Asbestos Air Monitoring Report

10 March 2023

Randwick City Council
30 Frances Street
Randwick NSW 2031

Attention: Joe Santangelo
joe.santangelo@randwick.nsw.gov.au

RE: Asbestos Air Monitoring Report

Dear Joe Santangelo

Please find below Asbestos air monitoring report for:

Site:	Little Bay Beach
Location:	Background air monitoring

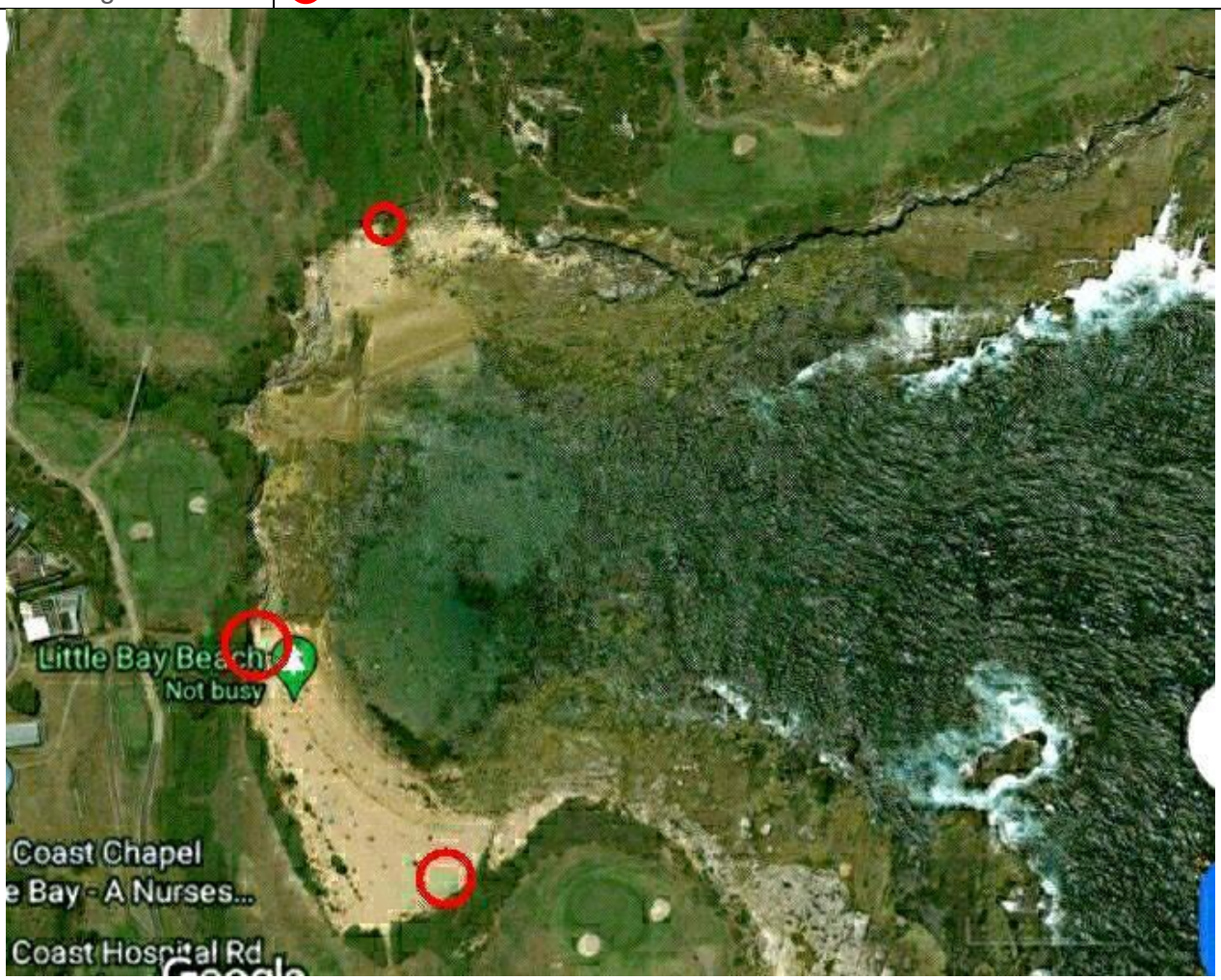
All works have been completed in accordance with relevant state WHS Legislation and approved Codes of Practices.

See following pages for results.

Regards,

Karim Nazemi
Licensed Asbestos Assessor #001359
Senior Occupational Hygienist
10/03/2023

Requested by:	
Client Contact Name	Joe Santangelo
Client Contact Number	0436839760
Client Contact Email	joe.santangelo@randwick.nsw.gov.au
Site:	
Address	2 Coast Hospital Rd, Little Bay NSW 2036
Local Government Area	Randwick City Council
Site Boundary	
Air Monitoring Locations	



Air Monitoring Details:	
Date of Field Work:	10/03/2023
Start Time:	10:00
Trinitas Consultant:	Karim Nazemi Senior Occupational Hygienist
Sampling Type:	Asbestos
Temperature	28°C

Wind Speed	19km/h
Scope of Work:	Background air monitoring

Methodology:

Asbestos fibre static air monitoring and analysis was conducted in accordance with Guidance Note on the Membrane Filter Method for the Estimation of Airborne Asbestos Fibres (NOHSC:3003: April 2005) and in-house procedures of NATA accredited laboratory for the estimation of airborne fibres.

The sample collection was performed using SKC portable sampling pumps fitted with sampling cassettes containing 25 mm membrane filters that were flow tested at the commencement and completion of sampling.

Exposure Standard

The Australian exposure standard for asbestos fibers is 0.1 fibres/ml of air and the action limit for asbestos fibres is 0.01 fibres/ml as per the NSW WHS Regulations 2017.

Sample Location / Person Name	AM Type	Sample ID	Average Flow Rate (L/Min)	Time On	Total Sampling Time (Min)	Total Volume (L)	Results
Western elevation, Beach entry, on fence	B	dh063457	3.5	10:10	148	518.00	<0.01 f/ml
Southern elevation, on pole	B	dh063440	3.5	10:12	148	518.00	<0.01 f/ml
Northern elevation, on stone retaining wall	B	dh063574	3.5	10:15	140	490.00	<0.01 f/ml
Field blank	Bl	dh063438					0 fibres / 100 fields

AM Type Legend

B= Background **Co**= Control **Cl** = Clearance **Bl**= Field Blank **Pe**= Personal

Comments/Recommendations:

All air monitoring results were below the exposure standard for asbestos fibers during removal works <0.01 f/ml
NATA accredited laboratory results are provided within **Appendix 2**.

Disclaimer:

The results within this report relate only to the sampling locations specified and their analysis. This report shall not be reproduced, except in full.

Prepared By	Approved By
Karim Nazemi *Licensed Asbestos Assessor #001359* Senior Occupational Hygienist 10/03/2023	**Denny Bolatti** Principal Occupational Hygienist Licensed Asbestos Assessor 001132 16/03/2023

Appendix 1: Air Monitoring Locations

Location: Western elevation, Beach entry, on fence
Result: <0.01 f/ml
Image Id: 230310-102533

Location: Southern elevation, on pole
Result: <0.01 f/ml
Image Id: 230310-102811

Location: Northern elevation, on stone retaining wall
Result: <0.01 f/ml
Image Id: 230310-103557

Location: Field blank
Result: 0 fibres / 100 fields
Image Id: 230310-103634

How to Contact Us

Mail	Trinitas Group
	PO Box 1376 Parramatta NSW 2124
Email	admin@trinitasgroup.com.au
Address	Level 3, 24 Hunter Street, Parramatta NSW 2150
Website	www.trinitasgroup.com.au
Telephone	1800 4 TRINITAS
Facsimile	02 8016 0875

Trinitas Group Pty Ltd
ABN 12 161 759 708

Appendix 2: Laboratory Analysis Results

Certificate of Analysis

Environment Testing

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.

Trinitas Group Pty Ltd
Level 3, 24 Hunter Street
Parramatta
NSW 2150

Attention:	Denny Bolatti
Report	971746-AFA
Project Name	LITTLE BAY BEACH
Received Date	Mar 13, 2023
Date Reported	Mar 15, 2023

METHODOLOGY:

Asbestos Counting	Conducted in accordance with the National Occupational Health & Safety Commission - Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and in-house Method LTM-ASB-8010.

Project Name LITTLE BAY BEACH
Project ID
Date Sampled Mar 10, 2023
Report 971746-AFA

Eurofins Sample No.	Client Sample ID	Location	Fibres/100 fields
23-Ma0033388	DH063438	BLANK	0/100
23-Ma0033389	DH063440	SOUTHERN ELEVATION, ON POLE	0/100
23-Ma0033390	DH063457	WESTERN ELEVATION, BEACH ENTRY, ON FENCE	0/100
23-Ma0033391	DH063574	NORTHERN ELEVATION, ON STONE RETAINING WALL	0/100

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.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8010	Sydney	Mar 14, 2023	Indefinite

eurofins

web: www.eurofins.com.au
email: 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
NATA# 1261 Site# 1254

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 25403

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
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
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

Newcastle
1/2 Frost Drive
Mayfield West NSW 2304
Tel: +61 2 4968 8448
NATA# 1261
Site# 25079 & 25289

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Ltd
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: Trinitas Group Pty Ltd
Address: Level 3, 24 Hunter Street
Parramatta
NSW 2150

Project Name: LITTLE BAY BEACH

Order No.:
Report #: 971746
Phone: 02 8810 4445
Fax: 02 8016 0875

Received: Mar 13, 2023 12:10 PM
Due: Mar 14, 2023
Priority: 1 Day
Contact Name: Denny Bolatti

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Asbestos (amount of fibres in air)
Sydney Laboratory - NATA # 1261 Site # 18217						X
External Laboratory						
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
1	DH063438	Mar 10, 2023		Air	S23-Ma0033388	X
2	DH063440	Mar 10, 2023	12:40PM	Air	S23-Ma0033389	X
3	DH063457	Mar 10, 2023	12:38PM	Air	S23-Ma0033390	X
4	DH063574	Mar 10, 2023	12:35PM	Air	S23-Ma0033391	X
Test Counts						4

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
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.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**).
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to “non-bonded / friable”.
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w)**.
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021).
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
Sampling	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

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

Asbestos Counter/Identifier:

Bennel Jiri	Senior Analyst-Asbestos

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos

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.