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# Bago Forest Quarry Air Quality Monitoring

Annual Report 2023



# Bago Forest Quarry Air Quality Monitoring Annual Report 2023

Project name Bago Forest Quarry AQM

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Description Annual Dust Deposition Monitoring Report for the Bago Forest Quarry

located at Herons Creek NSW, presenting data collected from 18 October 2022 to 13 October 2023.

Revision	Date	Prepared by	Reviewed by	Approved by	Description
1	31/10/2023	J. Bourke	R. Condon/ M. Parsons	B. Sinclair	Initial
2	2/11/2023	J. Bourke	R. Condon/ M. Parsons	B. Sinclair	Revision following CTK Review

Ramboll

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#### 1. Overview

Ramboll Australia Pty Ltd (Ramboll) has been commissioned by CTK Natural Resources Pty Ltd (CTK) to undertake air quality monitoring at the Bago Forest Quarry (BFQ), located at 31 Lookout Road, Herons Creek, NSW 2443.

Ambient air monitoring is required for BFQ by Environment Protection Licence (EPL) 20983 (NSW EPA 2018). EPL 20983 stipulates that dust deposition (as insoluble solids) is to be monitored in four locations reflecting close proximity to nearby sensitive receptors. Dust deposition refers to air particles that fall out of suspension from the air over a given area and time. This parameter is generally considered a nuisance concern rather than a concern for human health. Continuous  $PM_{10}$  (particulate matter with an aerodynamic diameter of 10 microns or less) monitoring is to be implemented once extractive rates exceed 150,000 tonnes per annum (tpa). BFQ is not currently extracting at this rate, so  $PM_{10}$  monitoring is not required.

This program was commissioned during October 2022, and this report presents annual results from the data collected since monitoring commenced (18 October 2022).

Previous memo reports delivered by Ramboll during this program are listed below:

- 318001562 Bago Forest Quarry DDG Report 2022-11, dated 1 December 2022, summarising data collected to 15 November 2022.
- 318001562 Bago Forest Quarry DDG Report 2022-12, dated 17 January 2023, summarising data collected to 19 December 2022.
- 318001562 Bago Forest Quarry DDG Report 2023-01, dated 23 February 2023, summarising data collected to 13 January 2023.
- 318001562 Bago Forest Quarry DDG Report 2023-02, dated 2 March 2023, summarising data collected to 14 February 2023.
- 318001562 Bago Forest Quarry DDG Report 2023-03, dated 27 April 2023, summarising data collected to 16 March 2023.
- 318001562 Bago Forest Quarry DDG Report 2023-04, dated 27 April 2023, summarising data collected to 13 April 2023.
- 318001562 Bago Forest Quarry DDG Report 2023-05, dated 28 July 2023, summarising data collected to 12 May 2023.
- 318001562 Bago Forest Quarry DDG Report 2023-06, dated 9 August 2023, summarising data collected to 13 June 2023.
- 318001562 Bago Forest Quarry DDG Report 2023-07, dated 9 August 2023, summarising data collected to 13 July 2023.
- 318001562 Bago Forest Quarry DDG Report 2023-08, dated 19 September 2023, summarising data collected to 10 August 2023.
- 318001562 Bago Forest Quarry DDG Report 2023-09, dated 30 October 2023, summarising data collected to 12 September 2023.

# 2. Methodology

#### 2.1 Deposited dust

Deposited dust is particulate matter that settles out of the air onto the ground or surfaces. It generally consists of larger, heavier particles from a local source and is considered a nuisance impact rather than a health concern. These particles contain a variety of components such as nitrates, sulphates, organic chemicals, metals, soil or dust particles and allergens. For this program, we are only concerned about insoluble solids to meet the requirements of BFQ's EPL.

#### 2.2 Equipment siting

For this study, siting of all equipment was completed, as far as practicable, in accordance with the recommendations of *AS/NZS 3580.1.1:2016 Methods for sampling and analysis of ambient air Guide to siting air monitoring equipment* (Standards Australia and Standards New Zealand, 2016a). Four dust deposition gauges were installed on 18 October 2022 at the monitoring points D1, D2 – Temporary, D3 and D4. The D1 monitoring location was moved on 16 March 2023 from Little Bago Lane to Nelsons Road to minimise the influence of organic matter from nearby trees on the results. The new location is considered adjacent to and representative of the same property. The D2 monitoring location was moved on 13 April 2023 from its temporary location at the quarry weighbridge, located immediately adjacent to Milligans Road, to the Lyons property located on Lambs Road following access being granted by the residents. The D2 monitor was moved again on 12 May 2023 to a property at the end of Nelsons Road following issues with the Lambs Road residents.

From the beginning of the monitoring program the D2 monitoring location was moved from the EPA specified location to avoid the influence of organic matter from nearby trees and was temporarily placed at the Quarry Weighbridge which is approximately 40 metres to the south of the location.

Coordinates and locations of the dust deposition gauges are presented in **Table 2-1** and **Figure 2-1**.

Table 2-1: Bago Forest Quarry air quality monitoring location and coordinates	

ID		Location	Easting (m)	Northing (m)
D1	Oct 22 – Mar 23	Matheson - Little Bago Lane, Herons Creek, NSW 2443	473518	6510827
D1	Mar 23 – present	Matheson - Nelsons Road, Herons Creek, NSW 2443	473498	6510749
	Oct 22 – Apr 23	Quarry weighbridge (temporary location only)	472659	6510691
D2	Apr – May 23	Lyons - Lambs Road, Heron Creek, NSW 2443	471453	6510925
	May 23 – present	Nelsons Road, Herons Creek, NSW 2443	472911	6510421
D3		Winery Resident - Lambs Road, Herons Creek, NSW 2443	471120	6511189
D4		Little Bago Lane, Herons Creek, NSW 2443	473690	6510381

#### 2.3 Sampling and analysis

Sampling and analysis was conducted in accordance with the recommendations of AS/NZS 3580.10.1:2016 Methods for sampling and analysis of ambient air Determination of particulate

matter - Deposited matter - Gravimetric method (Standards Australia and Standards New Zealand, 2016b). Each gauge was installed to collect deposited matter in a glass bottle together with rainwater through a funnel over a period of 30 days +/- 2 days at a mounted height of approximately 2 m above ground surface. The samples were sent to a NATA accredited laboratory under chain of custody conditions to be analysed for insoluble solids (including ash and combustible matter).



Legend

Dust deposition monitoring location

Α4 1:13,000

Figure 2-1 : Bago Forest Quarry - Air quality monitoring locations Bago Forest Quarry AQM

# 3. Assessment criteria

Air quality criteria relevant to the program are presented in **Table 3-1**.

Table 3-1: Air quality criteria relevant to Bago Forest Quarry air quality monitoring program

Pollutant	Averaging period	Criteria	Source
Deposited dust (as insoluble solids)	Annual	4 g/m²/month	NERDDC (1988), NSW EPA (2022)

## 4. Results and Discussion

A summary of dust deposition (insoluble solid) results for the program are presented in **Table 4-1** and **Figure 4-1** with all results (including ash and combustible matter content for each sample) are presented in **Table 1**, **Appendix 1**. Annual averages at locations D1, D3 and D4 all fall below the annual average criterion of 4.0 g/m<sup>2</sup>/month. D2 exceeded the annual average criterion, reporting an annual average of 6.0 g/m<sup>2</sup>/month.

Table 4-1: Dust deposition as insoluble solids results for Bago Forest Quarry since monitoring commenced.

Month	Start sampling	End sampling	Inso	luble Solids	s (g/m²/mơ	onth)
Month	period	period	D1	D2	D3	D4
1	18 Oct 2022	15 Nov 2022	2.1	3	0.7	0.6
2	15 Nov 2022	19 Dec 2022	8.8	12	1.5	1.4
3	19 Dec 2022	13 Jan 2023	6.2	5.1	0.4	0.9
4	13 Jan 2023	14 Feb 2023	14	4.8	0.9	1.2
5	14 Feb 2023	16 Mar 2023	4.5	1.1	1.3	0.5
6	16 Mar 2023	13 Apr 2023	0.4	10	0.4	0.4
7	13 Apr 2023	12 May 2023	0.4	3.1	0.8	0.4
8	12 May 2023	13 Jun 2023	2.2	0.9	1.8	0.4
9	13 Jun 2023	13 Jul 2023	1.4	23 <sup>1</sup>	0.6	0.7
10	13 Jul 2023	10 Aug 2023	1.5	4.61	0.8	0.4
11	10 Aug 2023	12 Sep 2023	1.6	0.7	0.6	0.3
12	12 Sep 2023	13 Oct 2023	2.2	3.1	1.6	0.6
	Annı	ual average criterion		4	.0	
		Annual average	3.8	6.0	1.0	0.7

Limit of reporting =  $0.1 \text{ g/m}^2/\text{month}$  for insoluble solids

It was observed that insoluble solids exceeded the criterion at D1 for December 2022, January 2023, February 2023, and March 2023. Although since the annual average at this location fell below the annual average criterion there are no further comments for this location and previous comments can be found in the December 2022, January 2023, February 2023, and March 2023 summary reports (Ramboll 2023a, Ramboll 2023b, Ramboll 2023c and Ramboll 2023d).

It was noted in the July and August 2023 summary reports (Ramboll 2023h and Ramboll 2023i) that D2 results were influenced by a high ash content due to nearby hazard reduction burning by the Forestry Corporation of NSW. For monitoring period 13 June to 13 July 2023 (Ramboll 2023h), D2 reported insoluble solid levels at 23 g/m²/month, with the laboratory reporting the elevated insoluble solids levels to contain a high ash count (20 g/m²/month). For monitoring period 13 July to 10 August 2023 (Ramboll 2023i), the laboratory also reported a high ash content in D2, with the elevated insoluble solids level (4.6 g/m²/month) containing 3.8 g/m²/month of ash. The nearest Bureau of Meteorology weather station at Port Macquarie indicated wind direction during both monitoring periods was predominantly from the south, as shown in wind roses in **Figure 4-2**, indicating the elevated result was unlikely to have been a result of quarry operations which is located to the north of the D2 monitoring location. It was also observed that insoluble solids exceeded the criterion at D2 for monitoring periods 15 November to 19 December 2022, 19

 $<sup>^{1}</sup>$  Result influenced by a high ash content due to nearby hazard reduction burning by the Forestry Corporation of NSW

December 2022 to 13 January 2023, 13 January to 14 February 2023, and 16 March to 13 April 2023, when D2 was temporarily located next to a busy unsealed road, and approximately 1 km from the nearest residence. As such, the monthly summary reports (Ramboll 2023a, Ramboll 2023b, Ramboll 2023c and Ramboll 2023e) considered that these data are influenced by heavy and light vehicle movements on the roadway into the quarry. Exceedances do not reflect the circumstances that exist at any of the nearest residential properties.

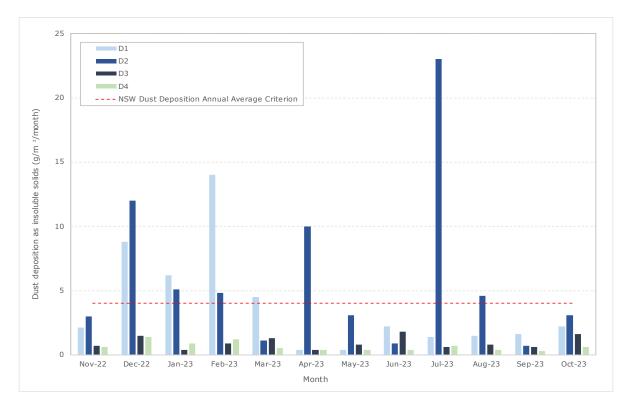


Figure 4-1: Dust deposition as insoluble solids results for the month compared to the annual criterion at Bago Forest Quarry since monitoring commenced.

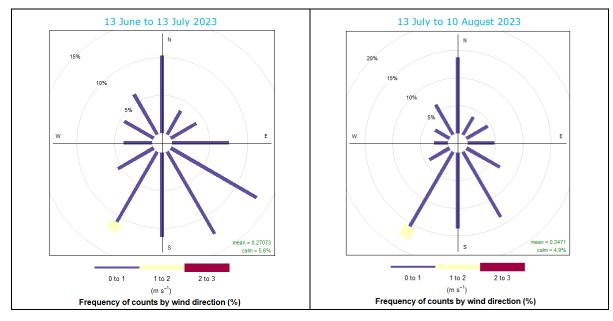


Figure 4-2: Wind roses for periods 13 June to 13 July 2023 (July) and 13 July to 10 August 2023 (August).

# 5. Summary

This report presents results of the air quality monitoring program at Bago Forest Quarry, Heron Creek, NSW since program commissioning on 18 October 2022. The program consists of dust deposition monitoring at four locations to meet the requirements of BFG's EPL.

The rolling annual average concentrations of deposited dust as insoluble solids remain below the annual average dust deposition criterion at all locations, except for D2, which reported an annual average of 6.0 g/m²/month against the annual average dust deposition criterion of 4.0 g/m²/month. It was noted that some elevated levels at this location were influenced by a high ash content due to nearby hazard reduction burning by the Forestry Corporation of NSW, and the location initially being situated adjacent a high traffic unsealed road for six months. It is difficult to isolate the quarry contribution using this method without applying additional monitoring techniques, and we are unable to say external influences are the only cause for the elevated levels.

## 6. Limitations

This document is issued in confidence to CTK Natural Resources Pty Ltd for the purposes of monitoring and assessing dust deposition (as insoluble solids) at Bago Forest Quarry in Herons Creek, NSW. It should not be used for any other purpose.

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## 7. References

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NSW EPA (2022). Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales. NSW Environment Protection Authority, Parramatta NSW.

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Ramboll (2023d). 318001562 Bago Forest Quarry DDG Report 2023-03, Bago Forest Quarry Air Quality Monitoring, Ramboll Australia Pty Ltd, 27 April 2023.

Ramboll (2023e). 318001562 Bago Forest Quarry DDG Report 2023-04, Bago Forest Quarry Air Quality Monitoring, Ramboll Australia Pty Ltd, 27 April 2023.

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Ramboll (2023j). 318001562 Bago Forest Quarry DDG Report 2023-09, Bago Forest Quarry Air Quality Monitoring, Ramboll Australia Pty Ltd, 30 October 2023.

Standards Australia, Standards New Zealand (2016a). *AS/NZS 3580.1.1:2016 Methods for sampling and analysis of ambient air Guide to siting air monitoring equipment*. Australian/New Zealand Standard.

Standards Australia, Standards New Zealand (2016b). AS/NZS 3580.10.1:2016 Methods for sampling and analysis of ambient air Determination of particulate matter - Deposited matter - Gravimetric method. Australian/New Zealand Standard.

Appendix 1 Results Table Project No: 318001562

Table 1 **Dust Deposition Analytical Results**  RAMBOLL

Project No: 318001502 Client Name: CTK Natural Resources Pty Ltd Project Name: Bago Forest Quarry AQM Project Site: Bago Forest Quarry 11/2/2023

			LOR	<b>usy</b> 0.1	Combustible Solids	spilos olidis olids	solible solids	0.1 Total Solids Dried at 103 °C to 105 °C	Volume (total)
			Units	g/m²/month	g/m²/month	g/m²/month	g/m²/month	g/m²/month	mL
	Sample Location	Sample Period	Laboratory Report						
		18/10/23 to 15/11/23	<b>No.</b> 942491	0.1	2	2.1	3.5	5.6	3200
		15/11/23 to 19/12/23	952510	1	7.7	8.8	8.2	17	1200
	Matheson - Little Bago Lane, Herons Creek	19/12/23 to 13/01/23	956073	0.7	5.5	6.2	2.8	9	1200
		13/01/23 to 14/02/23	964597	0.4	13	14	10	24	1400
		14/02/23 to 16/03/23	972795	0.2	4.3	4.5	7.5	12	4200
D1		16/03/23 to 13/04/23	980665	< 0.1	0.4	0.4	7.7	8.1	2800
		13/04/23 to 12/05/23	989550	0.1	0.3	0.4	4.6	5	800
	Markey and Malaysia Board Harris County	12/05/23 to 13/06/23	1000723	1.9	0.3	2.2	2.7	4.8	400
	Matheson - Nelsons Road, Herons Creek	13/06/23 to 13/07/23	1007790 1015939	1.2	0.2	1.4 1.5	< 0.1	1.4 3.3	300 250
	 	13/07/23 to 10/08/23 10/08/23 to 12/09/23	1015939	1.4	0.3	1.6	1.8	2.7	200
		12/09/23 to 13/10/23	1034788	2	0.3	2.2	2.1	4.3	200
		18/10/23 to 15/11/23	942491	< 0.1	2.9	3	4.6	7.6	2800
		15/11/23 to 19/12/23	952510	0.3	11	12	4.9	16	1300
	Quarry weighbridge	19/12/23 to 13/01/23	956073	0.2	5	5.1	4.4	9.5	1300
	Quarry weighbridge	13/01/23 to 14/02/23	964597	0.2	4.6	4.8	4.8	9.5	1500
		14/02/23 to 16/03/23	972795	< 0.1	1	1.1	7.2	8.3	4300
D2		16/03/23 to 13/04/23	980665	0.1	10	10	7.4	18	2700
	Lyons - Lambs Road, Heron Creek	13/04/23 to 12/05/23	989550	0.4	2.7	3.1	4.3	7.5	750
		12/05/23 to 13/06/23 13/06/23 to 13/07/23	1000723 1007790	0.6 20	0.3 2.5	0.9	1.3 0.2	2.2	250 300
	Nelsons Road, Herons Creek	13/07/23 to 10/08/23	1015939	3.8	0.9	4.6	3.2	7.9	750
		10/08/23 to 12/09/23	1025598	0.3	0.4	0.7	1.7	2.5	200
		12/09/23 to 13/10/23	1034788	1.7	1.4	3.1	3.9	7	260
		18/10/23 to 15/11/23	942491	< 0.1	0.6	0.7	5.4	6.1	2800
		15/11/23 to 19/12/23	952510	0.2	1.3	1.5	6.2	7.6	1400
		19/12/23 to 13/01/23	956073	< 0.1	0.3	0.4	< 0.1	0.4	1700
		13/01/23 to 14/02/23	964597	0.1	0.8	0.9	4.5	5.4	1500
	1	14/02/23 to 16/03/23	972795	< 0.1	1.2 0.4	1.3 0.4	7.6	13	3600
D3	Winery Resident - Lambs Road	16/03/23 to 13/04/23 13/04/23 to 12/05/23	980665 989550	< 0.1	0.4	0.4	7.6 4.3	8 5.1	2700 750
		12/05/23 to 12/05/23	1000723	1.5	0.7	1.8	4.8	6.6	450
		13/06/23 to 13/07/23	1007790	0.3	0.2	0.6	< 0.1	0.6	250
		13/07/23 to 10/08/23	1015939	0.6	0.2	0.8	2.8	3.6	300
		10/08/23 to 12/09/23	1025598	0.5	0.2	0.6	2.9	3.6	250
		12/09/23 to 13/10/23	1034788	1.2	0.4	1.6	2.5	4.1	280
		18/10/23 to 15/11/23	942491	< 0.1	0.6	0.6	4.2	4.8	2700
		15/11/23 to 19/12/23	952510	0.2	1.2	1.4	6.1	7.5	1300
		19/12/23 to 13/01/23	956073 964597	0.2	0.7	0.9 1.2	1.5 4.6	2.4 5.9	1400 1300
		13/01/23 to 14/02/23 14/02/23 to 16/03/23	972795	< 0.1	0.5	0.5	7.1	7.6	4000
		16/03/23 to 13/04/23	980665	< 0.1	0.3	0.3	9.3	9.7	2700
D4	Little Bago Lane, Herons Creek	13/04/23 to 12/05/23	989550	0.1	0.3	0.4	4.2	4.6	730
		12/05/23 to 13/06/23	1000723	0.3	< 0.1	0.4	3.8	4.2	400
		13/06/23 to 13/07/23	1007790	0.3	0.4	0.7	< 0.1	0.7	250
		13/07/23 to 10/08/23	1015939	0.3	0.2	0.4	3.7	4.2	300
		10/08/23 to 12/09/23	1025598	0.1	0.2	0.3	2	2.3	200
		12/09/23 to 13/10/23	1034788	0.1	0.4	0.6	3.2	3.8	200

Legend: LOR – Limit of Recording g = grams m = metres

mL - millilitres

Appendix 2 Laboratory Reports

•		CHAIN OF CUSTOD'  Eurofins   Environment Testing ABN		Syd Unit 02 9	F3 8kt.F	oratory 16 Mars Ro EnviroSa	oad Läne ( ampleNSV	Cove West	NSW 2066 s.com		Smallwood	tory I Place Muran viroSampleQL				Unit 29	aboratory Leach High	way Kewdal	e WA 61	105 fins.com					6 Mont	ercy Ro	Laboratory pad Dandenong South VIC 3175 EnviroSampleVic@eurofins.com
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Ne		Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)																		200	4	200	Jar	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warn
1		D1	18/10/2022 - 15/11/2022	s >	(																						
2		D2 Temporary	18/10/2022 - 15/11/2022	s	(																						
3		D3	18/10/2022 - 15/11/2022	s 🕽	(								1 8											ı			
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Jake Bourke

Signature

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Date

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Time

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Time

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Canberra Mitchell ACT 2911

Brisbane Unit 1.2 Dacre Street 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 2 6113 8091 Tel: +61 7 3902 4600

Newcastle 4/52 Industrial Drive Mayfield East NSW 2304 PO Box 60 Wickham 2293 NATA# 1261 Site# 20794 NATA# 1261 Site# 25079

ABN: 91 05 0159 898

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

NZBN: 9429046024954

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose, Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 9 526 45 51 Tel: 0800 856 450 IANZ# 1327 IANZ# 1290

#### Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name:

Greer Laing

Project name:

**BAGO FOREST QUARRY** 318001562

Project ID: Turnaround time:

5 Day

Date/Time received

Nov 17, 2022 12:00 PM

**Eurofins reference** 

942491

#### Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

Some samples have been subcontracted.

N/A Custody Seals intact (if used).

#### **Notes**

#### Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Greer Laing - glaing@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.





web: www.eurofins.com.au email: EnviroSales@eurofins.com

#### **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne Geelong 6 Monterey Road 19/8 Lewalan Street Dandenong South Grovedale VIC 3175 VIC 3216 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000

179 Magowar Road Girraween Mitchell NSW 2145 ACT 2911 Tel: +61 2 9900 8400 NATA# 1261 Site# 1254 NATA# 1261 Site# 1254 NATA# 1261 Site# 18217

**Dust Deposition** 

Sydney

Brisbane Unit 1.2 Dacre Street 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 2 6113 8091 Tel: +61 7 3902 4600

Newcastle 4/52 Industrial Drive Mayfield East NSW 2304 PO Box 60 Wickham 2293 Tel: +61 2 4968 8448 NATA# 1261 Site# 20794 NATA# 1261 Site# 25079

Perth 46-48 Banksia Road

Welshpool WA 6106 Tel: +61 8 6253 4444 NATA# 2377 Site# 2370

Received:

ABN: 91 05 0159 898

NZBN: 9429046024954 Auckland Christchurch

**Eurofins ARL Pty Ltd Eurofins Environment Testing NZ Ltd** 

Nov 17, 2022 12:00 PM

35 O'Rorke Road 43 Detroit Drive Penrose. Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 9 526 45 51 Tel: 0800 856 450 IANZ# 1327 IANZ# 1290

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** Project ID:

**BAGO FOREST QUARRY** 

318001562

Order No.: Report #:

Canberra

942491

Phone: 02 9954 8118 02 9954 8150 Fax:

Due: Nov 24, 2022

Priority: 5 Dav **Contact Name: Greer Laing** 

**Eurofins Analytical Services Manager: Andrew Black** 

# Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217 Χ **External Laboratory** Sample Date | Sampling No Sample ID Matrix LAB ID Time N22-No0044982 D1 Nov 15, 2022 Dust Х Deposition 2 D2 Dust Nov 15, 2022 N22-No0044983 Χ TEMPORARY Deposition 3 D3 Nov 15, 2022 Dust N22-No0044984 Х Deposition D4 Nov 15, 2022 Dust N22-No0044985 Χ Deposition 4 Test Counts



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Greer Laing

Report 942491-A

Project name BAGO FOREST QUARRY

Project ID 318001562

Received Date Nov 17, 2022

Client Sample ID			D1	D2 TEMPORARY	D3	D4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			N22- No0044982	N22- No0044983	N22- No0044984	N22- No0044985
Date Sampled			Nov 15, 2022	Nov 15, 2022	Nov 15, 2022	Nov 15, 2022
Test/Reference	LOR	Unit				
<b>Dust Deposition</b>						
Combustible Solids	0.1	g/m2/mth	2.0	2.9	0.6	0.6
Soluble Solids	0.1	g/m2/mth	3.5	4.6	5.4	4.2
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	5.6	7.6	6.1	4.8
Volume (total)*	0.1	mL	3200	2800	2800	2700
Ash*	0.1	g/m2/mth	0.1	< 0.1	< 0.1	< 0.1
Insoluble Solids	0.1	g/m2/mth	2.1	3.0	0.7	0.6



#### Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneyNov 18, 20225 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air

Report Number: 942491-A



web: www.eurofins.com.au email: EnviroSales@eurofins.com

#### **Eurofins Environment Testing Australia Pty Ltd**

NATA# 1261 Site# 1254 NATA# 1261 Site# 1254 NATA# 1261 Site# 18217

ABN: 50 005 085 521

Melbourne Geelong 6 Monterey Road 19/8 Lewalan Street Dandenong South Grovedale VIC 3175 VIC 3216 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000

Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

**Dust Deposition** 

Canberra Unit 1.2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091

Newcastle 1/21 Smallwood Place 4/52 Industrial Drive Mayfield East NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 20794 NATA# 1261 Site# 25079

PO Box 60 Wickham 2293

Perth

Welshpool

WA 6106

46-48 Banksia Road

Tel: +61 8 6253 4444

NATA# 2377 Site# 2370

**Eurofins ARL Pty Ltd Eurofins Environment Testing NZ Ltd** ABN: 91 05 0159 898 NZBN: 9429046024954

> Auckland 35 O'Rorke Road Penrose, Auckland 1061 Tel: +64 9 526 45 51 IANZ# 1327

Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 Tel: 0800 856 450 IANZ# 1290

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** Project ID:

**BAGO FOREST QUARRY** 

318001562

Order No.: Report #:

Phone:

Fax:

942491 02 9954 8118

02 9954 8150

Brisbane

Murarrie

QLD 4172

Tel: +61 7 3902 4600

Received: Nov 17, 2022 12:00 PM Due: Nov 24, 2022

Priority: 5 Day **Contact Name:** Greer Laing

**Eurofins Analytical Services Manager: Andrew Black** 

#### Sample Detail

Sydr	ney Laboratory	- NATA # 1261	Site # 18217			Х					
Exte	rnal Laboratory	•									
No	Sample ID	Sample Date	Matrix								
1	D1	Nov 15, 2022			N22-No0044982	Х					
2	D2 TEMPORARY	Nov 15, 2022			N22-No0044983	Х					
3	D3	Nov 15, 2022			N22-No0044984	Х					
4	D4	Nov 15, 2022		Dust Deposition	N22-No0044985	Х					
Test	Counts					4					



#### **Internal Quality Control Review and Glossary**

#### General

- 1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- 2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- 3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- 4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- 6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise
- 7. Samples were analysed on an 'as received' basis.
- 8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- 9. This report replaces any interim results previously issued.

#### **Holding Times**

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

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 SRA.

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.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

#### Units

mg/kg: milligrams per kilogram mg/L: milligrams per litre µg/L: micrograms per litre

ppm: parts per million ppb: parts per billion %: Percentage

org/100 mL: Organisms per 100 millilitres NTU: Nephelometric Turbidity Units MPN/100 mL: Most Probable Number of organisms per 100 millilitres

CFU: Colony forming unit

#### Terms

APHA American Public Health Association

COC Chain of Custody

CP Client Parent - QC was performed on samples pertaining to this report
CRM Certified Reference Material (ISO17034) - reported as percent recovery

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

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

LOR Limit of Reporting

LCS Laboratory Control Sample - reported as percent recovery.

Method Blank

In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.

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.

RPD Relative Percent Difference between two Duplicate pieces of analysis.

SPIKE Addition of the analyte to the sample and reported as percentage recovery.

SRA Sample Receipt Advice

Surr - Surrogate The addition of a like compound to the analyte target and reported as percentage recovery.

TBTO Tributyltin oxide (bis-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured

and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.

TCLP Toxicity Characteristic Leaching Procedure
TEQ Toxic Equivalency Quotient or Total Equivalence

QSM US Department of Defense Quality Systems Manual Version 5.4

US EPA United States Environmental Protection Agency

WA DWER Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

#### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

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% NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

#### **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. pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- 4. Recovery Data (Spikes & Surrogates) where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte
- 5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Report Number: 942491-A



#### Comments

#### Sample Integrity

Custody Seals Intact (if used)

Attempt to Chill was evident

N/A

Sample correctly preserved

Appropriate sample containers have been used

Yes

Sample containers for volatile analysis received with minimal headspace

Samples received within HoldingTime

Yes

Some samples have been subcontracted

No

#### Authorised by:

Andrew Black Analytical Services Manager Roopesh Rangarajan Senior Analyst-Inorganic

Glenn Jackson General Manager

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- \* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Report Number: 942491-A

CI	HAIN OF CUST	TODY RECORD ing ABN 50 005 025 521	Sydney L. Unit F3 Bld. 02 9900 844	aboratory F 16 Mars Road Lane Cove West NSW 2066 CenviroSampleNSW@eurofins.com	Unit 1 21 Smallwood Place Murarria 07 3902 4600 EnviroSampleQLD(		Perth Laboratory Unit 2 91 Leach Highway Kewdali 08 9251 9600 EnviroSempleWA					[	6 Mo	onterey F	Laboratory  Road Dandenong South VIC 3175  EnviroSampleVic@eurofins.com	
Company	Ramboli		Project №	318001562	Project Manager	Greer Laing			ample	er(s)		Jak	e Bour			
Address	50 Glebe Road, The Ju	unction NSW 2291	Project Name	Bago Forest Quarry	EDD Format ESdat EGuiS etc			Har	ided o	ver b	ý	Jak	e Bour	rke		
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	D3	15/11/2022 - 19/12/2022	s <b>X</b>													
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15/11/202



www.eurofins.com.au

EnviroSales@eurofins.com

#### **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 Geelong 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000

**Sydney** 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 NATA# 1261 Site# 1254 NATA# 1261 Site# 1254 NATA# 1261 Site# 18217

Canberra Mitchell ACT 2911

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NZBN: 9429046024954

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose, Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 9 526 45 51 Tel: 0800 856 450 IANZ# 1327 IANZ# 1290

## Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name:

Greer Laing

Project name:

**BAGO FOREST QUARRY** 

Project ID: Turnaround time: 318001562 10 Day

952510

Date/Time received

Dec 19, 2022 2:10 PM

**Eurofins reference** 

#### Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

Some samples have been subcontracted.

N/A Custody Seals intact (if used).

#### **Notes**

#### Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Greer Laing - glaing@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.





web: www.eurofins.com.au email: EnviroSales@eurofins.com

#### **Eurofins Environment Testing Australia Pty Ltd**

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Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

**Dust Deposition** 

Canberra Unit 1.2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 1254 NATA# 1261 Site# 1254 NATA# 1261 Site# 18217

Brisbane Newcastle 1/21 Smallwood Place 4/52 Industrial Drive Murarrie Mayfield East NSW 2304 QLD 4172 PO Box 60 Wickham 2293 Tel: +61 7 3902 4600 Tel: +61 2 4968 8448 NATA# 1261 Site# 20794 NATA# 1261 Site# 25079

**Eurofins ARL Pty Ltd Eurofins Environment Testing NZ Ltd** ABN: 91 05 0159 898

Perth 46-48 Banksia Road Welshpool WA 6106 Tel: +61 8 6253 4444

Penrose. Auckland 1061 Tel: +64 9 526 45 51 NATA# 2377 Site# 2370 IANZ# 1327

35 O'Rorke Road

Auckland

NZBN: 9429046024954

Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 Tel: 0800 856 450 IANZ# 1290

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** 

**BAGO FOREST QUARRY** 

Project ID:

318001562

Order No.:

Phone:

Fax:

Report #: 952510 02 9954 8118

02 9954 8150

Received: Dec 19, 2022 2:10 PM

Due: Jan 5, 2023 Priority: 10 Day **Contact Name: Greer Laing** 

**Eurofins Analytical Services Manager: Andrew Black** 

# Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217 Χ **External Laboratory** Sample Date | Sampling No Sample ID Matrix LAB ID Time Dec 19, 2022 D1 Dust S22-De0051044 Х Deposition 2 D2 Dust Dec 19, 2022 S22-De0051045 Х TEMPORARY Deposition 3 D3 Dec 19, 2022 Dust S22-De0051046 Х Deposition D4 Dec 19, 2022 Dust S22-De0051047 Χ Deposition 4 Test Counts



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Greer Laing

Report 952510-A

Project name BAGO FOREST QUARRY

Project ID 318001562

Received Date Dec 19, 2022

Client Sample ID			D1	D2 TEMPORARY	D3	D4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			S22- De0051044	S22- De0051045	S22- De0051046	S22- De0051047
Date Sampled			Dec 19, 2022	Dec 19, 2022	Dec 19, 2022	Dec 19, 2022
Test/Reference	LOR	Unit				
<b>Dust Deposition</b>						
Combustible Solids	0.1	g/m2/mth	7.7	11	1.3	1.2
Soluble Solids	0.1	g/m2/mth	8.2	4.9	6.2	6.1
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	17	16	7.6	7.5
Volume (total)*	0.1	mL	1200	1300	1400	1300
Ash*	0.1	g/m2/mth	1.0	0.3	0.2	0.2
Insoluble Solids	0.1	g/m2/mth	8.8	12	1.5	1.4



#### Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneyDec 21, 20225 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air

Report Number: 952510-A



web: www.eurofins.com.au email: EnviroSales@eurofins.com

#### **Eurofins Environment Testing Australia Pty Ltd**

NATA# 1261 Site# 1254 NATA# 1261 Site# 1254 NATA# 1261 Site# 18217

ABN: 50 005 085 521

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Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

**Dust Deposition** 

Canberra Unit 1.2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091

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Perth 46-48 Banksia Road

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ABN: 91 05 0159 898

Christchurch 43 Detroit Drive Rolleston,

Christchurch 7675 Tel: 0800 856 450 IANZ# 1290

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** 

**BAGO FOREST QUARRY** 

Project ID: 318001562 Order No.: Report #:

952510 02 9954 8118

Brisbane

Murarrie

QLD 4172

Tel: +61 7 3902 4600

Phone: 02 9954 8150 Fax:

Received: Dec 19, 2022 2:10 PM

Due: Jan 5, 2023 Priority: 10 Day **Contact Name: Greer Laing** 

**Eurofins Analytical Services Manager: Andrew Black** 

**Eurofins ARL Pty Ltd Eurofins Environment Testing NZ Ltd** 

35 O'Rorke Road

Tel: +64 9 526 45 51

Auckland 1061

IANZ# 1327

Auckland

Penrose,

NZBN: 9429046024954

#### Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217										
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	D1	Dec 19, 2022		Dust Deposition	S22-De0051044	Х				
2	D2 TEMPORARY	Dec 19, 2022		Dust Deposition	S22-De0051045	Х				
3	D3	Dec 19, 2022		Dust Deposition	S22-De0051046	Х				
4	D4	Dec 19, 2022		Dust Deposition	S22-De0051047	Х				
Test	Counts					4				



#### **Internal Quality Control Review and Glossary**

#### General

- 1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- 2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- 3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- 4. Actual LORs are matrix dependant, Quoted LORs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- 6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise
- 7. Samples were analysed on an 'as received' basis.
- 8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- 9. This report replaces any interim results previously issued.

#### **Holding Times**

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

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 SRA.

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.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

#### Units

mg/kg: milligrams per kilogram mg/L: milligrams per litre µg/L: micrograms per litre

ppm: parts per million ppb: parts per billion %: Percentage

org/100 mL: Organisms per 100 millilitres NTU: Nephelometric Turbidity Units MPN/100 mL: Most Probable Number of organisms per 100 millilitres

CFU: Colony forming unit

#### Terms

APHA American Public Health Association

COC Chain of Custody

CP Client Parent - QC was performed on samples pertaining to this report
CRM Certified Reference Material (ISO17034) - reported as percent recovery

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

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

LOR Limit of Reporting

LCS Laboratory Control Sample - reported as percent recovery.

Method Blank

In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.

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.

RPD Relative Percent Difference between two Duplicate pieces of analysis.

SPIKE Addition of the analyte to the sample and reported as percentage recovery.

SRA Sample Receipt Advice

Surr - Surrogate The addition of a like compound to the analyte target and reported as percentage recovery.

TBTO Tributyltin oxide (bis-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured

and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.

TCLP Toxicity Characteristic Leaching Procedure
TEQ Toxic Equivalency Quotient or Total Equivalence

QSM US Department of Defense Quality Systems Manual Version 5.4

US EPA United States Environmental Protection Agency

WA DWER Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

#### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

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% NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

#### **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. pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- 4. Recovery Data (Spikes & Surrogates) where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte
- 5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Report Number: 952510-A



#### Comments

#### Sample Integrity

Custody Seals Intact (if used)

Attempt to Chill was evident

N/A

Sample correctly preserved

Appropriate sample containers have been used

Yes

Sample containers for volatile analysis received with minimal headspace

Samples received within HoldingTime

Yes

Some samples have been subcontracted

No

#### Authorised by:

Andrew Black Analytical Services Manager Roopesh Rangarajan Senior Analyst-Inorganic

Glenn Jackson General Manager

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- \* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Report Number: 952510-A

Ç, C	HAIN OF CUST	TODY RECORD	Unit F3 Bld 02 9900 8	aboratory I.F 16 Mars Road Lane ( 100 EnviroSampleNS)	Cove West NSW 2066 N@eurofins.com	Unit 1.21 Sm 07 3902 4600	allwood Place Murame ( EnviroSampleQLD@	QLD 4172 eurofins.com		ach Highway Kewdale W 0 EnviroSampleWA@e			com A					ong South VIC 31 ampleVic@eurofin	
Company	Ramboll		Project №	318001562			Project Manager	Greer Laing			S	ample	r(s)		Jake Bourke				
Address	50 Glebe Road, The J	Froject Name 50 Glebe Road, The Junction NSW 2291			Bago Forest Quarry  EDD Format ESdat, EQuIS etta			Handed Email fo									oll.com		
Contact Name	Jake Bourke		ecify "Total" or "Filter act SUITE prioring.								Ema	ail for R		A CONTRACT	CONTRACTOR NAMED IN	@rambo		urke@rambo	
Phone №	0467 580 473		S specify Tol attract SUIT								, C	hange c	Cor	ntainers type & siz	s ze if nece	essary	Requ	efault will be 5 da	Called the standard of the
pecial Directions	Page 1 of 1		Analyse is are requested; please a code must be used to Dust Deposition								ţç	Q.	tic	rial	Sottle	(DPE)	Sa	ernight (reportime day •	☐ 1 day◆
Purchase Order			s meta SUTT								500mL Plastic	250mL Plastic	125mL Plastic	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	<b>Y96FSV</b> ■ 5 d	days (Standard	
Quote ID №	200316RAMN		When								200	250	125 200ml	-04 -04	500m	Jar (G	(Asbestos AS4864		
V2	Client Sample ID	Sampled Date/Time dd/mm/yy hh.mm	Matrix Solid (S) Water (W)														-	Sample Co gerous Goods	omments s Hazard Warning
	D1	19/12/2022 - 13/01/2023	s <b>X</b>																
2	D2 Temporary	19/12/2022 - 13/01/2023	s <b>X</b>																
	D3	19/12/2022 - 13/01/2023	s <b>X</b>																
4	D4	19/12/2022 - 13/01/2023	s <b>X</b>																
5																			
6																			
7																			
8																			
9																			
10																		26	
		Total	Counts 4																
Method of Shipment	Courier (#	) 🗹	Hand Delivered	☐ Postal	Name	Jake l	Bourke	Signature		10		Da	2000		4			Time	10/14
Laboratory Use	Only Received By	Jaidyn s	allow gran		ADL   100   DRW	Signature	4		Date Date	16/1/2	3	Tir		ŀ	2/	0	7	mperature Report No	MA
	Received By		SYD	BNE   MEL   PER	Submission of samples	Signature to the laboratory will be	e deemed as acceptance	of Eurofins   Environmen		arms and Conditions unles	ess agre	0.555	SERVICE ST	opy is av	railable o	on request.			1000

☐ Brisbane Laboratory

Sydney Laboratory

■ Melbourne Laboratory

6 Monterey Road Dandenong South VIC 3175

Perth Laboratory

Unit 2 91 Leach Highway Kewdale WA 6105

Eurofins Environment Testing Australia Pty Ltd



www.eurofins.com.au

EnviroSales@eurofins.com

#### **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 Geelong 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000

**Sydney** 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 NATA# 1261 Site# 1254 NATA# 1261 Site# 1254 NATA# 1261 Site# 18217

Canberra Mitchell ACT 2911

Brisbane Unit 1.2 Dacre Street 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 2 6113 8091 Tel: +61 7 3902 4600

Newcastle 4/52 Industrial Drive Mayfield East NSW 2304 PO Box 60 Wickham 2293 NATA# 1261 Site# 20794 NATA# 1261 Site# 25079

ABN: 91 05 0159 898

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

NZBN: 9429046024954

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose, Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 9 526 45 51 Tel: 0800 856 450 IANZ# 1327 IANZ# 1290

## Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name:

Greer Laing

Project name:

**BAGO FOREST QUARRY** 

Project ID: Turnaround time:

318001562 5 Day

Date/Time received **Eurofins reference** 

Jan 16, 2023 9:00 AM

956073

#### Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

Some samples have been subcontracted.

N/A Custody Seals intact (if used).

#### **Notes**

#### Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Greer Laing - glaing@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.





web: www.eurofins.com.au email: EnviroSales@eurofins.com

#### **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

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179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 NATA# 1261 Site# 1254 NATA# 1261 Site# 1254 NATA# 1261 Site# 18217

**Dust Deposition** 

4

Sydney

Brisbane Unit 1.2 Dacre Street 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 2 6113 8091 Tel: +61 7 3902 4600

Newcastle 4/52 Industrial Drive Tel: +61 2 4968 8448

Mayfield East NSW 2304 PO Box 60 Wickham 2293 NATA# 1261 Site# 20794 NATA# 1261 Site# 25079

Perth

Welshpool

WA 6106

46-48 Banksia Road

Tel: +61 8 6253 4444

NATA# 2377 Site# 2370

**Eurofins ARL Pty Ltd Eurofins Environment Testing NZ Ltd** ABN: 91 05 0159 898 NZBN: 9429046024954

> Auckland 35 O'Rorke Road Penrose. Auckland 1061 Tel: +64 9 526 45 51 IANZ# 1327

Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 Tel: 0800 856 450 IANZ# 1290

**Company Name:** 

Address:

Test Counts

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** Project ID:

**BAGO FOREST QUARRY** 

318001562

Order No.: Report #:

Canberra

Mitchell

ACT 2911

956073

Phone: 02 9954 8118 02 9954 8150 Fax:

Received: Jan 16, 2023 9:00 AM

Due: Jan 23, 2023 Priority: 5 Dav **Contact Name:** Greer Laing

**Eurofins Analytical Services Manager: Andrew Black** 

## Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217 Χ **External Laboratory** Sample Date | Sampling No Sample ID Matrix LAB ID Time D1 Jan 13, 2023 Dust N23-Ja0017550 Χ Deposition 2 D2 Dust Jan 13, 2023 N23-Ja0017551 Χ TEMPORARY Deposition 3 D3 Jan 13, 2023 Dust N23-Ja0017552 Х Deposition D4 Jan 13, 2023 Dust N23-Ja0017553 Χ Deposition



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Greer Laing

Report 956073-A

Project name BAGO FOREST QUARRY

Project ID 318001562
Received Date Jan 16, 2023

Client Sample ID			D1	D2 TEMPORARY	D3	D4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			N23-Ja0017550	N23-Ja0017551	N23-Ja0017552	N23-Ja0017553
Date Sampled			Jan 13, 2023	Jan 13, 2023	Jan 13, 2023	Jan 13, 2023
Test/Reference	LOR	Unit				
Dust Deposition						
Combustible Solids	0.1	g/m2/mth	5.5	5.0	0.3	0.7
Soluble Solids	0.1	g/m2/mth	2.8	4.4	< 0.1	1.5
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	9.0	9.5	0.4	2.4
Volume (total)*	0.1	mL	1200	1300	1700	1400
Ash*	0.1	g/m2/mth	0.7	0.2	< 0.1	0.2
Insoluble Solids	0.1	g/m2/mth	6.2	5.1	0.4	0.9



## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneyJan 17, 20235 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air

Report Number: 956073-A



#### **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne Geelong 6 Monterey Road 19/8 Lewalan Street Dandenong South Grovedale VIC 3175 VIC 3216 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000

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**Company Name:** 

Address:

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** 

**BAGO FOREST QUARRY** 

Project ID: 318001562 Order No.: Report #:

Canberra

956073 02 9954 8118

Phone: 02 9954 8150 Fax:

Received: Jan 16, 2023 9:00 AM

Due: Jan 23, 2023 Priority: 5 Day **Contact Name:** Greer Laing

**Eurofins Analytical Services Manager: Andrew Black** 

**Eurofins ARL Pty Ltd Eurofins Environment Testing NZ Ltd** 

35 O'Rorke Road

Tel: +64 9 526 45 51

Auckland 1061

IANZ# 1327

Auckland

Penrose,

NZBN: 9429046024954

## Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217														
Exte	rnal Laboratory	1												
No Sample ID Sample Date Sampling Matrix LAB ID Time Date Date Sampling Matrix LAB ID														
1	D1	Jan 13, 2023		Dust Deposition	N23-Ja0017550	х								
2	D2 TEMPORARY	Jan 13, 2023		Dust Deposition	N23-Ja0017551	х								
3	D3	Jan 13, 2023		Dust Deposition	N23-Ja0017552	х								
4	D4	Jan 13, 2023		Dust Deposition	N23-Ja0017553	х								
Test	Counts					4								



#### **Internal Quality Control Review and Glossary**

#### General

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and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.

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Report Number: 956073-A



#### Comments

## Sample Integrity

Custody Seals Intact (if used)

Attempt to Chill was evident

N/A

Sample correctly preserved

Appropriate sample containers have been used

Yes

Sample containers for volatile analysis received with minimal headspace

Samples received within HoldingTime

Yes

Some samples have been subcontracted

No

### Authorised by:

Bonnie Pu Analytical Services Manager Ryan Phillips Senior Analyst-Inorganic

Glenn Jackson General Manager

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- \* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Report Number: 956073-A

-	C	CHAIN OF CUSTODY Eurofins   Environment Testing ABN 50			<b>Sydney L</b> Unit F3 Bld 02 9900 84	F 16 Mars		Cove West	NSW 2066 s.com		imallwood F	ry Place Murarrie oSampleQLD(			272		oratory each Highwa						6 Monte	rey Road	boratory  I Dandenong South VIC 3175  EnviroSampleVic@eurofins.com
	Company	Ramboll		Proje	ct №	3180	01562				Project	Manager	Gree	er Laing					ample	r(s)		Jake I	Bourke		
				Projec	t Name	Bag	o Forest	Quarry				Format EQuIS etc						Hai	ded c	ver by		Jake l	Bourke		
	Address	50 Glebe Road, The Junction N	ISW 2291	, page												51		Ema	il for	nvoic		glaing	g@ramb	ooll.com	m: jbourke@ramboll.com
C	ontact Name	Jake Bourke		a" or "Filts E pricing.														Em	il for F	Result		glaing	g@ramb	ooll.com	m: jbourke@ramboll.com
	Phone №	0467 580 473		pecify Tol														(	hange		ntaine	rs size if ne	cessary.		Required Turnaround Time (TAT) Default will be 5 days if not ticked.
Spe	ecial Directions	Page 1 of 1		Analyses re requested, please sp de must be used to att	Dust Deposition																000	e H		Guidell	◆Surcharge will apply  Overnight (reporting by 9am)◆  Same day◆  1 day◆
	irchase Order Quote ID №	200316RAMN		Where metals a	Due													500mL Plastic	250mL Plastic	125mL Plastic	40ml VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	34964	2 days ♦ □ 3 days ♦  5 days (Standard)  Other(
N≥		Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)				an												,	4	S.	ي	Other (Asb	Sample Comments  Dangerous Goods Hazard Warning
1		D1	13/01/2023 - 14/02/2023	s	×											1000									
2		D2 Temporary	13/01/2023 - 14/02/2023	s	×																				93
3	B.Y.L	D3	13/01/2023 - 14/02/2023	s	×			E																	
4		D4	13/01/2023 - 14/02/2023	S	×															15					
5	T. Elli										Wangi Na Pal					776									
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Jake Bourke

Signature

Signature

Method of Shipment

Laboratory Use Only

Date

Date

Signature

Time

Temperature

Report №

.30

Date

Time

Time

16/2/23

Courier (#

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Postal

SYD | BNE | MEL | PER | ADL | NTL | DRW

Name



www.eurofins.com.au

EnviroSales@eurofins.com

## **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 Geelong 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 **Sydney** 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

Unit 1.2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091

Canberra

Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600

Newcastle 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 25403 NATA# 1261 Site# 25466 NATA# 1261 Site# 25466 NATA# 1261 Site# 2579 & 25289

ABN: 91 05 0159 898

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

NZBN: 9429046024954

Auckland

Auckland 1061

IANZ# 1327

Penrose,

Christchurch 35 O'Rorke Road 43 Detroit Drive Rolleston, Christchurch 7675 Tel: +64 9 526 45 51 Tel: 0800 856 450 IANZ# 1290

## Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name:

Greer Laing

Project name:

**BAGO FOREST QUARRY** 

Project ID:

318001562 5 Day

Turnaround time: Date/Time received

Feb 16, 2023 8:30 AM

**Eurofins reference** 

964567

## Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

Some samples have been subcontracted.

N/A Custody Seals intact (if used).

## **Notes**

## Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Greer Laing - glaing@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.





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Sydney Canberra 179 Magowar Road Unit 1.2 Dacre Street Girraween Mitchell NSW 2145 ACT 2911 Tel: +61 2 9900 8400 Tel: +61 2 6113 8091

**Dust Deposition** 

Brisbane 1/21 Smallwood Place Murarrie QLD 4172

Newcastle 1/2 Frost Drive Tel: +61 2 4968 8448 Tel: +61 7 3902 4600

Mayfield West NSW 2304 NATA# 1261 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 18217 NATA# 1261 Site# 25466 NATA# 1261 Site# 20794 Site# 25079 & 25289

NZBN: 9429046024954

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose, Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 9 526 45 51 Tel: 0800 856 450 IANZ# 1327 IANZ# 1290

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**BAGO FOREST QUARRY** 

**Project Name:** Project ID:

318001562

Cudnou Laboratoria NATA # 4364 Cita # 40047

Order No.: Report #:

964567 02 9954 8118

Phone: 02 9954 8150 Fax:

Received: Feb 16, 2023 8:30 AM

Due: Feb 23, 2023 **Priority:** 5 Day

**Contact Name:** Greer Laing

ABN: 91 05 0159 898

46-48 Banksia Road

Tel: +61 8 6253 4444

NATA# 2377 Site# 2370

Perth

Welshpool

WA 6106

**Eurofins Analytical Services Manager: Andrew Black** 

### Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217													
Exte	rnal Laboratory	•											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID								
1	D1	Feb 14, 2023		Dust Deposition	N23-Fe0039572	Х							
2	D2 TEMPORARY	Feb 14, 2023		Dust Deposition	N23-Fe0039573	Χ							
3	D3	Feb 14, 2023		Dust Deposition	N23-Fe0039574	Χ							
4 D4 Feb 14, 2023 Dust Deposition N23-Fe0039575													
Test	Counts					4							



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Greer Laing

Report 964567-A

Project name BAGO FOREST QUARRY

Project ID 318001562

Received Date Feb 16, 2023

Client Sample ID			D1	D2 TEMPORARY	D3	D4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			N23-Fe0039572	N23-Fe0039573	N23-Fe0039574	N23-Fe0039575
Date Sampled			Feb 14, 2023	Feb 14, 2023	Feb 14, 2023	Feb 14, 2023
Test/Reference	LOR	Unit				
Dust Deposition						
Combustible Solids	0.1	g/m2/mth	13	4.6	0.8	1.0
Soluble Solids	0.1	g/m2/mth	10	4.8	4.5	4.6
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	24	9.5	5.4	5.9
Volume (total)*	0.1	mL	1400	1500	1500	1300
Ash*	0.1	g/m2/mth	0.4	0.2	0.1	0.2
Insoluble Solids	0.1	g/m2/mth	14	4.8	0.9	1.2



## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneyFeb 17, 20235 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air



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Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 Tel: +61 2 6113 8091

**Dust Deposition** 

Brisbane Unit 1.2 Dacre Street 1/21 Smallwood Place Murarrie QLD 4172

Newcastle 1/2 Frost Drive Tel: +61 2 4968 8448 Tel: +61 7 3902 4600

Mayfield West NSW 2304 NATA# 1261 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 18217 NATA# 1261 Site# 25466 NATA# 1261 Site# 20794 Site# 25079 & 25289

**Eurofins ARL Pty Ltd Eurofins Environment Testing NZ Ltd** NZBN: 9429046024954

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose, Rolleston, Auckland 1061 Christchurch 7675 Tel: 0800 856 450 Tel: +64 9 526 45 51 IANZ# 1327 IANZ# 1290

**Company Name:** 

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**BAGO FOREST QUARRY** 

**Project Name:** Project ID:

Address:

318001562

Order No.: Report #:

Phone:

Fax:

Canberra

Mitchell

ACT 2911

964567 02 9954 8118

02 9954 8150

Received: Feb 16, 2023 8:30 AM

Due: Feb 23, 2023 Priority: 5 Day

ABN: 91 05 0159 898

46-48 Banksia Road

Tel: +61 8 6253 4444

NATA# 2377 Site# 2370

Perth

Welshpool

WA 6106

**Contact Name:** Greer Laing

**Eurofins Analytical Services Manager: Andrew Black** 

### Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217															
Exte	rnal Laboratory	•													
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID										
1	1 D1 Feb 14, 2023 Dust Deposition N23-Fe0039572														
2	D2 TEMPORARY	Feb 14, 2023		Dust Deposition	N23-Fe0039573	х									
3	D3	Feb 14, 2023		Dust Deposition	N23-Fe0039574	х									
4	D4	Feb 14, 2023		Dust Deposition	N23-Fe0039575	х									
Test	Counts					4									



#### **Internal Quality Control Review and Glossary**

#### General

- 1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- 2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- 3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- 4. Actual LORs are matrix dependant, Quoted LORs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- 6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise
- 7. Samples were analysed on an 'as received' basis.
- 8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- 9. This report replaces any interim results previously issued.

#### **Holding Times**

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

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 SRA.

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.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

#### Units

mg/kg: milligrams per kilogram mg/L: milligrams per litre µg/L: micrograms per litre

ppm: parts per million ppb: parts per billion %: Percentage

org/100 mL: Organisms per 100 millilitres NTU: Nephelometric Turbidity Units MPN/100 mL: Most Probable Number of organisms per 100 millilitres

CFU: Colony forming unit

#### **Terms**

APHA American Public Health Association

COC Chain of Custody

CP Client Parent - QC was performed on samples pertaining to this report
CRM Certified Reference Material (ISO17034) - reported as percent recovery

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

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

LOR Limit of Reporting

LCS Laboratory Control Sample - reported as percent recovery.

Method Blank

In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.

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.

RPD Relative Percent Difference between two Duplicate pieces of analysis.

SPIKE Addition of the analyte to the sample and reported as percentage recovery.

SRA Sample Receipt Advice

Surr - Surrogate The addition of a like compound to the analyte target and reported as percentage recovery.

TBTO Tributyltin oxide (bis-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured

and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.

TCLP Toxicity Characteristic Leaching Procedure
TEQ Toxic Equivalency Quotient or Total Equivalence

QSM US Department of Defense Quality Systems Manual Version 5.4

US EPA United States Environmental Protection Agency

WA DWER Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

#### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

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% NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

#### **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. pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- 4. Recovery Data (Spikes & Surrogates) where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte
- 5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Report Number: 964567-A



#### Comments

## Sample Integrity

Custody Seals Intact (if used)

Attempt to Chill was evident

N/A

Sample correctly preserved

Appropriate sample containers have been used

Yes

Sample containers for volatile analysis received with minimal headspace

Samples received within HoldingTime

Yes

Some samples have been subcontracted

No

### Authorised by:

Bonnie Pu Analytical Services Manager Ryan Phillips Senior Analyst-Inorganic

Glenn Jackson General Manager

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- \* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Report Number: 964567-A

	Company	Ramboll		Proje	ect No	318	001562					Project	Manager	Gre	er Laing				Sample	er(s)		Matilo	da Eng	glert	
	Address	5001.5.17.1.6.1	1914/0004	Project	t Name	Bag	go Forest	Quarry					ormat Quis etc					Hai	nded o	ver by		Matilo	da Eng	jlert	
	Address	50 Glebe Road, The Junction N	45W 2291	[tered"														Em	ail for l	nvoice		glaing	g@ran	nboll.c	com: jbourke@ramboll.com
Co	ontact Name	Matilda Englert		otal" or "Fi														Em	ail for R	lesults		glaing	g@ran	nboll.c	com: jbourke@ramboll.com
	Phone №	473014006		s specify 'Tr attract SUI															Change c		ntaine type & s		essary.		Required Turnaround Time (T Default will be 5 days if not ticked.
	cial Directions	Page 1 of 1		Analyses metals are requested, please specify Total or File SUTE code must be used to attest SUTE pricing.	Dust Deposition								=					lic	lic i	lic	rial	Sottle	IDPE)	Guidelli	Same day 1 days  4 Surcharge will ag  Overnight (reporting by 9am)  1 day 1  2 days 1  3 days 4
	rchase Order Iuote ID №	200316RAMN		Where metal												5		500mL Plastic	250mL Plastic	125mL Plastic	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	os AS4964,	✓ 5 däys (Standard)  ☐ Other(
Ne		Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)														G.		200-	4	200	Jar	9	Sample Comments / Dangerous Goods Hazard Wai
1.		D1	13/01/2023 - 14/02/2023	s	×																				
2		D2 Temporary	13/01/2023 - 14/02/2023	s	×		N.								M							Ī			
3		D3	13/01/2023 - 14/02/2023	s	×																				
4		D4	13/01/2023 - 14/02/2023	s	×																				
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7								ME,			1-														
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☐ Postal

SYD | BNE | MEL | PER | ADL | 100 | DRW

SYD | BNE | MEL | PER | ADL | NTL | DRW

**Total Counts** 

Jaidyn Slorgross

☑ Hand Delivered

Laboratory Use Only	Received I
Eurofins Environment Testing Au	stralia Pty Ltd

Courier (#

Received By

Method of Shipment

Date

Date

Date

Time

Time

Signature

Matilda Englert

Signature

Signature

equired Turnaround Time (TAT)
Default will be 5 days if not ticked.

+Surcharge will apply

Sample Comments ngerous Goods Hazard Warning

Time

Temperature

Report №



www.eurofins.com.au

EnviroSales@eurofins.com

## **Eurofins Environment Testing Australia Pty Ltd**

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Canberra

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NZBN: 9429046024954

Auckland 35 O'Rorke Road Penrose, Auckland 1061 Tel: +64 9 526 45 51 IANZ# 1327

Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 Tel: 0800 856 450 IANZ# 1290

## Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name:

Greer Laing

Project name:

**BAGO FOREST QUARRY** 

Project ID:

318001562 5 Day

Turnaround time: Date/Time received

Mar 16, 2023 2:41 PM

**Eurofins reference** 

972795

## Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

X Some samples have been subcontracted.

N/A Custody Seals intact (if used).

## **Notes**

## Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Greer Laing - glaing@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.





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Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

**Dust Deposition** 

Brisbane 1/21 Smallwood Place Murarrie QLD 4172

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Mayfield West NSW 2304 NATA# 1261 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 18217 NATA# 1261 Site# 25466 NATA# 1261 Site# 20794 Site# 25079 & 25289

**Eurofins ARL Pty Ltd Eurofins Environment Testing NZ Ltd** 

NZBN: 9429046024954

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose. Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 9 526 45 51 Tel: 0800 856 450 IANZ# 1327 IANZ# 1290

**Company Name:** 

Ramboll Australia Pty Ltd

Address:

Level 3/100 Pacific Highway

North Sydney NSW 2060

**Project Name:** 

**BAGO FOREST QUARRY** 

Project ID:

318001562

Order No.: Report #:

Canberra

Mitchell

ACT 2911

Unit 1.2 Dacre Street

Tel: +61 2 6113 8091

972795

Phone: 02 9954 8150 Fax:

02 9954 8118 Priority:

Received: Mar 16, 2023 2:41 PM Due:

Mar 23, 2023 5 Dav

**Contact Name: Greer Laing** 

ABN: 91 05 0159 898

46-48 Banksia Road

Tel: +61 8 6253 4444

NATA# 2377 Site# 2370

Perth

Welshpool

WA 6106

**Eurofins Analytical Services Manager: Andrew Black** 

### Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217 Χ **External Laboratory** Sample Date | Sampling No Sample ID Matrix LAB ID Time Mar 14, 2023 D1 Dust N23-Ma0041020 Х Deposition 2 D2 Dust Mar 14, 2023 N23-Ma0041021 Χ TEMPORARY Deposition 3 D3 Mar 15, 2023 Dust N23-Ma0041022 Χ Deposition D4 Mar 14, 2023 Dust N23-Ma0041023 Χ Deposition 4 Test Counts



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Greer Laing

Report 972795-A

Project name BAGO FOREST QUARRY

Project ID 318001562
Received Date Mar 16, 2023

Client Sample ID			D1	D2 TEMPORARY	D3	D4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			N23- Ma0041020	N23- Ma0041021	N23- Ma0041022	N23- Ma0041023
Date Sampled			Mar 14, 2023	Mar 14, 2023	Mar 15, 2023	Mar 14, 2023
Test/Reference	LOR	Unit				
Dust Deposition						
Combustible Solids	0.1	g/m2/mth	4.3	1.0	1.2	0.5
Soluble Solids	0.1	g/m2/mth	7.5	7.2	11	7.1
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	12	8.3	13	7.6
Volume (total)*	0.1	mL	4200	4300	3600	4000
Ash*	0.1	g/m2/mth	0.2	< 0.1	< 0.1	< 0.1
Insoluble Solids	0.1	g/m2/mth	4.5	1.1	1.3	0.5



## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneyMar 17, 20235 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air

Report Number: 972795-A



#### **Eurofins Environment Testing Australia Pty Ltd**

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**Company Name:** 

Ramboll Australia Pty Ltd

Address: Level 3/100 Pacific Highway North Sydney

NSW 2060

**BAGO FOREST QUARRY** 

**Project Name:** Project ID:

318001562

Order No.: Report #:

Phone:

972795 02 9954 8118

02 9954 8150 Fax:

Received: Mar 16, 2023 2:41 PM Due: Mar 23, 2023

Priority: 5 Day **Contact Name:** Greer Laing

ABN: 91 05 0159 898

Perth

**Eurofins Analytical Services Manager: Andrew Black** 

#### Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217													
Exte	rnal Laboratory												
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID								
1	D1	Mar 14, 2023		Dust Deposition	N23-Ma0041020	х							
2	D2 TEMPORARY	Mar 14, 2023		Dust Deposition	N23-Ma0041021	х							
3	D3	Mar 15, 2023		Dust Deposition	N23-Ma0041022	х							
4 D4 Mar 14, 2023 Dust Deposition N23-Ma0041023													
Test	Counts	_				4							



#### **Internal Quality Control Review and Glossary**

#### General

- 1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- 2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- 3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- 4. Actual LORs are matrix dependant, Quoted LORs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds
- 6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise
- 7. Samples were analysed on an 'as received' basis.
- 8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- 9. This report replaces any interim results previously issued.

#### **Holding Times**

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

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 SRA.

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.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

#### Units

mg/k: milligrams per kilogram mg/L: milligrams per litre  $\mu g/L$ : micrograms per litre

ppm: parts per million ppb: parts per billion %: Percentage

org/100 mL: Organisms per 100 millilitres NTU: Nephelometric Turbidity Units MPN/100 mL: Most Probable Number of organisms per 100 millilitres

CFU: Colony forming unit

#### Terms

APHA American Public Health Association

COC Chain of Custody

CP Client Parent - QC was performed on samples pertaining to this report
CRM Certified Reference Material (ISO17034) - reported as percent recovery

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

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

LOR Limit of Reporting

LCS Laboratory Control Sample - reported as percent recovery.

Method Blank

In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.

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.

RPD Relative Percent Difference between two Duplicate pieces of analysis.

SPIKE Addition of the analyte to the sample and reported as percentage recovery.

SRA Sample Receipt Advice

Surr - Surrogate The addition of a like compound to the analyte target and reported as percentage recovery.

TBTO Tributyltin oxide (bis-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured

and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.

TCLP Toxicity Characteristic Leaching Procedure
TEQ Toxic Equivalency Quotient or Total Equivalence

QSM US Department of Defense Quality Systems Manual Version 5.4

US EPA United States Environmental Protection Agency

WA DWER Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

#### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

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% NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

#### **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. pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- 4. Recovery Data (Spikes & Surrogates) where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte
- 5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Report Number: 972795-A



#### Comments

## Sample Integrity

 Custody Seals Intact (if used)
 N/A

 Attempt to Chill was evident
 N/A

 Sample correctly preserved
 Yes

 Appropriate sample containers have been used
 Yes

 Sample containers for volatile analysis received with minimal headspace
 Yes

 Samples received within HoldingTime
 N/A

 Some samples have been subcontracted
 No

### Authorised by:

Andrew Black Analytical Services Manager Ryan Phillips Senior Analyst-Inorganic

Glenn Jackson General Manager

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- \* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Report Number: 972795-A

	\$	CHAIN OF CUSTODY  Eurofins   Environment Testing ABN 50		Sydney Laboratory Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066 02 9900 8400 EmviroSampleNSW@eurofins.com					Smallwood I	ry Place Muranie oSampleQLD(				Leach High		vdale WA 6105 eWA@eurofins.com				Melbourne Laboratory 6 Monterey Road Dandenong South VIC 3175 03 8564 5000 EnviroSampleVic@eurofins.com					
	Company	Ramboll		Proje	ect №	318001	1562				Project	Manager	Gre	er Laing					Sample	er(s)		Matil	da En	glert	
	Address	50 Glebe Road, The Junction N	ISW 2291	Project	t Name	Bago I	Forest Q	luarry				Format EQuIS etc						Ha	nded c	ver by		Matil	da En	glert	
				g.											he!			Em	ail for	nvoice		glain	g@raı	nboll.	com: jbourke@ramboll.com
С	ontact Name	Matiida Englert		Fotal" or "														Em	ail for F	tesuits		glain	g@raı	nboll.	com: jbourke@ramboll.com
	Phone №	0473 014 006		es especify "Total" or "Filter ettract SUTE pricing.						- 7							111		Change (		ntaine type & s		cessary		Required Turnaround Time (TAT)  Default will be 5 days if not ticked.
Spe	ecial Directio	ns Page 1 of 1		Analys equested, pleas must be used to	Dust Deposition													5				ttle	PE)	A Guidelines)	+Surcharge will apply Overnight (reporting by 9am)+ Same day+ 1 day+
	rchase Orde Quote ID №	200316RAMN		Where metals are r	ď													500mL Plastic	250mL Plastic	125mL Plastic	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	(7)	☐ 2 days ♦ ☐ 3 days ♦ ☐ 5 days (Standard) ☐ Other(
Ne		Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)			Ì													2		63	7	Other (Asb	Sample Comments  I Dangerous Goods Hazard Warnin
U,	-	D1	16/03/2023 - 13/04/2023	S	×																				
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3		D3	16/03/2023 - 13/04/2023	s	X																				
4		D4	16/03/2023 - 13/04/2023	s	×										-										
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10																									

Matilda Englert

Signature

Courier (#

Received By

Received By

Method of Shipment

Laboratory Use Only

**Total Counts** 

Jaidan Slongon

Hand Delivered

☐ Postal

SYD | BNE | MEL | PER | ADL | MID | DRW

SYD | BNE | MEL | PER | ADL | NTL | DRW

Date

Date

13/4/2

Date

Time

13/04/2023

46 PM

Time

Temperature

Report №

Signature



www.eurofins.com.au

EnviroSales@eurofins.com

#### **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 Geelong 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 **Sydney** 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

Unit 1.2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091

Canberra

Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600

Newcastle 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 25403 NATA# 1261 Site# 25466 NATA# 1261 Site# 25466 NATA# 1261 Site# 2579 & 25289

ABN: 91 05 0159 898

Perth 46-48 Banksia Road Welshpool WA 6106 Tel: +61 8 6253 4444

NATA# 2377 Site# 2370

NZBN: 9429046024954

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Rolleston, Penrose, Auckland 1061 Christchurch 7675 Tel: +64 9 526 45 51 Tel: 0800 856 450 IANZ# 1327 IANZ# 1290

## Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name:

Greer Laing

Project name:

BAGO FOREST QUARRY (MONTHLY)

Project ID:

3180001562

Turnaround time:

7 Day

Date/Time received **Eurofins reference** 

Apr 14, 2023 1:46 PM

980665

## Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

Some samples have been subcontracted.

N/A Custody Seals intact (if used).

## **Notes**

## Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Greer Laing - glaing@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.





#### **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne Geelong 6 Monterey Road 19/8 Lewalan Street Dandenong South Grovedale VIC 3175 VIC 3216 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000

Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

**Dust Deposition** 

Brisbane 1/21 Smallwood Place Murarrie QLD 4172

Newcastle 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 Tel: +61 7 3902 4600

Welshpool WA 6106 Tel: +61 8 6253 4444 NATA# 1261 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 18217 NATA# 1261 Site# 25466 NATA# 1261 Site# 20794 Site# 25079 & 25289 NATA# 2377 Site# 2370

NZBN: 9429046024954 Auckland

Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose. Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 9 526 45 51 Tel: 0800 856 450 IANZ# 1327 IANZ# 1290

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** BAGO FOREST QUARRY (MONTHLY)

Project ID: 3180001562 Order No.: Report #:

Canberra

Mitchell

ACT 2911

Unit 1.2 Dacre Street

Tel: +61 2 6113 8091

980665 02 9954 8118

Phone: 02 9954 8150 Fax:

Received: Apr 14, 2023 1:46 PM Due: Apr 26, 2023

Priority: 7 Dav **Contact Name:** Greer Laing

ABN: 91 05 0159 898

46-48 Banksia Road

Perth

**Eurofins Analytical Services Manager: Andrew Black** 

## Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217 Χ **External Laboratory** Sample Date | Sampling No Sample ID Matrix LAB ID Time D1 Apr 13, 2023 Dust N23-Ap0027258 Х Deposition 2 D2 Dust N23-Ap0027259 Apr 13, 2023 Х TEMPORARY Deposition 3 D3 Apr 13, 2023 Dust N23-Ap0027260 Χ Deposition D4 Apr 13, 2023 Dust N23-Ap0027261 Χ Deposition 4 Test Counts



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Greer Laing

Report 980665-A

Project name BAGO FOREST QUARRY (MONTHLY)

Project ID 3180001562

Received Date Apr 14, 2023

Client Sample ID			D1	D2 TEMPORARY	D3	D4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			N23- Ap0027258	N23- Ap0027259	N23- Ap0027260	N23- Ap0027261
Date Sampled			Apr 13, 2023	Apr 13, 2023	Apr 13, 2023	Apr 13, 2023
Test/Reference	LOR	Unit				
Dust Deposition	·	•				
Combustible Solids	0.1	g/m2/mth	0.4	10	0.4	0.4
Soluble Solids	0.1	g/m2/mth	7.7	7.4	7.6	9.3
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	8.1	18	8.0	9.7
Volume (total)*	0.1	mL	2800	2700	2700	2700
Ash*	0.1	g/m2/mth	< 0.1	0.1	< 0.1	< 0.1
Insoluble Solids	0.1	g/m2/mth	0.4	10	0.4	0.4



## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneyApr 14, 20235 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air



#### **Eurofins Environment Testing Australia Pty Ltd**

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Auckland 35 O'Rorke Road Penrose, Auckland 1061 Tel: +64 9 526 45 51 IANZ# 1327

**Eurofins ARL Pty Ltd Eurofins Environment Testing NZ Ltd** 

NZBN: 9429046024954

Apr 14, 2023 1:46 PM

Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 Tel: 0800 856 450 IANZ# 1290

**Company Name:** 

Ramboll Australia Pty Ltd Level 3/100 Pacific Highway

North Sydney

NSW 2060

BAGO FOREST QUARRY (MONTHLY)

**Project Name:** Project ID:

Address:

3180001562

Order No.:

Report #: 980665 Phone: 02 9954 8118 02 9954 8150 Fax:

Due: Apr 26, 2023 Priority: 7 Day **Contact Name:** Greer Laing

ABN: 91 05 0159 898

Perth

Received:

**Eurofins Analytical Services Manager: Andrew Black** 

## Sample Detail

Sydr	ney Laboratory	- NATA # 1261	Sydney Laboratory - NATA # 1261 Site # 18217													
Exte	rnal Laboratory															
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID											
1	D1	Apr 13, 2023		Dust Deposition	N23-Ap0027258	х										
2 D2 TEMPORARY Apr 13, 2023 Dust Deposition N23-Ap0027259																
3	D3	Apr 13, 2023		Dust Deposition	N23-Ap0027260	х										
4	D4	Apr 13, 2023		Dust Deposition	N23-Ap0027261	х										
Test	Counts					4										



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Report Number: 980665-A



#### Comments

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 N/A

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 Sample correctly preserved
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 Yes

 Sample containers for volatile analysis received with minimal headspace
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 Yes

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 No

### Authorised by:

Andrew Black Analytical Services Manager Ryan Phillips Senior Analyst-Inorganic

Glenn Jackson General Manager

Final Report - this report replaces any previously issued Report

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Measurement uncertainty of test data is available on request or please click here.

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Report Number: 980665-A

	HAIN OF CU	Unit F3	Sydney Laboratory Unit F3 Bld,F 16 Mars Road Lane Cove West NSW 2066 02 9900 8400 ErwiroSampleNSW@eurofins.com				6	Brisbane Laboratory Unit 1 21 Smallwood Place Murenie QLD 4172 07 3902 4500 EnviroSampleQLD@eurofins.com				[	Perth Laboratory Unit 2 91 Leach Highway Kewdale WA 6105 08 9251 9600 EnviroSampleWA@uurofins.com						Melbourne Laboratory 6 Monterey Road Dandenong South VIC 3175 03 8564 5000 EnviroSampleVic@eurofins.com								
Company	Ramboli		Project №	318001562				Project Manager Greer Laing			)	Sampler(s)					Matilda Englert										
Address 50 Glebe Road, The Junction NSW 2291			Project Name	В	ago Fores	t Quarry	'				Format , EQuiS etc							н	anded	over	бу	Ma	tilda E	nglert			
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Contact Name	Matilda Englert	Total" or "F															En	nail for	Resu	Its	gla	lng@r	ambol	l.com: jbourke@r	ramboll.com	_	
Phone №	0473 014 006				- "														Change		ontair er type		necessa	ry.	Required Tu Default will	rmaround Time (TA l be 5 days if not ticked.	ıT)
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Ne	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)																		×	a	5 -3	Other (Asbestos AS4864,	Samp / Dangerous G	ole Comments Goods Hazard Warn	ing
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2	D2 Temporary	13/04/2023 - 12/05/2023	s X																								
	D3	13/04/2023 - 12/05/2023	s <b>X</b>																			Ī			The second		
	D4	13/04/2023 - 12/05/2023	s X																								
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EnviroSales@eurofins.com

## **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 Geelong 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 **Sydney** 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

Unit 1.2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091

Canberra

Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 25403 NATA# 1261 Site# 25466 NATA# 1261 Site# 25466 NATA# 1261 Site# 2579 & 25289

Newcastle 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448

ABN: 91 05 0159 898

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

NZBN: 9429046024954

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Rolleston, Penrose, Auckland 1061 Christchurch 7675 Tel: +64 9 526 4551 IANZ# 1327 IANZ# 1290

## Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name:

Greer Laing

Project name:

**BAGO FOREST QUARRY** 

Project ID:

318001562 7 Day

Turnaround time: Date/Time received

May 15, 2023 8:30 AM

**Eurofins reference** 

989550

## Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

Some samples have been subcontracted.

N/A Custody Seals intact (if used).

## **Notes**

## Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Greer Laing - glaing@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.





#### **Eurofins Environment Testing Australia Pty Ltd**

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Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

**Dust Deposition** 

Х

Canberra Brisbane Unit 1.2 Dacre Street 1/21 Smallwood Place Mitchell Murarrie ACT 2911 QLD 4172 Tel: +61 7 3902 4600 Tel: +61 2 6113 8091

Newcastle 1/2 Frost Drive Tel: +61 2 4968 8448

Mayfield West NSW 2304 NATA# 1261

Welshpool WA 6106 Tel: +61 8 6253 4444 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 18217 NATA# 1261 Site# 25466 NATA# 1261 Site# 20794 Site# 25079 & 25289 NATA# 2377 Site# 2370

Perth

46-48 Banksia Road

ABN: 91 05 0159 898 NZBN: 9429046024954

> Auckland Christchurch 35 O'Rorke Road Penrose, Rolleston, Auckland 1061 Tel: +64 9 526 4551

43 Detroit Drive Christchurch 7675 Tel: +64 3 343 5201 IANZ# 1290

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** 

**BAGO FOREST QUARRY** 

Project ID: 318001562 Order No.:

Report #: 989550

Phone: 02 9954 8118 02 9954 8150 Fax:

Received: May 15, 2023 8:30 AM Due: May 24, 2023

**Priority:** 7 Day **Contact Name:** Greer Laing

**Eurofins Analytical Services Manager: Andrew Black** 

IANZ# 1327

## Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217

External Laboratory

External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	D1	May 12, 2023		Dust Deposition	N23-My0035631	х					
2	D2 TEMPORARY	May 12, 2023		Dust Deposition	N23-My0035632	х					
3	D3	May 12, 2023		Dust Deposition	N23-My0035633	х					
4	D4	May 12, 2023		Dust Deposition	N23-My0035634	х					
Test	Counts					4					



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Greer Laing

Report 989550-A

Project name BAGO FOREST QUARRY

Project ID 318001562

Received Date May 15, 2023

Client Sample ID			D1	D2 TEMPORARY	D3	D4	
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition	
Eurofins Sample No.			N23- My0035631	N23- My0035632	N23- My0035633	N23- My0035634	
Date Sampled			May 12, 2023	May 12, 2023	May 12, 2023	May 12, 2023	
Test/Reference	LOR	Unit					
Dust Deposition							
Combustible Solids	0.1	g/m2/mth	0.3	2.7	0.7	0.3	
Soluble Solids	0.1	g/m2/mth	4.6	4.3	4.3	4.2	
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	5.0	7.5	5.1	4.6	
Volume (total)*	0.1	mL	800	750	750	730	
Ash*	0.1	g/m2/mth	0.1	0.4	0.2	0.1	
Insoluble Solids	0.1	g/m2/mth	0.4	3.1	0.8	0.4	



## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneyMay 15, 20235 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air

Report Number: 989550-A



#### **Eurofins Environment Testing Australia Pty Ltd**

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Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 Tel: +61 2 6113 8091

**Dust Deposition** 

Brisbane 1/21 Smallwood Place Murarrie QLD 4172

Newcastle 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 Tel: +61 7 3902 4600 NATA# 1261

Welshpool WA 6106 Tel: +61 8 6253 4444 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 18217 NATA# 1261 Site# 25466 NATA# 1261 Site# 20794 Site# 25079 & 25289 NATA# 2377 Site# 2370

NZBN: 9429046024954

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose, Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 9 526 4551 Tel: +64 3 343 5201 IANZ# 1327 IANZ# 1290

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** 

**BAGO FOREST QUARRY** 

Project ID: 318001562 Order No.: Report #:

Canberra

Mitchell

ACT 2911

Unit 1.2 Dacre Street

989550

Phone: 02 9954 8118 02 9954 8150 Fax:

Received: May 15, 2023 8:30 AM Due: May 22, 2023

Priority: 5 Dav **Contact Name:** Greer Laing

ABN: 91 05 0159 898

46-48 Banksia Road

Perth

**Eurofins Analytical Services Manager: Andrew Black** 

## Sample Detail

Sydr	Sydney Laboratory - NATA # 1261 Site # 18217												
External Laboratory													
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID								
1	D1	May 12, 2023		Dust Deposition	N23-My0035631	Χ							
2	D2 TEMPORARY	May 12, 2023		Dust Deposition	N23-My0035632	Χ							
3	D3	May 12, 2023		Dust Deposition	N23-My0035633	Χ							
4	D4	May 12, 2023		Dust Deposition	N23-My0035634	Χ							
Test	Counts					4							



#### **Internal Quality Control Review and Glossary**

#### General

- 1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- 2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- 3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- 4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds
- 6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise
- 7. Samples were analysed on an 'as received' basis.
- 8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- 9. This report replaces any interim results previously issued.

#### **Holding Times**

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

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 SRA.

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.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

#### Units

mg/kg: milligrams per kilogram mg/L: milligrams per litre μg/L: micrograms per litre

ppm: parts per million ppb: parts per billion %: Percentage

org/100 mL: Organisms per 100 millilitres NTU: Nephelometric Turbidity Units MPN/100 mL: Most Probable Number of organisms per 100 millilitres

CFU: Colony forming unit

#### Terms

APHA American Public Health Association

COC Chain of Custody

CP Client Parent - QC was performed on samples pertaining to this report
CRM Certified Reference Material (ISO17034) - reported as percent recovery

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

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

LOR Limit of Reporting

LCS Laboratory Control Sample - reported as percent recovery.

Method Blank

In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.

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.

RPD Relative Percent Difference between two Duplicate pieces of analysis.

SPIKE Addition of the analyte to the sample and reported as percentage recovery.

SRA Sample Receipt Advice

Surr - Surrogate The addition of a like compound to the analyte target and reported as percentage recovery.

TBTO Tributyltin oxide (bis-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured

and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.

TCLP Toxicity Characteristic Leaching Procedure
TEQ Toxic Equivalency Quotient or Total Equivalence

QSM US Department of Defense Quality Systems Manual Version 5.4

US EPA United States Environmental Protection Agency

WA DWER Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

#### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

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% NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

#### **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. pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- 4. Recovery Data (Spikes & Surrogates) where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte
- 5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Report Number: 989550-A



#### Comments

## Sample Integrity

Custody Seals Intact (if used)

Attempt to Chill was evident

N/A

Sample correctly preserved

Appropriate sample containers have been used

Yes

Sample containers for volatile analysis received with minimal headspace

Samples received within HoldingTime

Yes

Some samples have been subcontracted

No

### Authorised by:

Adam Bateup Analytical Services Manager Ryan Phillips Senior Analyst-Inorganic

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- \* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

9	CHAIN OF CUSTODY RECORD  Eurofins   Envirolationent Testing   ABN 50 005 085 521				Sydney Unit F3 B 02 9900 8	ld.F 16 Ma	rs Road Lan	e Cove Wes SW@eurofi	Brisbane Laboratory   Cove West NSW 2066			[		1 Leach High	nway Kewda							6 Mor	nterey F	Laboratory Road Dandening South VIC 3175				
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	Address	50 Glebe Road, The Junction	n NSW 2291	Projec	t Name	Ba	ago Fores	t Quarry					D Format al, EQuIS etc							Н	łande	d over	by	,	Vlatild	la En	glert	
				Filtered".																E	mail fo	or Invo	oice					oli.com; jbourke@ramboll.com; oll.com
C	ontact Name	Matilda Englert		ify Total or Filter																E	mail fo	or Resi	ults	r	cond nengl	on@i lert@	rambo rambo	oll.com; jbourke@ramboll.com; oll.com
	Phone №	0473 014 006		த் த								JI.									Chan	ge conta		ainers e & size		essary.		Required Turnaround Time (TA) Default will be 5 days if not ficked.
Spe	ecial Directions	Page 1 of 1		Analyses are requested, please sp code must be used to att	Dust Deposition																						H	Surcharge will apply Overnight (reporting by 9am)  Same day   1 day
	irchase Order Quote ID №	200316RAMN		Where metals a	Dus		ŀ													500mL Piastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	4964	☐ 2 days ♦ ☐ 3 days ♦ ☑ 5 days (Stànđard) ☐ Other(
Ne		Client Sample ID	Sampled Date/Time domm/yy hh:mm	Matrix Solid (S) Water (W)																S	2	12	200n	40	500r	Jar (	Other (Asbest	Sample Comments  I Dangerous Goods Hazard Warni
1		D1	12/05/2023 - 13/06/2023	s	X				1																			
2		D2 Temporary	12/05/2023 · 13/06/2023	s	×				14																			
3		D3	12/05/2023 - 13/06/2023	S	×			H																				Neur III
4		D4	12/05/2023 - 13/06/2023	S	×																							
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Signature

Signature

SYD | BNE | MEL | PER | ADL | ME | DRW

SYD | BNE | MEL | PER | ADL | NTL | DRW

Laboratory Use Only

Received By

Received By

Date

Date

20/6/23

Date

Time

2:18

Time

Temperature

Report №



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EnviroSales@eurofins.com

## **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

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ABN: 91 05 0159 898

Perth 46-48 Banksia Road

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NZBN: 9429046024954 Auckland

Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 IANZ# 1290

## Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name:

Rachel Condon

Project name:

**BAGO FOREST QUARRY** 318001562

Project ID: Turnaround time:

7 Day

Date/Time received **Eurofins reference** 

Jun 20, 2023 2:18 PM

1000723

## Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

Some samples have been subcontracted.

N/A Custody Seals intact (if used).

## **Notes**

## Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Rachel Condon - rcondon@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.





#### **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

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Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

**Dust Deposition** 

Brisbane Unit 1.2 Dacre Street 1/21 Smallwood Place Murarrie QLD 4172

Newcastle 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 Tel: +61 7 3902 4600

Welshpool WA 6106 NATA# 1261 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 18217 NATA# 1261 Site# 25466 NATA# 1261 Site# 20794 Site# 25079 & 25289

Tel: +61 8 6253 4444 NATA# 2377 Site# 2370

ABN: 91 05 0159 898

46-48 Banksia Road

Perth

NZBN: 9429046024954 Auckland

Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose, Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 3 343 5201 Tel: +64 9 526 4551 IANZ# 1327 IANZ# 1290

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** 

**BAGO FOREST QUARRY** 

Project ID: 318001562 Order No.:

Canberra

Mitchell

ACT 2911

Tel: +61 2 6113 8091

Report #: 1000723 02 9954 8118

Phone: 02 9954 8150 Fax:

Received: Jun 20, 2023 2:18 PM Due: Jun 29, 2023

**Priority:** 7 Day

**Contact Name:** Rachel Condon

**Eurofins Analytical Services Manager: Andrew Black** 

## Sample Detail

Sydr	ney Laboratory	- NATA # 1261	Site # 18217			Х
Exte	rnal Laboratory	•				
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	D1	Jun 13, 2023		Dust Deposition	N23-Jn0045940	х
2	D2 TEMPORARY	Jun 13, 2023		Dust Deposition	N23-Jn0045941	х
3	D3	Jun 13, 2023		Dust Deposition	N23-Jn0045942	Х
4	D4	Jun 13, 2023		Dust Deposition	N23-Jn0045943	Х
Test	Counts					4



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Rachel Condon

Report 1000723-A

Project name BAGO FOREST QUARRY

 Project ID
 318001562

 Received Date
 Jun 20, 2023

Client Sample ID			D1	D2 TEMPORARY	D3	D4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			N23-Jn0045940	N23-Jn0045941	N23-Jn0045942	N23-Jn0045943
Date Sampled			Jun 13, 2023	Jun 13, 2023	Jun 13, 2023	Jun 13, 2023
Test/Reference	LOR	Unit				
Dust Deposition						
Combustible Solids	0.1	g/m2/mth	0.3	0.3	0.3	< 0.1
Soluble Solids	0.1	g/m2/mth	2.7	1.3	4.8	3.8
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	4.8	2.2	6.6	4.2
Volume (total)*	0.1	mL	400	250	450	400
Ash*	0.1	g/m2/mth	1.9	0.6	1.5	0.3
Insoluble Solids	0.1	g/m2/mth	2.2	0.9	1.8	0.4

Report Number: 1000723-A



## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneyJun 21, 20235 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air

Report Number: 1000723-A



#### **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

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Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

**Dust Deposition** 

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Mayfield West NSW 2304 NATA# 1261 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 18217 NATA# 1261 Site# 25466 NATA# 1261 Site# 20794 Site# 25079 & 25289

Auckland 46-48 Banksia Road 35 O'Rorke Road Welshpool Penrose, WA 6106 Auckland 1061

**Eurofins ARL Pty Ltd Eurofins Environment Testing NZ Ltd** 

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Tel: +64 9 526 4551

IANZ# 1327

Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 Tel: +64 3 343 5201 IANZ# 1290

**Company Name:** 

Address:

Ramboll Australia Pty Ltd Level 3/100 Pacific Highway

North Sydney

NSW 2060

**Project Name: BAGO FOREST QUARRY** 

Project ID:

318001562

Order No.:

Report #: 1000723 Phone: 02 9954 8118

02 9954 8150 Fax:

Received: Jun 20, 2023 2:18 PM

Due: Jun 29, 2023 Priority: 7 Day

ABN: 91 05 0159 898

Tel: +61 8 6253 4444

NATA# 2377 Site# 2370

Perth

**Contact Name:** Rachel Condon

**Eurofins Analytical Services Manager: Andrew Black** 

## Sample Detail

Sydr	ney Laboratory	- NATA # 1261	Site # 18217	,		Х							
Exte	rnal Laboratory												
No         Sample ID         Sample Date         Sampling Time         Matrix         LAB ID           1         D1         Jun 13, 2023         Dust         N23-Jn0045940													
1	D1	Jun 13, 2023		Dust Deposition	N23-Jn0045940	х							
2	D2 TEMPORARY	Jun 13, 2023		Dust Deposition	N23-Jn0045941	х							
3	D3	Jun 13, 2023		Dust Deposition	N23-Jn0045942	х							
4	D4	Jun 13, 2023		Dust Deposition	N23-Jn0045943	х							
Test	Counts					4							



#### **Internal Quality Control Review and Glossary**

#### General

- 1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
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- 4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- 6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise
- 7. Samples were analysed on an 'as received' basis.
- 8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
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For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

#### Units

mg/kg: milligrams per kilogram mg/L: milligrams per litre µg/L: micrograms per litre

**ppm**: parts per million **ppb**: parts per billion
%: Percentage

org/100 mL: Organisms per 100 millilitres NTU: Nephelometric Turbidity Units MPN/100 mL: Most Probable Number of organisms per 100 millilitres

CFU: Colony forming unit

#### **Terms**

APHA American Public Health Association

COC Chain of Custody

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

CRM Certified Reference Material (ISO17034) - reported as percent recovery.

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

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

LOR Limit of Reporting

LCS Laboratory Control Sample - reported as percent recovery.

Method Blank

In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.

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.

RPD Relative Percent Difference between two Duplicate pieces of analysis.

SPIKE Addition of the analyte to the sample and reported as percentage recovery

SRA Sample Receipt Advice

**Surr - Surrogate** The addition of a like compound to the analyte target and reported as percentage recovery.

TBTO Tributyltin oxide (bis-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured

and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.

TCLP Toxicity Characteristic Leaching Procedure
TEQ Toxic Equivalency Quotient or Total Equivalence

QSM US Department of Defense Quality Systems Manual Version 5.4

US EPA United States Environmental Protection Agency

WA DWER Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

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%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 - 150%

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

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- 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. pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- 4. Recovery Data (Spikes & Surrogates) where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte
- 5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Report Number: 1000723-A



#### Comments

## Sample Integrity

 Custody Seals Intact (if used)
 N/A

 Attempt to Chill was evident
 N/A

 Sample correctly preserved
 Yes

 Appropriate sample containers have been used
 Yes

 Sample containers for volatile analysis received with minimal headspace
 Yes

 Samples received within HoldingTime
 Yes

 Some samples have been subcontracted
 No

## Authorised by:

Adam Bateup Analytical Services Manager Ryan Phillips Senior Analyst-Inorganic

Glenn Jackson

**Managing Director** 

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- \* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Report Number: 1000723-A

•	C	HAIN OF CUS	STODY RECORD esting ABN 50 005 085 521	Sydney L Unit F3 Bld 02 9900 84	aboratory I.F 16 Mars Road Li 00 EnviroSample	ane Cove West	NSW 2066		Brisbane Unit 1 21 S 07 3902 46	Smallwood	Place Mura	rie QLD 4172 D@eurofins.co	m	Unit 3	h Laboratory 291 Leach High 51 9600 Envir						כ	61	Montere	ne Laboratory Road Dandenong South	
	Company	Ramboli		Project №	31800156						t Manage		el Condon		21 3000	osampiewy.		Samp	ler(s)		Mat		Engler	000 EnviroSampleVic@	eurofins.com
	Address	50 Glebe Road, The	Junction NSW 2291	Project Name	Bago For	est Quarry					Format EQuIS etc						Ha	inded	over b	у	Mat	ilda E	Engler		
				illered".													En	nail for	Invoid	e				boll.com; jbourke@ boll.com	ramboll.com;
C	Contact Name	Matilda Englert		Total or F										1			En	nail for	Resul	s	rcor	ndon(	@rami	ooll.com; jbourke@ boll.com	ramboll.com;
	Phone №	0473 014 006		es e specify " e attract SU				ŀ										Change		ontain er type 8				Required Turr	naround Time (TA e 5 days if not ticked.
Spe	ecial Directions	Page 1 of 1		Analyses als are requested, please or E code must be used to att Dust Deposition																			Culdelines)		+Surcharge will appl eporting by 9am)+
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	Quote ID №	200316RAMN		Where									27				500mL Plastic	250mL Plastic	125mL Plastic	ZUUML AMber Glass	500mL PFAS Bottle	Jar (Glass or HDPE)	8 AS486	5 days (Stand	Jard)
Ne		Client Sample ID	Sampled Date/Time dd/mm/yy hh.mm	Matrix Solid (S) Water (W)													20	22	12	2007	500m	Jar (	Other (Asbestos AS4964,	Sample / Dangerous God	Comments ods Hazard Warni
į		D1	13/06/23-13/07/23	s 🗶																					
2		D2 Temporary	13/06/23-13/07/23	s 🗶																					
3		D3	13/06/23-13/07/23	s <b>X</b>																					
4		D4	13/06/23-13/07/23	s <b>X</b>																					
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Signature

SYD | BNE | MEL | PER | ADL | NTL | DRW

Received By

Date

Time

Report №



www.eurofins.com.au

EnviroSales@eurofins.com

## **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 Geelong 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 **Sydney** 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

Unit 1.2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091

Canberra

Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600

Newcastle 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 25403 NATA# 1261 Site# 25466 NATA# 1261 Site# 25466 NATA# 1261 Site# 2579 & 25289

ABN: 91 05 0159 898

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

NZBN: 9429046024954

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Rolleston, Penrose, Auckland 1061 Christchurch 7675 Tel: +64 9 526 4551 IANZ# 1327 IANZ# 1290

## Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name:

Rachel Condon

Project name:

**BAGO FOREST QUARRY** 

Project ID: Turnaround time: 318001562 5 Day

Date/Time received

Jul 13, 2023 3:00 PM

**Eurofins reference** 

1007790

## Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

Some samples have been subcontracted.

N/A Custody Seals intact (if used).

## **Notes**

## Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Rachel Condon - rcondon@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.



#### **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne Geelong 6 Monterey Road 19/8 Lewalan Street Dandenong South Grovedale VIC 3175 VIC 3216 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000

Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400

**Dust Deposition** 

Χ

Canberra Brisbane Unit 1.2 Dacre Street 1/21 Smallwood Place Mitchell Murarrie ACT 2911 QLD 4172

Newcastle 1/2 Frost Drive Tel: +61 2 4968 8448 Tel: +61 7 3902 4600

Mayfield West NSW 2304 NATA# 1261

Welshpool WA 6106 Tel: +61 8 6253 4444 NATA# 1261 Site# 1254 NATA# 1261 Site# 25403 NATA# 1261 Site# 18217 NATA# 1261 Site# 25466 NATA# 1261 Site# 20794 Site# 25079 & 25289 NATA# 2377 Site# 2370

Perth

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Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose, Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 9 526 4551 Tel: +64 3 343 5201 IANZ# 1327 IANZ# 1290

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** 

**BAGO FOREST QUARRY** 

Project ID: 318001562 Order No.: Report #:

Tel: +61 2 6113 8091

1007790 02 9954 8118

Phone: 02 9954 8150 Fax:

Received: Jul 13, 2023 3:00 PM

Due: Jul 20, 2023 **Priority:** 5 Day

**Contact Name:** Rachel Condon

**Eurofins Analytical Services Manager: Andrew Black** 

# Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217

Exte	rnal Laboratory					
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	D1	Jul 13, 2023		Dust Deposition	N23-JI0027973	х
2	D2 TEMPORARY	Jul 13, 2023		Dust Deposition	N23-JI0027974	х
3	D3	Jul 13, 2023		Dust Deposition	N23-JI0027975	х
4	D4	Jul 13, 2023		Dust Deposition	N23-JI0027976	х
Test	Counts					4



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Rachel Condon

Report 1007790-A

Project name BAGO FOREST QUARRY

Project ID 318001562 Received Date Jul 13, 2023

Client Sample ID			D1	D2 TEMPORARY	D3	D4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			N23-JI0027973	N23-JI0027974	N23-JI0027975	N23-JI0027976
Date Sampled			Jul 13, 2023	Jul 13, 2023	Jul 13, 2023	Jul 13, 2023
Test/Reference	LOR	Unit				
Dust Deposition						
Combustible Solids	0.1	g/m2/mth	0.2	2.5	0.2	0.4
Soluble Solids	0.1	g/m2/mth	< 0.1	0.2	< 0.1	< 0.1
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	1.4	23	0.6	0.7
Volume (total)*	0.1	mL	300	300	250	250
Ash*	0.1	g/m2/mth	1.2	20	0.3	0.3
Insoluble Solids	0.1	g/m2/mth	1.4	23	0.6	0.7

Report Number: 1007790-A



## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneyJul 14, 20235 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air

Report Number: 1007790-A



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**Company Name:** 

Ramboll Australia Pty Ltd

Address:

Cudnou Laboratoru NATA # 4004 Cita # 40047

Level 3/100 Pacific Highway North Sydney

NSW 2060

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Order No.:

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Welshpool

WA 6106

**Contact Name:** Rachel Condon

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Report Number: 1007790-A



#### Comments

## Sample Integrity

 Custody Seals Intact (if used)
 N/A

 Attempt to Chill was evident
 N/A

 Sample correctly preserved
 Yes

 Appropriate sample containers have been used
 Yes

 Sample containers for volatile analysis received with minimal headspace
 Yes

 Samples received within HoldingTime
 Yes

 Some samples have been subcontracted
 No

## Authorised by:

Andrew Black Analytical Services Manager
Dilani Samarakoon Senior Analyst-Inorganic

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- \* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Report Number: 1007790-A

1	C	HAIN OF CUSTODY			<b>Sydney L.</b> Unit F3 Bld. 02 9900 84	F 16 Mars	Road Lane			Unit 1 21		ory Place Muranio roSampleQLC				horatory each Highw							6 Ma	nterey R	Laboratory Road Dandenong South VIC 3175 DEnviroSampleVic@eurofins.com
	Company	Ramboll		Proje	ect №	318	001562				Project	Manager	Rac	chel Cond	ion				Samp	ler(s)		Mati	da En	glert	
	Address	50 Glebe Road, The Junction	NCW 2204	Project	t Name	Bag	jo Forest	Quarry				Format EQuiS etc						H	anded	over b	y	Mati	da En	glert	
	Mudicas	30 Glebe Road, The Junction	NOW 2251	tered".					8-	LR								En	nail fo	Invoid	e				oll.com; jbourke@ramboll.com; oll.com
С	ontact Name	Matilda Englert		otal" or "Filter TE pricing.														En	nail for	Resulf	s				oll.com; jbourke@ramboll.com; oll.com
	Phone №	0473 014 006		S specify "Total" attract SUITE p					-	H									Change		ontain or type 8	i <b>ers</b> S size if n	ecessan	<i>j.</i>	Required Turnaround Time (TA Default will be 5 days if not ticked.
Spe	ecial Directions	Page 1 of 1		Analyses rire requested, please sp	Dust Deposition																BSS	Tie tie	<u>(j</u>	Other (Asbestos AS4964, WA Guidelines)	+Surcharge will appl  Civernight (reporting by 9am)+  Same day   1 day
Pt	irchase Order			e melais ຂ SUITE ດ	DO													500mL Plastic	250mL Plastic	125mL Plastic	nber G	40mL VOA vial	S or E	4964, WA	2 days   2 days   3 days   5 days (Standard)
	Quote ID №	200316RAMN		Wher														500mL	250mL	125mL	200mL Amber Glass	500mL PFAS Bottle	Jar (Glass or HDPE)	stos AS	Other(
Nº		Client Sample ID	Sampled Date/Time od/mm/yy hh:mm	Matrix Solid (S) Water (W)																	20	35	S.L.	Other (Ash	Sample Comments / Dangerous Goods Hazard Warn
1		D1	13/07/23-10/08/23	s	X												Ħ							= [	ROPE WITH
2		D2	13/07/23-10/08/23	S	X																				
3		D3	13/07/23-10/08/23	s	×												- 1								
4		D4	13/07/23-10/08/23	s	×																				
5												-		-											
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10										3-1			- 01				3								
10					100			-																	

Matilda Englert

Signature

Courier (#

Received By

Received By

Method of

Shipment

Laboratory Use Only

**Total Counts** 

✓ Hand Delivered

Postal

SYD | BNE | MEL | PER | ADL | NTL | DRW

SYD | BNE | MEL | PER | ADL | NTL | DRW

Name

Date

Date

Time

Time

10/08/23

Time

Temperature

Report №

Signature



www.eurofins.com.au

EnviroSales@eurofins.com

NZBN: 9429046024954

IANZ# 1327

## **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South Grovedale VIC 3175 VIC 3216 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000 Tel: +61 2 9900 8400 NATA# 1261

Geelong 19/8 Lewalan Street NATA# 1261 Site# 25403

Sydney 179 Magowar Road Girraween NSW 2145 NATA# 1261 Site# 18217

Canberra Unit 1.2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 25466

Brisbane 1/21 Smallwood Place 1/2 Frost Drive Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 NATA# 1261 Site# 20794

Newcastle Mayfield West NSW 2304 Tel: +61 2 4968 8448 Site# 25079 & 25289

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

ABN: 91 05 0159 898

Eurofins ARL Pty Ltd

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose, Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 9 526 4551 Tel: +64 3 343 5201

IANZ# 1290

**Eurofins Environment Testing NZ Ltd** 

Tauranga 1277 Cameron Road Gate Pa, Tauranga 3112 IANZ# 1402

## Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name:

Rachel Condon

Project name: Project ID:

**BAGO FOREST QUARRY** 318001562

Turnaround time:

5 Day

Date/Time received **Eurofins reference** 

Aug 11, 2023 8:30 AM 1015939

## Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

X Some samples have been subcontracted.

N/A Custody Seals intact (if used).

## **Notes**

## Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Rachel Condon - rcondon@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.





#### **Eurofins Environment Testing Australia Pty Ltd**

NATA# 1261

Site# 25403

ABN: 50 005 085 521

Melbourne Geelong 6 Monterey Road Dandenong South VIC 3175

Sydney 19/8 Lewalan Street 179 Magowar Road Grovedale Girraween VIC 3216 NSW 2145 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000 Tel: +61 2 9900 8400 Tel: +61 2 6113 8091

NATA# 1261

Site# 18217

Canberra Unit 1.2 Dacre Street Mitchell ACT 2911

NATA# 1261

Site# 25466

**Dust Deposition** 

Х

Brisbane Newcastle 1/21 Smallwood Place 1/2 Frost Drive Murarrie Mayfield West NSW 2304 QLD 4172 Tel: +61 2 4968 8448 Tel: +61 7 3902 4600 NATA# 1261 NATA# 1261 Site# 25079 & 25289 Site# 20794

46-48 Banksia Road

Tel: +61 8 6253 4444

Perth

Welshpool

WA 6106

NATA# 2377

Site# 2370

ABN: 91 05 0159 898 NZBN: 9429046024954

Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose, Rolleston. Auckland 1061

Tauranga 1277 Cameron Road. Gate Pa, Christchurch 7675 Tauranga 3112 Tel: +64 9 526 4551 Tel: +64 3 343 5201 Tel: +64 9 525 0568 IANZ# 1290 IANZ# 1402

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

NATA# 1261

Site# 1254

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** 

**BAGO FOREST QUARRY** 

Project ID:

318001562

Order No.:

Report #: 1015939 Phone: 02 9954 8118

Fax:

02 9954 8150

Received: Aug 11, 2023 8:30 AM

Due: Aug 18, 2023 **Priority:** 5 Dav

IANZ# 1327

**Contact Name:** Rachel Condon

**Eurofins Analytical Services Manager: Andrew Black** 

## Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217

External Laboratory

	mai Laboratory					
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	D1	Aug 10, 2023		Dust Deposition	N23-Au0028612	х
2	D2	Aug 10, 2023		Dust Deposition	N23-Au0028613	х
3	D3	Aug 10, 2023		Dust Deposition	N23-Au0028614	х
4	D4	Aug 10, 2023		Dust Deposition	N23-Au0028615	х
Test	Counts					4



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Rachel Condon

Report 1015939-A

Project name BAGO FOREST QUARRY

Project ID 318001562
Received Date Aug 11, 2023

Client Sample ID			D1	D2	D3	D4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			N23- Au0028612	N23- Au0028613	N23- Au0028614	N23- Au0028615
Date Sampled			Aug 10, 2023	Aug 10, 2023	Aug 10, 2023	Aug 10, 2023
Test/Reference	LOR	Unit				
Dust Deposition						
Combustible Solids	0.1	g/m2/mth	0.3	0.9	0.2	0.2
Soluble Solids	0.1	g/m2/mth	1.8	3.2	2.8	3.7
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	3.3	7.9	3.6	4.2
Volume (total)*	0.1	mL	250	750	300	300
Ash*	0.1	g/m2/mth	1.2	3.8	0.6	0.3
Insoluble Solids	0.1	g/m2/mth	1.5	4.6	0.8	0.4

Report Number: 1015939-A



## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneyAug 11, 20235 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air

Report Number: 1015939-A



#### **Eurofins Environment Testing Australia Pty Ltd**

NATA# 1261

Site# 25403

ABN: 50 005 085 521

NATA# 1261

Site# 1254

Melbourne Geelong 6 Monterey Road 19/8 Lewalan Street Dandenong South Grovedale VIC 3175 VIC 3216

Sydney 179 Magowar Road Girraween NSW 2145

NATA# 1261

Site# 18217

Canberra Mitchell ACT 2911 NATA# 1261

Site# 25466

**Dust Deposition** 

Brisbane Newcastle Unit 1.2 Dacre Street 1/21 Smallwood Place 1/2 Frost Drive Murarrie Mayfield West NSW 2304 QLD 4172 Tel: +61 2 4968 8448 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000 Tel: +61 2 9900 8400 Tel: +61 2 6113 8091 Tel: +61 7 3902 4600 NATA# 1261 NATA# 1261 Site# 25079 & 25289 Site# 20794

ABN: 91 05 0159 898

46-48 Banksia Road

Tel: +61 8 6253 4444

Received:

Priority:

**Contact Name:** 

Due:

Perth

Welshpool

WA 6106

NATA# 2377

Site# 2370

NZBN: 9429046024954

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

Aug 11, 2023 8:30 AM

Aug 18, 2023

Rachel Condon

**Company Name:** 

Ramboll Australia Pty Ltd

Address: Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** 

**BAGO FOREST QUARRY** 

Project ID:

318001562

Order No.:

Report #: 1015939 Phone: 02 9954 8118

02 9954 8150 Fax:

**Eurofins Analytical Services Manager: Andrew Black** 

5 Dav

### Sample Detail

Sydr	ney Laboratory	- NATA # 1261	Site # 18217	<u> </u>		Х
Exte	rnal Laboratory	•				
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	D1	Aug 10, 2023		Dust Deposition	N23-Au0028612	х
2	D2	Aug 10, 2023		Dust Deposition	N23-Au0028613	х
3	D3	Aug 10, 2023		Dust Deposition	N23-Au0028614	х
4	D4	Aug 10, 2023		Dust Deposition	N23-Au0028615	х
Test	Counts				·	4



#### **Internal Quality Control Review and Glossary**

#### General

- 1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- 2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- 3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- 4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- 6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise
- 7. Samples were analysed on an 'as received' basis.
- 8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- 9. This report replaces any interim results previously issued.

#### **Holding Times**

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

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 SRA.

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.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

#### Units

mg/kg: milligrams per kilogram mg/L: milligrams per litre µg/L: micrograms per litre

**ppm**: parts per million **ppb**: parts per billion
%: Percentage

org/100 mL: Organisms per 100 millilitres NTU: Nephelometric Turbidity Units MPN/100 mL: Most Probable Number of organisms per 100 millilitres

CFU: Colony forming unit

#### **Terms**

APHA American Public Health Association

COC Chain of Custody

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

CRM Certified Reference Material (ISO17034) - reported as percent recovery.

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

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

LOR Limit of Reporting

LCS Laboratory Control Sample - reported as percent recovery.

Method Blank

In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.

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.

RPD Relative Percent Difference between two Duplicate pieces of analysis.

SPIKE Addition of the analyte to the sample and reported as percentage recovery

SRA Sample Receipt Advice

**Surr - Surrogate** The addition of a like compound to the analyte target and reported as percentage recovery.

TBTO Tributyltin oxide (bis-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured

and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits. \\

TCLP Toxicity Characteristic Leaching Procedure
TEQ Toxic Equivalency Quotient or Total Equivalence

QSM US Department of Defense Quality Systems Manual Version 5.4

US EPA United States Environmental Protection Agency

WA DWER Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

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%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 - 150%

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

### **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. pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- 4. Recovery Data (Spikes & Surrogates) where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte
- 5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Report Number: 1015939-A



#### Comments

## Sample Integrity

 Custody Seals Intact (if used)
 N/A

 Attempt to Chill was evident
 N/A

 Sample correctly preserved
 Yes

 Appropriate sample containers have been used
 Yes

 Sample containers for volatile analysis received with minimal headspace
 Yes

 Samples received within HoldingTime
 Yes

 Some samples have been subcontracted
 No

## Authorised by:

Andrew Black Analytical Services Manager
Ryan Phillips Senior Analyst-Inorganic

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- \* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Report Number: 1015939-A

## CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing ABN 50 005 085 521

Unit F3 Bid.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Unit 2 91 Leach Highway Kewdale WA 6105

08 9251 9600 EnviroSampleWA@eurofins.com

Company	Ramboll		Projec	t N≘	318001562	!			Project Manager	Rachel Cond	on		Sa	mpler(	5)	Ma	atilda l	Engle	rt	
900				Vame	Bago Fore	st Quarry			EDD Format Esdat FoulS etc				Hand	ed ove	r by	Ma	atilda l	Englei	rt	
Address	50 Glebe Road, The Junction	NSW 2291	sred".										Email	for Inv	oice				nboll.com; jbourke@ra nboll.com	mboll.com;
Contact Name	Matilda Englert		lal" or "Eilt										Email	for Res	ults	rce	ondon	@ram	nboll.com; jbourke@ra nboll.com	mboll.com;
Phone №	0473 014 006		nalyses , please specify "Total" or "Elf used to altract SUITE pricing.										Chi	ange con!	Contai ainer type	ners	43		Required Turna	round Time (TAT)
Special Directions	Page 1 of 1		Analyses Analyses Prequested, please st e must be used to alt	Dust Deposition											88		0	(i	Overnight (representation of the first of th	
Purchase Order			SUITE con	Dus									500mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	2 days ♦  2 days ♦  3 5 days (Standa	☐ 3 days◆
Quote ID №	200316RAMN		White										500mL	125mL	00mL Ar	40mL	00mL P	ar (Glas	Other(	)
No.	Client Sample ID	Sampled Date/Time dommilyy ht.min	Matrix Solid (S) Water (W)												72		ن. ا	J. 14	Sample C	Comments ds Hazard Warning
1	D1	10/08/23-12/09/23	s	×																
2	D2	10/08/23-12/09/23	s	×																
3	D3	10/08/23-12/09/23	s	×												Ī				
4	D4	10/08/23-12/09/23	s	×													Ī			
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Method or Shipment	[ ] Courier (#		and Delivered		Postal		ame		a Englert	Signature		0		Date			9/12/20		Time	
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	Received By			SYD   B	NE   MEL   PEF	R   ADL   NTI	. į DRW	Signature	TO THE P		Date	A 100 M	1	Time	130				Report №	



www.eurofins.com.au

EnviroSales@eurofins.com

NZBN: 9429046024954

## **Eurofins Environment Testing Australia Pty Ltd**

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Geelong 19/8 Lewalan Street NATA# 1261 Site# 25403

179 Magowar Road Girraween NSW 2145 NATA# 1261 Site# 18217

Canberra Unit 1.2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 25466

Brisbane 1/21 Smallwood Place 1/2 Frost Drive Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 NATA# 1261 Site# 20794

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ABN: 91 05 0159 898

Eurofins ARL Pty Ltd

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**Eurofins Environment Testing NZ Ltd** 

Tauranga 1277 Cameron Road Gate Pa, Tauranga 3112 IANZ# 1402

## Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name: Project name:

Rachel Condon **Bago Forest Quarry** 

Project ID: Turnaround time: 318001562 5 Day

Date/Time received

Sep 13, 2023 1:30 PM

**Eurofins reference** 1025598

## Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

X Some samples have been subcontracted.

N/A Custody Seals intact (if used).

## **Notes**

## Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Rachel Condon - rcondon@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.





#### **Eurofins Environment Testing Australia Pty Ltd**

NATA# 1261

Site# 25403

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175

Geelong Sydney 19/8 Lewalan Street 179 Magowar Road Grovedale Girraween VIC 3216 NSW 2145

NATA# 1261

Site# 18217

Canberra Unit 1.2 Dacre Street Mitchell ACT 2911 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000 Tel: +61 2 9900 8400 Tel: +61 2 6113 8091 NATA# 1261

Site# 25466

**Dust Deposition** 

Х

Brisbane Newcastle 1/21 Smallwood Place 1/2 Frost Drive Murarrie Mayfield West NSW 2304 QLD 4172 Tel: +61 2 4968 8448 Tel: +61 7 3902 4600 NATA# 1261 NATA# 1261 Site# 25079 & 25289 Site# 20794

Received:

**Priority:** 

**Contact Name:** 

Due:

ABN: 91 05 0159 898

46-48 Banksia Road

Tel: +61 8 6253 4444

Perth

Welshpool

WA 6106

NATA# 2377

Site# 2370

NZBN: 9429046024954

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

Sep 13, 2023 1:30 PM

Sep 20, 2023

Rachel Condon

**Company Name:** 

Address:

Ramboll Australia Pty Ltd

NATA# 1261

Site# 1254

Level 3/100 Pacific Highway North Sydney

NSW 2060

**Project Name:** 

Bago Forest Quarry

Project ID:

318001562

Order No.: Report #:

1025598 02 9954 8118

Phone: 02 9954 8150 Fax:

**Eurofins Analytical Services Manager: Andrew Black** 

5 Dav

## Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217

External Laboratory

-Atto	mar Laboratory					
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	D1	Sep 12, 2023		Dust Deposition	N23-Se0028611	х
2	D2	Sep 12, 2023		Dust Deposition	N23-Se0028612	х
3	D3	Sep 12, 2023		Dust Deposition	N23-Se0028613	х
4	D4	Sep 12, 2023		Dust Deposition	N23-Se0028614	х
Test	Counts					4



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Rachel Condon

Report 1025598-A

Project name Bago Forest Quarry

Project ID 318001562
Received Date Sep 13, 2023

Client Sample ID			D1	D2	D3	D4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			N23- Se0028611	N23- Se0028612	N23- Se0028613	N23- Se0028614
Date Sampled			Sep 12, 2023	Sep 12, 2023	Sep 12, 2023	Sep 12, 2023
Test/Reference	LOR	Unit				
Dust Deposition						
Combustible Solids	0.1	g/m2/mth	0.3	0.4	0.2	0.2
Soluble Solids	0.1	g/m2/mth	1.1	1.7	2.9	2.0
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	2.7	2.5	3.6	2.3
Volume (total)*	0.1	mL	200	200	250	200
Ash*	0.1	g/m2/mth	1.4	0.3	0.5	0.1
Insoluble Solids	0.1	g/m2/mth	1.6	0.7	0.6	0.3

Report Number: 1025598-A



## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneySep 13, 20235 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air

Report Number: 1025598-A



#### **Eurofins Environment Testing Australia Pty Ltd**

NATA# 1261

Site# 25403

ABN: 50 005 085 521

NATA# 1261

Site# 1254

Melbourne Geelong 6 Monterey Road 19/8 Lewalan Street Dandenong South Grovedale VIC 3175 VIC 3216

Sydney 179 Magowar Road Girraween NSW 2145 NATA# 1261

Site# 18217

Canberra Mitchell ACT 2911

NATA# 1261

Site# 25466

**Dust Deposition** 

Brisbane Newcastle Unit 1.2 Dacre Street 1/21 Smallwood Place 1/2 Frost Drive Murarrie Mayfield West NSW 2304 QLD 4172 Tel: +61 2 4968 8448 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000 Tel: +61 2 9900 8400 Tel: +61 2 6113 8091 Tel: +61 7 3902 4600 NATA# 1261 NATA# 1261 Site# 25079 & 25289 Site# 20794

Received:

ABN: 91 05 0159 898

46-48 Banksia Road

Tel: +61 8 6253 4444

Perth

Welshpool

WA 6106

NATA# 2377

Site# 2370

NZBN: 9429046024954

Auckland Christchurch Tauranga 35 O'Rorke Road 43 Detroit Drive 1277 Cameron Road. Penrose, Rolleston. Gate Pa.

Auckland 1061 Christchurch 7675 Tauranga 3112 Tel: +64 9 526 4551 Tel: +64 3 343 5201 Tel: +64 9 525 0568 IANZ# 1327 IANZ# 1290 IANZ# 1402

Sep 13, 2023 1:30 PM

**Company Name:** 

Ramboll Australia Pty Ltd

Level 3/100 Pacific Highway North Sydney

NSW 2060

Bago Forest Quarry

**Project Name:** Project ID:

Address:

318001562

Order No.: Report #:

1025598 02 9954 8118

Phone: 02 9954 8150 Fax:

Due: Sep 20, 2023

**Priority:** 5 Dav

**Contact Name:** Rachel Condon

**Eurofins Analytical Services Manager: Andrew Black** 

### Sample Detail

Sydr	ney Laboratory	- NATA # 1261	Site # 18217	7		Х
Exte	rnal Laboratory	•				
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	D1	Sep 12, 2023		Dust Deposition	N23-Se0028611	х
2	D2	Sep 12, 2023		Dust Deposition	N23-Se0028612	х
3	D3	Sep 12, 2023		Dust Deposition	N23-Se0028613	х
4	D4	Sep 12, 2023		Dust Deposition	N23-Se0028614	х
Test	Counts					4



#### **Internal Quality Control Review and Glossary**

#### General

- 1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- 2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- 3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- 4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- 6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise
- 7. Samples were analysed on an 'as received' basis.
- 8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- 9. This report replaces any interim results previously issued.

#### **Holding Times**

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

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 SRA.

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.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

#### Units

mg/kg: milligrams per kilogram mg/L: milligrams per litre µg/L: micrograms per litre

**ppm**: parts per million **ppb**: parts per billion
%: Percentage

org/100 mL: Organisms per 100 millilitres NTU: Nephelometric Turbidity Units MPN/100 mL: Most Probable Number of organisms per 100 millilitres

CFU: Colony forming unit

#### **Terms**

APHA American Public Health Association

COC Chain of Custody

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

CRM Certified Reference Material (ISO17034) - reported as percent recovery.

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

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

LOR Limit of Reporting

LCS Laboratory Control Sample - reported as percent recovery.

Method Blank

In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.

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.

RPD Relative Percent Difference between two Duplicate pieces of analysis.

SPIKE Addition of the analyte to the sample and reported as percentage recovery

SRA Sample Receipt Advice

**Surr - Surrogate** The addition of a like compound to the analyte target and reported as percentage recovery.

TBTO Tributyltin oxide (bis-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured

and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.

TCLP Toxicity Characteristic Leaching Procedure
TEQ Toxic Equivalency Quotient or Total Equivalence

QSM US Department of Defense Quality Systems Manual Version 5.4

US EPA United States Environmental Protection Agency

WA DWER Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

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%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 - 150%

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

### **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. pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- 4. Recovery Data (Spikes & Surrogates) where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte
- 5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Report Number: 1025598-A



#### Comments

## Sample Integrity

 Custody Seals Intact (if used)
 N/A

 Attempt to Chill was evident
 N/A

 Sample correctly preserved
 Yes

 Appropriate sample containers have been used
 Yes

 Sample containers for volatile analysis received with minimal headspace
 Yes

 Samples received within HoldingTime
 Yes

 Some samples have been subcontracted
 No

## Authorised by:

Andrew Black Analytical Services Manager
Dilani Samarakoon Senior Analyst-Inorganic

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- \* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Report Number: 1025598-A

Company	Eurofins   Environment	STODY RECORD Testing ABN 50 005 085 521	10.01	02 9900 84	.F 16 Mars Road 00 EnviroSan	d Lane Cove West N npleNSW@eurofins.c		Unit 1	21 Smallwo 02 4600 E	od Place Mura	rie QLD 4172 .D@eurofins.con		Perth Laborator Unit 2 91 Leach Hig 08 9251 9600 En	hway Kewdale 1	NA 6105	com			61	Monterer	<b>ne Laboratory</b> y Road Dandenong	South VIC 3175
	Kanipoli		Pr	oject Na	3180015	562			Proje	ect Manage	Rachel	Condon		oounpieva <sub>(U</sub>	100	mpler	(s)		03 atilda E		000 EnviroSample	Vic@eurofins.com
Address	50 Glebe Road, The	e Junction NSW 2291	Proj	ect Name	Bago Fo	rest Quarry			ED ES:	D Format						led ove		-				
			tered".						3539	un brindate de La Ci								-	atilda E			
Contact Name	Matilda Englert		ecify "Total" or "Filter	r prioing.										1		for Im		me	englert(	@ramb	ooll.com	e@ramboll.com;
Phone №	0473 014 006		pecify To	ract SULL											Email			me	ndon@ nglert(	@ramb @ramb	oll.com	e@ramboll.com;
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Quote ID №	200316RAMN	V (1 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -	Where											Silver Discolar	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	Jar (Glass or HDPE)	s AS4964, W/	☐ 2 days ♠ ☑ 5 days (St	
C	lient Sample ID	Sampled Date/Time dd/mm/yy hh.rom	Matrix Solid (S) Water (W)												2	4	200m	40 500m	Jar (	Other (Asbestos AS4964, WA Guidel	Sam	ole Comments
	D1	12/09/23-13/10/23	S	×											-					0	i Dangerous (	Goods Hazard Warr
	D2	12/09/23-13/10/23	S	×																		
	D3	12/09/23-13/10/23	S	×																		
	D4	12/09/23-13/10/23	S	×														-				
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		Total Cor	unts	4																		
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www.eurofins.com.au

EnviroSales@eurofins.com

IANZ# 1327

## **Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000 Tel: +61 2 9900 8400 NATA# 1261

Geelong 19/8 Lewalan Street Grovedale VIC 3216 NATA# 1261 Site# 25403

179 Magowar Road Girraween NSW 2145 NATA# 1261 Site# 18217

Canberra Unit 1.2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 25466

Brisbane 1/21 Smallwood Place 1/2 Frost Drive Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 NATA# 1261 Site# 20794

Newcastle Mayfield West NSW 2304 Tel: +61 2 4968 8448 Site# 25079 & 25289

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

ABN: 91 05 0159 898

Eurofins ARL Pty Ltd

NZBN: 9429046024954 Auckland Christchurch 35 O'Rorke Road 43 Detroit Drive Penrose, Rolleston, Auckland 1061 Christchurch 7675 Tel: +64 9 526 4551 Tel: +64 3 343 5201

IANZ# 1290

**Eurofins Environment Testing NZ Ltd** 

Tauranga 1277 Cameron Road Gate Pa, Tauranga 3112 IANZ# 1402

## Sample Receipt Advice

Company name:

Ramboll Australia Pty Ltd

Contact name: Project name:

Rachel Condon **Bago Forest Quarry** 

Project ID: Turnaround time: 318001562 5 Day

Date/Time received **Eurofins reference** 

Oct 13, 2023 12:30 PM

1034788

## Sample Information

A detailed list of analytes logged into our LIMS, is included in the attached summary table.

All samples have been received as described on the above COC.

COC has been completed correctly.

N/A Attempt to chill was evident.

Appropriately preserved sample containers have been used.

All samples were received in good condition.

Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

Appropriate sample containers have been used.

Sample containers for volatile analysis received with zero headspace.

Split sample sent to requested external lab.

X Some samples have been subcontracted.

N/A Custody Seals intact (if used).

## **Notes**

## Contact

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

Andrew Black on phone: (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Rachel Condon - rcondon@ramboll.com.

Note: A copy of these results will also be delivered to the general Ramboll Australia Pty Ltd email address.





#### **Eurofins Environment Testing Australia Pty Ltd**

NATA# 1261

Site# 25403

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175

NATA# 1261

Site# 1254

Geelong Sydney 19/8 Lewalan Street 179 Magowar Road Grovedale Girraween VIC 3216 NSW 2145

Site# 18217

Mitchell ACT 2911 NATA# 1261 NATA# 1261

**Dust Deposition** 

Х

Canberra

Site# 25466

Brisbane Newcastle Unit 1.2 Dacre Street 1/21 Smallwood Place 1/2 Frost Drive Murarrie Mayfield West NSW 2304 QLD 4172 Tel: +61 2 4968 8448 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000 Tel: +61 2 9900 8400 Tel: +61 2 6113 8091 Tel: +61 7 3902 4600 NATA# 1261 NATA# 1261 Site# 25079 & 25289 Site# 20794

Received:

**Priority:** 

**Contact Name:** 

Due:

ABN: 91 05 0159 898

46-48 Banksia Road

Tel: +61 8 6253 4444

Perth

Welshpool

WA 6106

NATA# 2377

Site# 2370

NZBN: 9429046024954

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

Oct 13, 2023 12:30 PM

Oct 20, 2023

Rachel Condon

**Company Name:** 

Address:

Ramboll Australia Pty Ltd Level 3/100 Pacific Highway

North Sydney

NSW 2060

**Project Name:** 

Bago Forest Quarry

Project ID:

318001562

Order No.: Report #:

1034788

Phone: 02 9954 8118 02 9954 8150 Fax:

**Eurofins Analytical Services Manager: Andrew Black** 

5 Day

Sample Detail

Sydney Laboratory - NATA # 1261 Site # 18217

Exte	rnal Laboratory					
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	D1	Oct 13, 2023		Dust Deposition	N23-Oc0031671	х
2	D2	Oct 13, 2023		Dust Deposition	N23-Oc0031672	х
3	D3	Oct 13, 2023		Dust Deposition	N23-Oc0031673	х
4	D4	Oct 13, 2023		Dust Deposition	N23-Oc0031674	х
Test	Counts					4



Ramboll Australia Pty Ltd Level 3/100 Pacific Highway North Sydney NSW 2060





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: Rachel Condon

Report 1034788-A

Project name Bago Forest Quarry

Project ID 318001562

Received Date Oct 13, 2023

Client Sample ID			D1	D2	D3	D4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			N23- Oc0031671	N23- Oc0031672	N23- Oc0031673	N23- Oc0031674
Date Sampled			Oct 13, 2023	Oct 13, 2023	Oct 13, 2023	Oct 13, 2023
Test/Reference	LOR	Unit				
Dust Deposition						
Combustible Solids	0.1	g/m2/mth	0.3	1.4	0.4	0.4
Soluble Solids	0.1	g/m2/mth	2.1	3.9	2.5	3.2
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	4.3	7.0	4.1	3.8
Volume (total)*	0.1	mL	200	260	280	200
Ash*	0.1	g/m2/mth	2.0	1.7	1.2	0.1
Insoluble Solids	0.1	g/m2/mth	2.2	3.1	1.6	0.6

Report Number: 1034788-A



## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

DescriptionTesting SiteExtractedHolding TimeDust DepositionSydneyOct 16, 20235 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air

Report Number: 1034788-A



#### **Eurofins Environment Testing Australia Pty Ltd**

NATA# 1261

Site# 25403

ABN: 50 005 085 521

NATA# 1261

Site# 1254

Melbourne Geelong 6 Monterey Road 19/8 Lewalan Street Dandenong South Grovedale VIC 3175 VIC 3216

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Site# 18217

Canberra Mitchell ACT 2911

NATA# 1261

Site# 25466

**Dust Deposition** 

Brisbane Newcastle Unit 1.2 Dacre Street 1/21 Smallwood Place 1/2 Frost Drive Murarrie Mayfield West NSW 2304 QLD 4172 Tel: +61 2 4968 8448 Tel: +61 3 8564 5000 Tel: +61 3 8564 5000 Tel: +61 2 9900 8400 Tel: +61 2 6113 8091 Tel: +61 7 3902 4600 NATA# 1261 NATA# 1261 Site# 25079 & 25289 Site# 20794

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Site# 2370

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**Company Name:** 

Address:

Ramboll Australia Pty Ltd Level 3/100 Pacific Highway

North Sydney

NSW 2060

**Project Name:** 

Bago Forest Quarry

Project ID:

318001562

Order No.: Report #:

Phone:

1034788 02 9954 8118

02 9954 8150 Fax:

Received: Oct 13, 2023 12:30 PM

Due: Oct 20, 2023 Priority: 5 Day

**Contact Name:** Rachel Condon

**Eurofins Analytical Services Manager: Andrew Black** 

## Sample Detail

Sydr	ney Laboratory ·	- NATA # 1261	Site # 18217	<u> </u>		Х
Exte	rnal Laboratory					
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	D1	Oct 13, 2023		Dust Deposition	N23-Oc0031671	Х
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4	D4	Oct 13, 2023		Dust Deposition	N23-Oc0031674	Χ
Test	Counts					4



#### **Internal Quality Control Review and Glossary**

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- 4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
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%: Percentage

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

LOR Limit of Reporting

LCS Laboratory Control Sample - reported as percent recovery.

Method Blank

In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.

NCP

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SRA Sample Receipt Advice

**Surr - Surrogate** The addition of a like compound to the analyte target and reported as percentage recovery.

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and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.

TCLP Toxicity Characteristic Leaching Procedure
TEQ Toxic Equivalency Quotient or Total Equivalence

QSM US Department of Defense Quality Systems Manual Version 5.4

US EPA United States Environmental Protection Agency

WA DWER Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

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

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 - 150%

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

### **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.
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- 4. Recovery Data (Spikes & Surrogates) where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte
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Report Number: 1034788-A



#### Comments

## Sample Integrity

 Custody Seals Intact (if used)
 N/A

 Attempt to Chill was evident
 N/A

 Sample correctly preserved
 Yes

 Appropriate sample containers have been used
 Yes

 Sample containers for volatile analysis received with minimal headspace
 Yes

 Samples received within HoldingTime
 Yes

 Some samples have been subcontracted
 No

## Authorised by:

Andrew Black Analytical Services Manager
Ryan Phillips Senior Analyst-Inorganic

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- \* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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