects are minimised, and that the extent of coverage from the sprinklers is monitored with adjustment of the sprinkler position / flow rate as necessary to maintain a damp stockpile surface. RCA would also recommend regular use of the street-sweeper on the surface of the weighbridges and water application on the trafficable areas.

6 LIMITATIONS

This report has been prepared for Concrush Pty Ltd in accordance with an agreement with RCA Australia (RCA). The services performed by RCA have been conducted in a manner consistent with that generally exercised by members of its profession and consulting practice.

This report has been prepared for the sole use of Concrush Pty Ltd. The report may not contain sufficient information for purposes of other uses or for parties other than Concrush Pty Ltd. This report shall only be presented in full and may not be used to support objectives other than those stated in the report without written permission from RCA Australia.

Yours faithfully

RCA AUSTRALIA

Muhammad Hayyat
Environmental Engineer
MEng (Env), B

REFERENCES

[1] RCA Australia, *Operational Air Quality Management Plan (OAQMP) for Expansion of the Concrush Resource Recovery Facility*, V3.0, June 2023.

[2] Lake Macquarie City Council Local Environmental Plan 2014, under the Environmental Planning and Assessment Act 1979, published 2014.

[3] AS/NZS 3580.1.1:2016 *Methods for sampling and analysis of ambient air: Guide to siting air monitoring equipment*, May 2016.

[4] NSW EPA, *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* January 2017.

[5] NSW EPA, *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW*, January 2007.

Appendix A

Field Sheets

RCA AUSTRALIA

STATIC DUST GAUGES – FIELD SHEET

Client: Concrush
Location: 21 Racecourse Road, Teralba
Date On: 29/09/2023
Date Off: 31/10/2023

Job Number: 13589a
Month/Year: 2023
Personnel: FB/AH
Field Sheet: Page 1 of 1

Field ID (Job No + Gauge No.)	Lab ID (To be entered by Lab Technician on receipt of samples)	Time Serviced	Funnel Number (if replaced)	Approx. Volume	Notes	Comments
						Eg. Colour, contamination, bird droppings, insects etc
DG1A		8.50	—	~1500		Clear, floating insects, few particles @ base
DG2A		9.55	—	~1500		Clear, floating insects
DG3A		10.15	—	~1500		Clear, particles @ base, floating flower
DG4A		11.15	—	~1500		Clear, particles @ base, floating insects
DG5A		11.25	—	~1500		Clear, some floating insects
						Photographs taken of dust gauge inlet & bottle contents (Y/N)

OBSERVATIONS OF DUST GENERATING ACTIVITIES & SUPPRESSION MEASURES

Dust cart on site (Y/N). Dust cart in operation (Y/N)
Sprinklers on all stockpiles (Y/N). Sprinklers in operation (Y/N)
Equipment in operation? Yes – Muncher, 2-3 excavators, screen.
Customer activity? Yes
Dust observed? From chipper (bit in face by particles ~20m away) Photographs taken (Y/N).

Notes:

A = Animals (frogs, lizards, snakes)
O = Organic Matter (specify)
B = Bird Droppings
F = Feathers
G = Grass (and seeds)
N = No foreign mater
T = Tree Litter (twigs, leaves, gum nuts)
I = Insects (and spiders)
MF = Invalid sample: Missing funnel
FB = Invalid sample: Broken funnel
EB = Invalid sample: Excess bird droppings
RN = Invalid sample: Refer to notes below

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

STATIC DUST GAUGES – FIELD SHEET

Client: Concrush
Location: 21 Racecourse Road, Teralba
Date On: 31/10/2023
Date Off: 30/11/2023

Job Number: 13589a
Month/Year: November 2023
Personnel: AH / MH
Field Sheet: Page 1 of 1

Field ID (Job No + Gauge No.)	Lab ID (To be entered by Lab Technician on receipt of samples)	Time Serviced	Funnel Number (if replaced)	Approx. Volume (L)	Notes	Comments
		~~8.35~~	—	~~1.3~~		Eg. Colour, contamination, bird droppings, insects etc
DG1A		~~10.25~~	—	~~1.3~~ 1.2		Clear, floating insects, fine particulate at base
DG2A		10.08	—	1.4		Clear, floating insects, fine particulate at base
DG3A		10.53	—	1.8		Clear, suspended solid & fine particulate at base
DG4A		12.25	—	2.0		Clear, floating insects, particulate at base
DG5A						
						Photographs taken of dust gauge inlet & bottle contents (Y/N)

OBSERVATIONS OF DUST GENERATING ACTIVITIES & SUPPRESSION MEASURES

Dust cart on site (Y/N). Dust cart in operation (Y/N)
Sprinklers on all stockpiles (Y/N). Sprinklers in operation (Y/N)
Equipment in operation? Y
Customer activity? not busy
Dust observed? N Photographs taken (Y/N).

Notes:

A = Animals (frogs, lizards, snakes)
O = Organic Matter (specify)
B = Bird Droppings
F = Feathers
G = Grass (and seeds)
N = No foreign mater
T = Tree Litter (twigs, leaves, gum nuts)
I = Insects (and spiders)
MF = Invalid sample: Missing funnel
FB = Invalid sample: Broken funnel
EB = Invalid sample: Excess bird droppings
RN = Invalid sample: Refer to notes below

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

STATIC DUST GAUGES – FIELD SHEET

Client: Concrush
Location: 21 Racecourse Road, Teralba
Date On: 30/11/2023
Date Off: 02/01/2024

Job Number: 13589a
Month/Year: January 2024
Personnel: Anh Hoang
Field Sheet: Page 1 of 1

Field ID (Job No + Gauge No.)	Lab ID (To be entered by Lab Technician on receipt of samples)	Time Serviced	Funnel Number (if replaced)	Approx. Volume	Notes	Comments
		~~10:15am~~	~~-~~	~~1.25L~~		Eg. Colour, contamination, bird droppings, insects etc
DG1A		10:15am	—	1.25L		Clear, floating insects, fine particulate base
DG2A		10:25am	—	1.25L		Clear & floating insects
DG3A		10:40am	—	1.3L		Pale yellow, floating insects + leaves + fine base
DG4A		10:50am	—	1.2L		Clear & floating insects
DG5A		11:00am	—	1.35L		Clear & floating insects
						Photographs taken of dust gauge inlet & bottle contents (Y/N)

OBSERVATIONS OF DUST GENERATING ACTIVITIES & SUPPRESSION MEASURES

Dust cart on site (Y/(N)). Dust cart in operation (Y/(N))
Sprinklers on all stockpiles (Y/(N)). Sprinklers in operation (Y/(N))
Equipment in operation? Yes (only two)
Customer activity?
Dust observed? No Photographs taken (Y/(N))

Notes:

A = Animals (frogs, lizards, snakes)
O = Organic Matter (specify)
B = Bird Droppings
F = Feathers
G = Grass (and seeds)
N = No foreign mater
T = Tree Litter (twigs, leaves, gum nuts)
I = Insects (and spiders)
MF = Invalid sample: Missing funnel
FB = Invalid sample: Broken funnel
EB = Invalid sample: Excess bird droppings
RN = Invalid sample: Refer to notes below

Appendix B

Laboratory Report Sheets

Robert Carr & Associates Pty Ltd Trading as RCA Laboratories – Environmental
92 Hill Street PO Box 175, Carrington NSW 2294
ABN 53 063 515 711 Ph 02 4902 9200 – Fax 02 4902 9299
Email: administrator@rca.com.au Web www.rca.com.au

NATA Accredited Laboratory 9811
Corporate Site Number 18077
Accredited for compliance with ISO/IEC 17025-Testing

Concrush Pty Ltd
PO Box 362
Merewether NSW 2291

Attention Helen Milne

Project:	RCA ref 13589a-219/0		
Date:	29/11/2023		
Client reference:	Dust Report October 2023		
Received date:	31/10/2023	**Number of samples:**	5
Client order number:	N/A	**Testing commenced:**	2/11/2023

CERTIFICATE OF ANALYSIS

1 ANALYTICAL TEST METHODS

ANALYSIS	METHOD	UNITS	ANALYSING LABORATORY	NATA ANALYSIS / NON NATA
Dust Depositional Gauge (DDG)	ENV-LAB004*	g/m^2.month	RCA Laboratories - Environmental	NON-NATA
Dust Depositional Gauge (DDG)	ENV-LAB004*	mg	RCA Laboratories - Environmental	NATA

* The analytical procedures used by RCA Laboratories - Environmental are based on established internationally recognised procedures such as APHA and Australian Standards

** Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling not collected by RCA Laboratory personal.

2 RESULTS

ANALYSIS	UNITS	DG1A	DG2A	DG3A	DG4A
Depositional Dust Gauge (DDG)					
Sample Number	-	102313589A001	102313589A002	102313589A003	102313589A004
Date sample started	-	29/09/2023	29/09/2023	29/09/2023	29/09/2023
Date sample finished	-	31/10/2023	31/10/2023	31/10/2023	31/10/2023
Sampled By		Client	Client	Client	Client
Number of days	-	32	32	32	32
Notes	-	I,T	I	T	I
Insoluble solids **	(g/m^2.month)	2.9	3.4	2.1	2.5
Ash **	(g/m^2.month)	2.1	2.6	1.0	2.0
Combustible matter **	(g/m^2.month)	0.8	0.7	1.1	0.5
Insoluble solids (mg)	mg	54.5	63.6	38.9	48.0
Ash (mg)	mg	39.2	49.7	18.1	37.8
Combustible matter (mg)	mg	15.3	13.9	20.8	10.2
Volume **	mg	1400	1600	1400	1600

ANALYSIS	UNITS	DG5A
Depositional Dust Gauge (DDG)		
Sample Number	-	102313589A005
Date sample started	-	29/09/2023
Date sample finished	-	31/10/2023
Sampled By		Client
Number of days	-	32
Notes	-	I,T
Insoluble solids **	(g/m^2.month)	2.2
Ash **	(g/m^2.month)	1.5
Combustible matter **	(g/m^2.month)	0.7
Insoluble solids (mg)	mg	42.2
Ash (mg)	mg	28.9
Combustible matter (mg)	mg	13.3
Volume **	mg	1400

Depositional Dust Gauge (DDG)

Analysis on samples is on as received basis samples

.

Depositional Dust Gauge (DDG) Qualifier Codes
I = Insects (eg. Ants, spiders)
T = Tree Litter (eg. Twigs. Leaves, gumnuts)

Robert Carr & Associates Pty Ltd Trading as RCA Laboratories – Environmental
92 Hill Street PO Box 175, Carrington NSW 2294
ABN 53 063 515 711 Ph 02 4902 9200 – Fax 02 4902 9299
Email: administrator@rca.com.au Web www.rca.com.au

NATA Accredited Laboratory 9811
Corporate Site Number 18077
Accredited for compliance with ISO/IEC 17025-Testing

Depositional Dust Gauge Quality Control

A blank crucible, containing no deposited matter, is analysed with every batch of 10 samples analysed. The acceptable mass difference between the first and second weighing of a blank crucible, at the indicated steps, in the analysis procedure is +/- 0.001g.

Blank Crucibles Analysis

METHOD STEP	PRE-DETERMINATION		DETERMINATION OF INSOLUBLE SOLIDS		DETERMINATION OF ASH AND COMBUSTIBLE MATTER	
	1st weighing	2nd weighing	1st weighing	2nd weighing	1st weighing	2nd weighing
Crucible No.	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)
147	20.7167	20.7164	20.7162	20.7162	20.7162	20.7162

Please contact the undersigned if you have any queries.

Yours sincerely

Laura Schofield
Environmental Laboratory Manager
Robert Carr & Associates Pty Ltd Trading as
RCA Laboratories – Environmental

RCA Internal Quality Review

General

1. Laboratory QC results for Method Blanks, Duplicates and Laboratory Control Samples are included in this QC report where applicable. Additional QC data maybe available on request.
2. RCA QC Acceptance / Rejection Criteria are available on request.
3. Proficiency Trial results are available on request.
4. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
5. When individual results are qualified in the body of a report, refer to the qualifier descriptions that follow.
6. Samples were analysed on an 'as received' basis.
7. Sampled dates in this report are those listed on the COC or sample jars; if no sample dates are noted, the date the samples are received at the laboratory have been used.
8. All soil results are reported on a dry basis, unless otherwise stated. (ACID SULPHATE SOILS)
9. This report replaces any interim results previously issued.

Holding Times.

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample

Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

##NOTE: pH duplicates are reported as a range NOT as RPD

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR: RPD must lie between 0-30%

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.

2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.

3. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Glossary

UNITS

mg/kg: milligrams per Kilogram

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/L: milligrams per Litre

TERMS

Dry Where moisture has been determined on a solid sample the result is expressed on a dry basis.

LOR Limit of Reporting.

RPD Relative Percent Difference between two Duplicate pieces of analysis can be obtained upon request.

QCS Quality Control Sample - reported as value recovery

Method Blank In the case of solid samples these are performed on laboratory certified clean sands.

In the case of water samples these are performed on de-ionised water.

Duplicate A second piece of analysis from the same sample and reported in the same units as the result to show comparison.

Batch Duplicate A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.

USEPA United States Environment Protection Authority

APHA American Public Health Association

COC Chain of Custody

CP Client Parent - QC was performed on samples pertaining to this report

NCP Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within

< indicates less than

> Indicates greater than

ND Not Detected

RCA LABORATORIES
• ENVIRONMENTAL • CONSTRUCTION MATERIALS TESTING

Ph: (02) 4902 9200 Fax: 02 4902 9299
92 Hill Street, Carrington NSW 2294
www.rca.com.au Email: labenviro@rca.com.au

ENV-F103-4

Client Name: Concrush Pty Ltd c/- RCA Enviro
Client Site: 21 Racecourse Road, Teralba

Contact Name: F Brooker (RCA Enviro)
Phone Number: 0408 687 529

Email Report To: enviro@rca.com.au
Project Manager: Fiona Brooker (RCA Enviro)

Turnaround Required:
× Standard (5 Day)

Date Required: 7-Nov-23

Expected Reporting Date:
(Laboratory Use Only)

ANALYSIS REQUIRED

Page of

RCA Job Number: 13589a

SAMPLE INFORMATION

RCA Laboratories Environmental Sample Number	Client ID / Description			Date	Matrix	Total Samples	Depositional Dust											Notes:
1023135892001	DG1A	29/09/2023	31/10/2023	31/10/23	W	1	X											
1023135892002	DG2A	29/09/2023	31/10/2023	31/10/23	W	1	X											
1023135892003	DG3A	29/09/2023	31/10/2023	31/10/23	W	1	X											
1023135892004	DG4A	29/09/2023	31/10/2023	31/10/23	W	1	X											
1023135892005	DG5A	29/09/2023	31/10/2023	31/10/23	W	1	X											

RELINQUISHED BY		RECEIVED BY		Laboratory use only (circle appropriate)
Name: Anh Hoang	Date: 31/10/2023	Name: YS	Date: 31/10/23	Received in good condition: Yes No
Of: RCA Enviro	Time: 13.22	Of: RCA-LE	Time: 13:25	Chilled: Yes No

Robert Carr & Associates Pty Ltd Trading as RCA Laboratories – Environmental
92 Hill Street PO Box 175, Carrington NSW 2294
ABN 53 063 515 711 Ph 02 4902 9200 – Fax 02 4902 9299
Email: administrator@rca.com.au Web www.rca.com.au

NATA Accredited Laboratory 9811
Corporate Site Number 18077
Accredited for compliance with ISO/IEC 17025-Testing

Concrush Pty Ltd
PO Box 362
Merewether NSW 2291

Attention Helen Milne

Project:	RCA ref 13589a-221/0		
Date:	8/12/2023		
Client reference:	Dust Report November 2023		
Received date:	30/11/2023	**Number of samples:**	5
Client order number:	N/A	**Testing commenced:**	30/11/2023

CERTIFICATE OF ANALYSIS

1 ANALYTICAL TEST METHODS

ANALYSIS	METHOD	UNITS	ANALYSING LABORATORY	NATA ANALYSIS / NON NATA
Dust Depositional Gauge (DDG)	ENV-LAB004*	g/m^2.month	RCA Laboratories - Environmental	NON-NATA
Dust Depositional Gauge (DDG)	ENV-LAB004*	mg	RCA Laboratories - Environmental	NATA

***** The analytical procedures used by RCA Laboratories - Environmental are based on established internationally recognised procedures such as APHA and Australian Standards

** Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling not collected by RCA Laboratory personal.

2 RESULTS

ANALYSIS	UNITS	DG1A	DG2A	DG3A	DG4A
Depositional Dust Gauge (DDG)					
Sample Number	-	112313589a001	112313589a002	112313589a003	112313589a004
Date sample started	-	31/10/2023	31/10/2023	31/10/2023	31/10/2023
Date sample finished	-	30/11/2023	30/11/2023	30/11/2023	30/11/2023
Sampled By		AH	AH	AH	AH
Number of days	-	30	30	30	30
Notes	-	I	I	IT	I
Insoluble solids **	(g/m^2.month)	5.7	5.0	5.9	3.7
Ash **	(g/m^2.month)	3.8	3.8	4.2	2.8
Combustible matter **	(g/m^2.month)	1.9	1.4	1.7	0.9
Insoluble solids (mg)	mg	100.2	87.8	104.5	64.8
Ash (mg)	mg	66.6	64.5	73.4	49.1
Combustible matter (mg)	mg	33.6	23.3	31.1	15.7
Volume **	mg	2150	2150	2250	2150

ANALYSIS	UNITS	DG5A
Depositional Dust Gauge (DDG)		
Sample Number	-	112313589a005
Date sample started	-	31/10/2023
Date sample finished	-	30/11/2023
Sampled By		AH
Number of days	-	30
Notes	-	I
Insoluble solids **	(g/m^2.month)	2.5
Ash **	(g/m^2.month)	1.7
Combustible matter **	(g/m^2.month)	0.8
Insoluble solids (mg)	mg	44.5
Ash (mg)	mg	30.2
Combustible matter (mg)	mg	14.3
Volume **	mg	2100

Depositional Dust Gauge (DDG)

Analysis on samples is on as received basis samples

.

Depositional Dust Gauge (DDG) Qualifier Codes
I = Insects (eg. Ants, spiders)
T = Tree Litter (eg. Twigs. Leaves, gumnuts)

Robert Carr & Associates Pty Ltd Trading as RCA Laboratories – Environmental
92 Hill Street PO Box 175, Carrington NSW 2294
ABN 53 063 515 711 Ph 02 4902 9200 – Fax 02 4902 9299
Email: administrator@rca.com.au Web www.rca.com.au

NATA Accredited Laboratory 9811
Corporate Site Number 18077
Accredited for compliance with ISO/IEC 17025-Testing

Depositional Dust Gauge Quality Control

A blank crucible, containing no deposited matter, is analysed with every batch of 10 samples analysed. The acceptable mass difference between the first and second weighing of a blank crucible, at the indicated steps, in the analysis procedure is +/- 0.001g.

Blank Crucibles Analysis

METHOD STEP	PRE-DETERMINATION		DETERMINATION OF INSOLUBLE SOLIDS		DETERMINATION OF ASH AND COMBUSTIBLE MATTER	
	1st weighing	2nd weighing	1st weighing	2nd weighing	1st weighing	2nd weighing
Crucible No.	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)
15	24.7464	24.7466	24.747	24.7466	24.7466	24.7466

Please contact the undersigned if you have any queries.

Yours sincerely

Laura Schofield
Environmental Laboratory Manager
Robert Carr & Associates Pty Ltd Trading as
RCA Laboratories – Environmental

RCA Internal Quality Review

General

1. Laboratory QC results for Method Blanks, Duplicates and Laboratory Control Samples are included in this QC report where applicable. Additional QC data maybe available on request.
2. RCA QC Acceptance / Rejection Criteria are available on request.
3. Proficiency Trial results are available on request.
4. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
5. When individual results are qualified in the body of a report, refer to the qualifier descriptions that follow.
6. Samples were analysed on an 'as received' basis.
7. Sampled dates in this report are those listed on the COC or sample jars; if no sample dates are noted, the date the samples are received at the laboratory have been used.
8. All soil results are reported on a dry basis, unless otherwise stated. (ACID SULPHATE SOILS)
9. This report replaces any interim results previously issued.

Holding Times.

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample

Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

##NOTE: pH duplicates are reported as a range NOT as RPD

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR: RPD must lie between 0-30%

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.

2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.

3. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Glossary

UNITS

mg/kg: milligrams per Kilogram

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/L: milligrams per Litre

TERMS

Dry Where moisture has been determined on a solid sample the result is expressed on a dry basis.

LOR Limit of Reporting.

RPD Relative Percent Difference between two Duplicate pieces of analysis can be obtained upon request.

QCS Quality Control Sample - reported as value recovery

Method Blank In the case of solid samples these are performed on laboratory certified clean sands.

In the case of water samples these are performed on de-ionised water.

Duplicate A second piece of analysis from the same sample and reported in the same units as the result to show comparison.

Batch Duplicate A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.

USEPA United States Environment Protection Authority

APHA American Public Health Association

COC Chain of Custody

CP Client Parent - QC was performed on samples pertaining to this report

NCP Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within

< indicates less than

> Indicates greater than

ND Not Detected

RCA LABORATORIES
• ENVIRONMENTAL • CONSTRUCTION MATERIALS TESTING

Ph: (02) 4902 9200 Fax: 02 4902 9299
92 Hill Street, Carrington NSW 2294
www.rca.com.au Email: labenviro@rca.com.au

ENV-F103-4

Client Name: Concrush Pty Ltd c/- RCA Enviro
Client Site: 21 Racecourse Road, Teralba

Contact Name: F Brooker (RCA Enviro)
Phone Number: 0408 687 529

Email Report To: enviro@rca.com.au
Project Manager: Fiona Brooker (RCA Enviro)

Turnaround Required:
× Standard (5 Day)

Date Required: 30/11/2023

Expected Reporting Date: 05/12/2023 *(Laboratory Use Only)*

ANALYSIS REQUIRED

Page of

RCA Job Number: 13589a

SAMPLE INFORMATION

RCA Laboratories Environmental Sample Number	Client ID / Description		Date	Matrix	Total Samples	Depositional Dust												Notes:
1123135891A001	DG1A	31/10/2023	30/11/23	W	1	X												
1123135891A002	DG2A	31/10/2023	30/11/23	W	1	X												
1123135891A003	DG3A	31/10/2023	30/11/23	W	1	X												
1123135891A004	DG4A	31/10/2023	30/11/23	W	1	X												
1123135891A005	DG5A	31/10/2023	30/11/23	W	1	X												

RELINQUISHED BY		RECEIVED BY		Laboratory use only (circle appropriate)
Name: Anh Hoang	Date: 30/11/23	Name:	Date: 30/11/23	Received in good condition: (Yes) No
Of: RCA Enviro	Time: 14.08	Of: RCAE	Time:	Chilled: Yes (No)

Robert Carr & Associates Pty Ltd Trading as RCA Laboratories – Environmental
92 Hill Street PO Box 175, Carrington NSW 2294
ABN 53 063 515 711 Ph 02 4902 9200 – Fax 02 4902 9299
Email: administrator@rca.com.au Web www.rca.com.au

NATA Accredited Laboratory 9811
Corporate Site Number 18077
Accredited for compliance with ISO/IEC 17025-Testing

Concrush Pty Ltd
PO Box 362
Merewether NSW 2291

Attention Helen Milne

Project:	RCA ref 13589a-223/0		
Date:	12/01/2024		
Client reference:	Dust Report December 2023		
Received date:	2/01/2024	**Number of samples:**	5
Client order number:	N/A	**Testing commenced:**	2/01/2024

CERTIFICATE OF ANALYSIS

1 ANALYTICAL TEST METHODS

ANALYSIS	METHOD	UNITS	ANALYSING LABORATORY	NATA ANALYSIS / NON NATA
Dust Depositional Gauge (DDG)	ENV-LAB004*	g/m^2.month	RCA Laboratories - Environmental	NON-NATA
Dust Depositional Gauge (DDG)	ENV-LAB004*	mg	RCA Laboratories - Environmental	NATA

***** The analytical procedures used by RCA Laboratories - Environmental are based on established internationally recognised procedures such as APHA and Australian Standards

** Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling not collected by RCA Laboratory personal.

2 RESULTS

ANALYSIS	UNITS	DG1A	DG2A	DG3A	DG4A
Depositional Dust Gauge (DDG)					
Sample Number	-	122313589a001	122313589a002	122313589a003	122313589a004
Date sample started	-	30/11/2023	30/11/2023	30/11/2023	30/11/2023
Date sample finished	-	2/01/2024	2/01/2024	2/01/2024	2/01/2024
Sampled By		AH	AH	AH	AH
Number of days	-	33	33	33	33
Notes	-	I	I	IT	I
Insoluble solids **	(g/m^2.month)	3.0	7.5	2.2	4.9
Ash **	(g/m^2.month)	1.9	6.3	1.3	4.8
Combustible matter **	(g/m^2.month)	1.1	1.2	0.9	1.0
Insoluble solids (mg)	mg	58.4	144.9	42.5	113.7
Ash (mg)	mg	36.0	123.0	25.6	94.5
Combustible matter (mg)	mg	22.4	21.9	16.9	19.2
Volume **	mg	1400	1400	1500	1400

ANALYSIS	UNITS	DG5A
Depositional Dust Gauge (DDG)		
Sample Number	-	122313589a005
Date sample started	-	30/11/2023
Date sample finished	-	2/01/2024
Sampled By		AH
Number of days	-	33
Notes	-	I
Insoluble solids **	(g/m^2.month)	3.5
Ash **	(g/m^2.month)	2.7
Combustible matter **	(g/m^2.month)	0.8
Insoluble solids (mg)	mg	67.4
Ash (mg)	mg	52.1
Combustible matter (mg)	mg	15.3
Volume **	mg	1400

Depositional Dust Gauge (DDG)

Analysis on samples is on as received basis samples

Analysis on samples is on as received basis sample does not comply to the exposure period 28-32 days

.

Depositional Dust Gauge (DDG) Qualifier Codes
I = Insects (eg. Ants, spiders)
T = Tree Litter (eg. Twigs. Leaves, gumnuts)

Robert Carr & Associates Pty Ltd Trading as RCA Laboratories – Environmental
92 Hill Street PO Box 175, Carrington NSW 2294
ABN 53 063 515 711 Ph 02 4902 9200 – Fax 02 4902 9299
Email: administrator@rca.com.au Web www.rca.com.au

NATA Accredited Laboratory 9811
Corporate Site Number 18077
Accredited for compliance with ISO/IEC 17025-Testing

Depositional Dust Gauge Quality Control

A blank crucible, containing no deposited matter, is analysed with every batch of 10 samples analysed. The acceptable mass difference between the first and second weighing of a blank crucible, at the indicated steps, in the analysis procedure is +/- 0.001g.

Blank Crucibles Analysis

METHOD STEP	PRE-DETERMINATION		DETERMINATION OF INSOLUBLE SOLIDS		DETERMINATION OF ASH AND COMBUSTIBLE MATTER	
	1st weighing	2nd weighing	1st weighing	2nd weighing	1st weighing	2nd weighing
Crucible No.	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)	Mass of Crucible(g)
56	25.705	25.7048	25.7050	25.7050	25.7049	25.7048

Please contact the undersigned if you have any queries.

Yours sincerely

Laura Schofield
Environmental Laboratory Manager
Robert Carr & Associates Pty Ltd Trading as
RCA Laboratories – Environmental

Robert Carr & Associates Pty Ltd Trading as RCA Laboratories – Environmental
92 Hill Street PO Box 175, Carrington NSW 2294
ABN 53 063 515 711 Ph 02 4902 9200 – Fax 02 4902 9299
Email: administrator@rca.com.au Web www.rca.com.au

NATA Accredited Laboratory 9811
Corporate Site Number 18077
Accredited for compliance with ISO/IEC 17025-Testing

RCA Internal Quality Review

General

1. Laboratory QC results for Method Blanks, Duplicates and Laboratory Control Samples are included in this QC report where applicable. Additional QC data maybe available on request.
2. RCA QC Acceptance / Rejection Criteria are available on request.
3. Proficiency Trial results are available on request.
4. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
5. When individual results are qualified in the body of a report, refer to the qualifier descriptions that follow.
6. Samples were analysed on an 'as received' basis.
7. Sampled dates in this report are those listed on the COC or sample jars; if no sample dates are noted, the date the samples are received at the laboratory have been used.
8. All soil results are reported on a dry basis, unless otherwise stated. (ACID SULPHATE SOILS)
9. This report replaces any interim results previously issued.

Holding Times.

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample

Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

##NOTE: pH duplicates are reported as a range NOT as RPD

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR: RPD must lie between 0-30%

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.

2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.

3. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Glossary

UNITS

mg/kg: milligrams per Kilogram

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/L: milligrams per Litre

TERMS

Dry Where moisture has been determined on a solid sample the result is expressed on a dry basis.

LOR Limit of Reporting.

RPD Relative Percent Difference between two Duplicate pieces of analysis can be obtained upon request.

QCS Quality Control Sample - reported as value recovery

Method Blank In the case of solid samples these are performed on laboratory certified clean sands.

In the case of water samples these are performed on de-ionised water.

Duplicate A second piece of analysis from the same sample and reported in the same units as the result to show comparison.

Batch Duplicate A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.

USEPA United States Environment Protection Authority

APHA American Public Health Association

COC Chain of Custody

CP Client Parent - QC was performed on samples pertaining to this report

NCP Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within

< indicates less than

> Indicates greater than

ND Not Detected

RCA LABORATORIES
• ENVIRONMENTAL • CONSTRUCTION MATERIALS TESTING

Ph: (02) 4902 9200 Fax: 02 4902 9299
92 Hill Street, Carrington NSW 2294
www.rca.com.au Email: labenviro@rca.com.au

ENV-F103-4

Client Name: Concrush Pty Ltd c/- RCA Enviro
Client Site: 21 Racecourse Road, Teralba

Contact Name: F Brooker (RCA Enviro)
Phone Number: 0408 687 529

Email Report To: enviro@rca.com.au
Project Manager: Fiona Brooker (RCA Enviro)

Turnaround Required:
× Standard (5 Day)

Date Required: 8-Jan-24

Expected Reporting Date:
(Laboratory Use Only)

ANALYSIS REQUIRED

Page of

RCA Job Number: 13589a

SAMPLE INFORMATION

RCA Laboratories Environmental Sample Number	Client ID / Description			Date	Matrix	Total Samples	Depositional Dust												Notes:
122313589A001	DG1A	31/08/2023	30/11/2023	2/01/24	W	1	X												
122313589A002	DG2A	31/08/2023	30/11/2023	2/01/24	W	1	X												
122313589A003	DG3A	31/08/2023	30/11/2023	2/01/24	W	1	X												
122313589A004	DG4A	31/08/2023	30/11/2023	2/01/24	W	1	X												
122313589A005	DG5A	31/08/2023	30/11/2023	2/01/24	W	1	X												

RELINQUISHED BY		RECEIVED BY		Laboratory use only (circle appropriate)
Name: Anh Huang	Date: 2/01/2024	Name: Stella Mygdali	Date: 2/1/24	**Received in good condition:** Yes No
Of: RCA Enviro	Time: 12.25	Of:	Time: 12:25pm	**Chilled:** Yes No