

### JBS&G (65686 - 163,935)

### AMR324 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

5 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

### AMR324: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Wednesday 4 December 2024.** Daily sample locations are shown in **Attachment 2.** 

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

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If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





# Asbestos Air Monitoring Results



# Certificate of Analysis

# **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1167451-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 04, 2024
Date Reported	Dec 04, 2024

### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 04, 2024
Report	1167451-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0008705	DM208763	AC027	LOC1: LP7, NE ADJ TO P14 + LP6	7:07	15:00	2.0	2.0	0/100	< 0.01
24-De0008706	DM208696	AC152	LOC2: BIRSB, WEST ADJ TO P14	7:09	15:02	2.0	2.0	0/100	< 0.01
24-De0008707	DM208689	AC142	LOC3: BIRSB, CENTRE ADJ RETAINING WALL	7:11	15:04	2.0	2.0	0/100	< 0.01
24-De0008708	DM208753	AC035	LOC4: LP9, EAST ADJ HAUL RD CATTLE GRID	7:14	15:07	2.0	2.0	0/100	< 0.01
24-De0008709	DM208692	AC161	LOC5: BIRSB, REDBANK RD CORNER CCC CARPARK	7:18	15:11	2.0	2.0	0/100	< 0.01
24-De0008710	DM208770	AC132	LOC6: BIRSB, EAST ADJ CCC	7:20	15:13	2.0	2.0	0.5/100	< 0.01
24-De0008711	DM208741	AC167	LOC7: LP7, SW ADJ TO SITE SHEDS	7:23	15:17	2.0	2.0	0/100	< 0.01
24-De0008712	DM208697	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 04, 2024

Holding Time 24 Indefinite

Eurofins Environment Testing Australia Pty Ltd										Eurofins ARL Pty Ltd	Eurofins Environment Testing NZ Ltd					
ABN: 50 005 085 521 Melbourne Geelong Sydney Canberra										ABN: 91 05 0159 898	NZBN: 9429046024					
web: w	ww.eurofins.com.au nviroSales@eurofins.co	Melbourne 6 Monterey Road Dandenong Sou VIC 3175 n.au +61 3 8564 5000		eelong 9/8 Lewalan Street irovedale IC 3216 61 3 8564 5000 ATA# 1261 ite# 25403	Lewalan Street 179 Magowar Road evale Girraween 3216 NSW 2145 3 8564 5000 +61 2 9900 8400 A# 1261 NATA# 1261		Brisbane           Street         1/21 Smallwood Place           Murarrie         OLD 4172           91         T: +61 7 3902 4600           NATA# 1261         Site# 20794 & 2780		Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402		
Co Ad	mpany Name: dress:	JBS & G Austr Level 8, 179 El Sydney NSW 2000	alia (NS izabeth	W) P/L St					Order No Report #: Phone: Fax:			Received: Due: Priority: Contact Name:	Dec 4, 2024 Dec 4, 2024 Same day Milad Nouja			
	oject Name: oject ID:	IMHC WESTM 65686	EAD								Eurofin	s Analytical Servi	ces Manager :	Andrew Black		
Sud	Sample Detail															
	ney Laboratory		Site # 1	18217			Х	-								
No	rnal Laboratory Sample ID	Sample Date	Samp	oling Ma	trix L	AB ID		_								
	<b>D</b> 14000700	D 04 0004	Tin		004.5	0000705	V	-								
1	DM208763	Dec 04, 2024	3:00P			e0008705	X	-								
-	DM208696	Dec 04, 2024	3:02P			e0008706	X	-								
3 4	DM208689 DM208753	Dec 04, 2024 Dec 04, 2024	3:04P 3:07P			e0008707 e0008708	X X	{								
5	DM208753	Dec 04, 2024 Dec 04, 2024	3:11P			e0008708	X	1								
6	DM208770	Dec 04, 2024	3:13P			e0008710	X	1								
7	DM208741	Dec 04, 2024	3:17P			e0008711	Х	1								
8	DM208697	Dec 04, 2024		Air		e0008712	Х	1								
Teet	Counts						8	1								



#### Internal Quality Control Review and Glossary General

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

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

Units	
	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
	Airborne fibre filter loading as Fibres (N) per Fields counted (n) Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
	Concentration in grams per kilogram 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:	$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$
Ashastas Cantant (as ashastas);	$\% w/w = \frac{(m \times P_A)}{M}$
Asbestos Content (as asbestos):	$90 W/W = \frac{1}{M}$
Weighted Average (of asbestos):	$\mathscr{H}_{WA} = \sum \frac{(m \times P_A)_x}{x}$
Tormo	
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 (Pa). This estimate is not NATA-accredited.
	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.
	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".
	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 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Australian Standard.
, ,	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Chain of Custody.
	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Sample is dried by heating prior to analysis.
	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
	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 distinguish visibly 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 Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
	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 the degree of friability.
	UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
	International Organization for Standardization / International Electrotechnical Commission.
. ,	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).
	Limit of Reporting.
, ,	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)].
	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
	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 5370:2024* Sampling and qualitative
	identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
Trace Analysis	An analytical procedure is 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 to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is 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-
	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



#### Comments

Volume Measurement : David Edwards-Davis, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

#### 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	N/A
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

#### Asbestos Counter/Identifier:

Geronimo Jr Abrot Senior Analyst-Asbestos

#### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

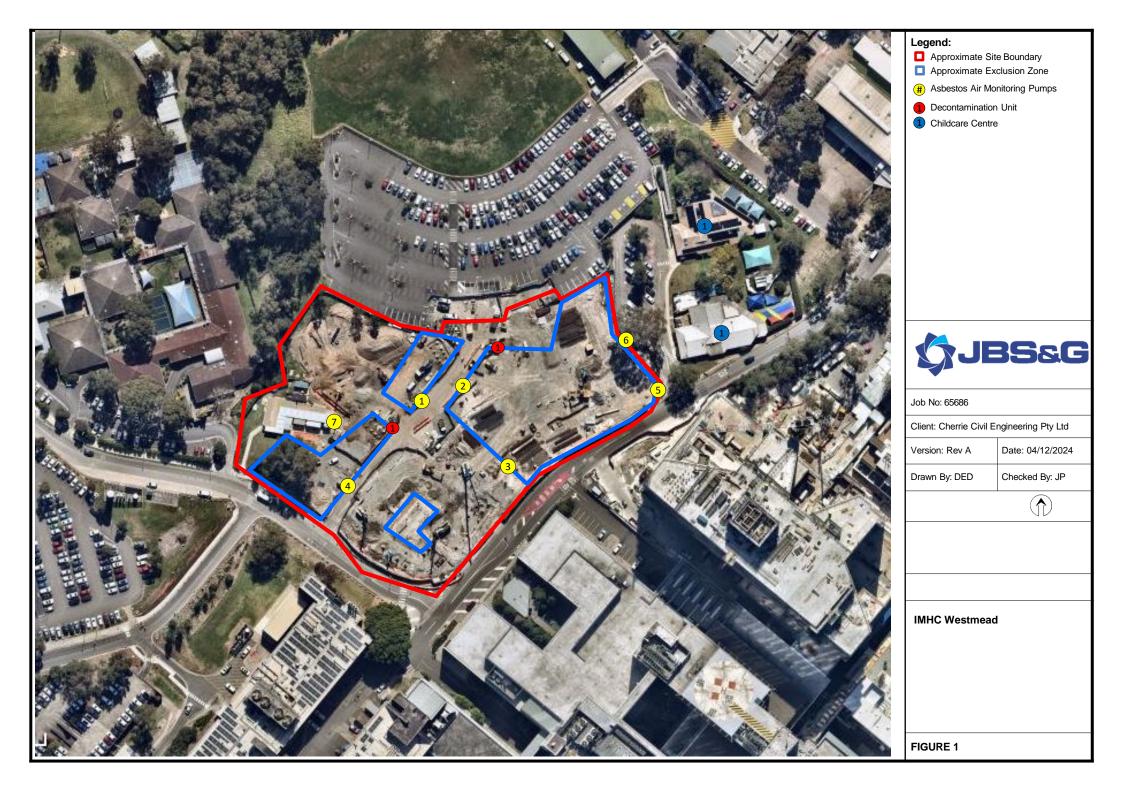
\* Indicates NATA accreditation does not cover the performance of this service

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.



# 2 Daily Sample Locations





### JBS&G (65686 - 164,149)

### AMR325 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

6 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

## AMR325: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Thursday 05 December 2024.** Daily sample locations are shown in **Attachment 2.** 

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

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If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





# Asbestos Air Monitoring Results



# Certificate of Analysis

# **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1168051-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 05, 2024
Date Reported	Dec 05, 2024

### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 05, 2024
Report	1168051-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0012277	DM208694	AC027	LOC1: LP7, NE ADJ TO P14 + LP6	7:05	15:05	2.0	2.0	0/100	< 0.01
24-De0012278	DM208712	AC035	LOC2: BIRSB, WEST ADJ TO P14	7:07	15:07	2.0	2.0	0/100	< 0.01
24-De0012279	DM208728	AC142	LOC3: BIRSB, CENTRE OPPOSITE RETAINING WALL	7:09	15:09	2.0	2.0	0/100	< 0.01
24-De0012280	DM208710	AC152	LOC4: LP9, EAST ADJ HAUL RD CATTLE GRID	7:12	15:12	2.0	2.0	0/100	< 0.01
24-De0012281	DM208700	AC119	LOC5: BIRSB, REDBANK RD CORNER CCC CARPARK	7:15	15:16	2.0	2.0	0/100	< 0.01
24-De0012282	DM208699	AC161	LOC6: BIRSB, EAST ADJ CCC	7:18	15:18	2.0	2.0	0/100	< 0.01
24-De0012283	DM208705	AC132	LOC7: LP7, SW ADJ TO SITE SHEDS	7:22	15:23	2.0	2.0	0/100	< 0.01
24-De0012284	DM208703	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 05, 2024

Holding Time 24 Indefinite

Eurofins Environment Testing Australia Pty Ltd										Eurofins ARL Pty Ltd	Eurofins Environment Testing NZ Ltd					
eurofins ABN: 50 005 085 521										ABN: 91 05 0159 898	NZBN: 9429046024					
web: wy	ww.eurofins.com.au inviroSales@eurofins.co	Melbourne 6 Monterey Roa Dandenong Sou VIC 3175 m.au +61 3 8564 500		interey Road         19/8 Lewalan Street         179 Ma           idenong South         Grovedale         Girrawe           3175         VIC 3216         NSW 2           3 8564 5000         +61 3 8564 5000         +61 4 2           IA 1261         NATA# 1261         NATA# <th colspan="2">Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466</th> <th>Brisbane 1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 &amp; 2780</th> <th>Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079</th> <th>Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 &amp; 2554</th> <th>Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327</th> <th>Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308</th> <th>Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290</th> <th>Tauranga           1277 Cameron Road,           Gate Pa,           Tauranga 3112           +64 9 525 0568           IANZ# 1402</th>		Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466		Brisbane 1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga           1277 Cameron Road,           Gate Pa,           Tauranga 3112           +64 9 525 0568           IANZ# 1402		
Co Ad	dress:	JBS & G Austr Level 8, 179 E Sydney NSW 2000	alia (NS	SW) P/L	Site# 18217				Order No Report #: Phone: Fax:	.:		Received: Due: Priority: Contact Name:	Dec 5, 2024 Dec 5, 2024 Same day Milad Nouja			
	oject Name: oject ID:	IMHC WESTM 65686	EAD								Eurofins	s Analytical Servi	ces Manager :	Andrew Black		
Sample Detail							Asbestos Fibre Count & Concentration ×									
	ney Laboratory		Site #	18217			X									
No	rnal Laboratory Sample ID	Sample Date			trix L	AB ID										
1	DM208694	Dec 05, 2024	7:05/	<b>ne</b> AM Air	S24-D	e0012277	х									
2	DM208712	Dec 05, 2024	7:07			e0012278	X									
3	DM208728	Dec 05, 2024	7:09/			e0012279	X	1								
4	DM208710	Dec 05, 2024	7:12/			e0012280	Х									
5	DM208700	Dec 05, 2024	7:15/			e0012281	Х	1								
6	DM208699	Dec 05, 2024	7:18/			e0012282	Х									
7	DM208705	Dec 05, 2024	7:22/			e0012283	Х	1								
8	DM208703	Dec 05, 2024		Air		e0012284	Х	]								
Tost	Counts						8	]								



#### Internal Quality Control Review and Glossary General

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

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

Units	
	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
	Airborne fibre filter loading as Fibres (N) per Fields counted (n) Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
	Concentration in grams per kilogram 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:	$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$
Ashastas Cantant (as ashastas);	$\% w/w = \frac{(m \times P_A)}{M}$
Asbestos Content (as asbestos):	$90 W/W = \frac{1}{M}$
Weighted Average (of asbestos):	$\mathscr{H}_{WA} = \sum \frac{(m \times P_A)_x}{x}$
Tormo	
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 (Pa). This estimate is not NATA-accredited.
	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.
	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".
	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 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Australian Standard.
, ,	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Chain of Custody.
	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Sample is dried by heating prior to analysis.
	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
	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 distinguish visibly 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 Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
	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 the degree of friability.
	UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
	International Organization for Standardization / International Electrotechnical Commission.
. ,	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).
	Limit of Reporting.
, , ,	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)].
	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
	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 5370:2024* Sampling and qualitative
	identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
Trace Analysis	An analytical procedure is 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 to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is 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-
	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



#### Comments

Volume Measurement : DAVID EDWARDS-DAVIS, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

#### 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:

Geronimo Jr Abrot Senior Analyst-Asbestos

#### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

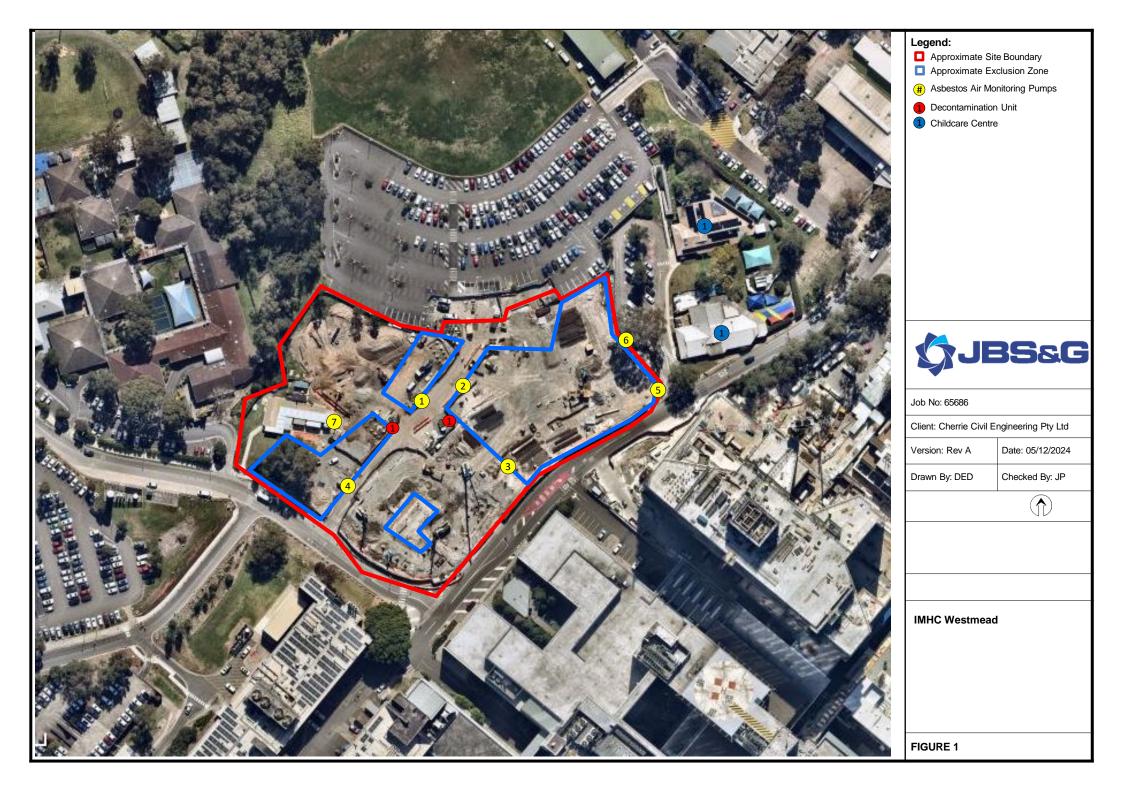
\* Indicates NATA accreditation does not cover the performance of this service

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.



# 2 Daily Sample Locations





### JBS&G (65686 - 164,150)

### AMR326 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

9 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

## AMR326: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Friday 06 December 2024.** Daily sample locations are shown in **Attachment 2**.

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

\_\_\_\_\_

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





# Asbestos Air Monitoring Results



# Certificate of Analysis

# **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1168635-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 06, 2024
Date Reported	Dec 06, 2024

### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 06, 2024
Report	1168635-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0016389	DM208766	AC142	LOC1: LP7, NE ADJ TO P14 + LP6	7:01	14:40	2.0	2.0	0/100	< 0.01
24-De0016390	DM208686	AC119	LOC2: BIRSB, WEST ADJ TO P14	7:03	14:42	2.0	2.0	0/100	< 0.01
24-De0016391	DM208724	AC167	LOC3: BIRSB, CENTRE OPPOSITE RETAINING WALL	7:05	14:42	2.0	2.0	0/100	< 0.01
24-De0016392	DM208723	AC035	LOC4: LP9, EAST ADJ HAUL RD CATTLE GRID	7:07	14:46	2.0	2.0	0/100	< 0.01
24-De0016393	DM208713	AC027	LOC5: BIRSB, REDBANK RD CORNER CCC CARPARK	7:09	14:48	2.0	2.0	0/100	< 0.01
24-De0016394	DM208688	AC161	LOC6: BIRSB, EAST ADJ CCC		14:50	2.0	2.0	0/100	< 0.01
24-De0016395	DM208695	AC152	LOC7: LP7, SW ADJ TO SITE SHEDS		14:53	2.0	2.0	1/100	< 0.01
24-De0016396	DM208726	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 06, 2024

Holding Time 24 Indefinite

Eurofins Environment Testing Australia Pty Ltd						Eurofins ARL Pty Ltd				Eurofins Environment Testing NZ Ltd				
web: www.eurofins.com.au email: EnviroSales@eurofins.com		ABN: 50 005	ABN: 50 005 085 521							ABN: 91 05 0159 898	NZBN: 9429046024954			
		6 Monterey R Dandenong S VIC 3175 +61 3 8564 5	6 Monterey Road         19/8 Lewalan Street         17           Dandenong South         Grovedale         G           VIC 3175         VIC 3216         N:           +61 3 8564 5000         +61 3 8564 5000         +6           NATA# 1261         NATA# 1261         NATA# 1261		Sydney         Canberra           179 Magowar Road         Unit 1,2 Da           Girraween         Mitchell           NSW 2145         ACT 2911           +61 2 9900 8400         +61 2 6113           NATA# 1261         NATA# 1261			Brisbane 1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402
Co Ad	ompany Name: Idress:	JBS & G Austra	S & G Australia (NSW) P/L /el 8, 179 Elizabeth St Inev					0.0	Order No Report #: Phone: Fax:	:		Received: Due: Priority: Contact Name:	Dec 6, 2024 Dec 6, 2024 Same day Milad Nouja	
	Project Name: IMHC WESTMEAD Project ID: 65686								Eurofins	s Analytical Servio	ces Manager : .	Andrew Black		
Sud	Sample Detail			Asbestos Fibre Count & Concentration										
	ney Laboratory		Site # 1	8217			Х							
No	ernal Laboratory Sample ID	/ Sample Date	Sampl	ling Ma	trix L	AB ID								
			Tim											
1	DM208766	Dec 06, 2024	7:01AN			e0016389	X							
2	DM208686	Dec 06, 2024	7:03AN			e0016390	X							
3 4	DM208724 DM208723	Dec 06, 2024	7:05AN 7:07AN			e0016391	X X							
4 5	DM208723 DM208713	Dec 06, 2024 Dec 06, 2024	7:07AN			e0016392 e0016393	X							
6	DM208688	Dec 06, 2024 Dec 06, 2024	7:109AN			e0016393	x							
7	DM208695	Dec 06, 2024 Dec 06, 2024	7:14AN			e0016394	x							
8	DM208726	Dec 06, 2024		Air		e0016396	X							
	t Counts	20000, 2024	1	17.00	1024 0		8							
103	- counto						-	I						



#### Internal Quality Control Review and Glossary General

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

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

Units	
	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
	Airborne fibre filter loading as Fibres (N) per Fields counted (n) Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
	Concentration in grams per kilogram 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:	$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$
Ashastas Cantant (as ashastas);	$\% w/w = \frac{(m \times P_A)}{M}$
Asbestos Content (as asbestos):	$90 W/W = \frac{1}{M}$
Weighted Average (of asbestos):	$\mathscr{H}_{WA} = \sum \frac{(m \times P_A)_x}{x}$
Tormo	
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 (Pa). This estimate is not NATA-accredited.
	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.
	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".
	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 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Australian Standard.
, ,	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Chain of Custody.
	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Sample is dried by heating prior to analysis.
	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
	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 distinguish visibly 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 Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
	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 the degree of friability.
	UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
	International Organization for Standardization / International Electrotechnical Commission.
. ,	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).
	Limit of Reporting.
, , ,	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)].
	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
	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 5370:2024* Sampling and qualitative
	identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
Trace Analysis	An analytical procedure is 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 to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is 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-
	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



#### Comments

Volume Measurement : MILAD NOUJAIN, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

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:

Geronimo Jr Abrot

Senior Analyst-Asbestos

#### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

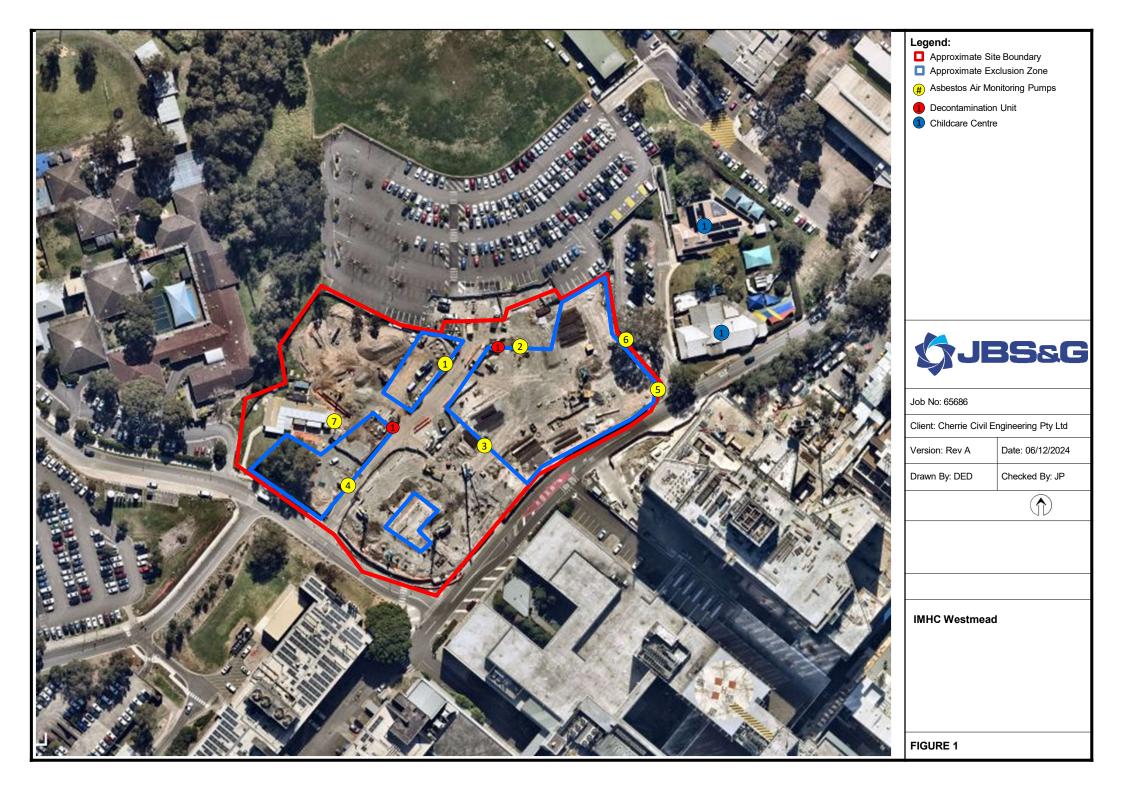
\* Indicates NATA accreditation does not cover the performance of this service

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.



# 2 Daily Sample Locations





### JBS&G (65686 - 164,152)

### AMR327 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

10 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

## AMR327: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Monday 09 December 2024.** Daily sample locations are shown in **Attachment 2.** 

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

\_\_\_\_\_

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





# Asbestos Air Monitoring Results



# Certificate of Analysis

# **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1169101-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 09, 2024
Date Reported	Dec 10, 2024

### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 09, 2024
Report	1169101-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0019707	DM208725	AC142	LOC1: LP7, NE ADJ TO LP6 + P14	7:03	15:03	2.0	2.0	0/100	< 0.01
24-De0019708	DM208721	AC152	LOC2: BIRSB, WEST ADJ TO P14	7:05	15:05	2.0	2.0	0/100	< 0.01
24-De0019709	DM208704	AC027	LOC3: BIRSB, CENTRE OPPOSITE RETAINING WALL	7:07	15:07	2.0	2.0	0/100	< 0.01
24-De0019710	DM208757	AC035	LOC4: LP9 HAUL RD CORNER CCC CARPARK	7:09	15:10	2.0	2.0	0/100	< 0.01
24-De0019711	DM208707	AC132	LOC5: BIRSB, REDBANK RD CORNER CCC CARPARK	7:13	15:15	2.0	2.0	0/100	< 0.01
24-De0019712	DM208720	AC161	LOC6: BIRSB, EAST ADJ CCC	7:15	15:17	2.0	2.0	0/100	< 0.01
24-De0019713	DM208714	AC119	LOC7: LP7, SW ADJ TO SITE SHED	7:19	15:22	2.0	2.0	0/100	< 0.01
24-De0019714	DM208690	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 09, 2024

Holding Time 24 Indefinite

	_		Eurofins Environment Testing Australia Pty Ltd								Eurofins Environment Testing NZ Ltd					
web: www.eurofinsanz.com email: EnviroSales@eurofins.com		ABN: 50 005	ABN: 50 005 085 521								NZBN: 9429046024954					
		6 Monterey R Dandenong S VIC 3175 +61 3 8564 5	oad 19/ South Gro VIC 000 +6 <sup>-</sup> NA	eelong /8 Lewalan Street ovedale C 3216 1 3 8564 5000 ATA# 1261 te# 25403	Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466		Brisbane 1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402		
Company Name: JBS & G Australia (NSW) P/L Address: Level 8, 179 Elizabeth St Sydney NSW 2000									Order No Report #: Phone: Fax:	.:		Received: Due: Priority: Contact Name:	Dec 9, 2024 Dec 9, 2024 Same day Milad Nouja			
	oject Name: oject ID:	IMHC WESTM 65686	EAD								Eurofin	s Analytical Servi	ces Manager : .	Andrew Black		
Sample Detail																
	ney Laboratory		Site # 1	8217			Х									
No	ernal Laboratory Sample ID	Sample Date	Sampl	ling Ma	trix L	AB ID										
		-	Tim	e												
1	DM208725	Dec 09, 2024	3:03PN			e0019707	X									
2	DM208721	Dec 09, 2024	3:05PN			e0019708	X									
3	DM208704	Dec 09, 2024	3:07PN			e0019709	X									
4 5	DM208757 DM208707	Dec 09, 2024 Dec 09, 2024	3:10PN 3:15PN			e0019710 e0019711	X X									
5 6	DM208707 DM208720	Dec 09, 2024 Dec 09, 2024	3:15PM			e0019711 e0019712	×									
7	DM208720 DM208714	Dec 09, 2024 Dec 09, 2024	3:22PM			e0019712	x									
8	DM208690	Dec 09, 2024	0.221	Air		e0019713	X									
	t Counts	200 00, 2024		[7 W	0270		8									
ารระ งงนแร							-									



### Internal Quality Control Review and Glossary General

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

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

Units	
	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
	Airborne fibre filter loading as Fibres (N) per Fields counted (n) Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
	Concentration in grams per kilogram 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:	$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$
Ashastas Cantant (as ashastas);	$\% w/w = \frac{(m \times P_A)}{M}$
Asbestos Content (as asbestos):	$90 W/W = \frac{1}{M}$
Weighted Average (of asbestos):	$\mathscr{H}_{WA} = \sum \frac{(m \times P_A)_x}{x}$
Tormo	
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 (Pa). This estimate is not NATA-accredited.
	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.
	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".
	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 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Australian Standard.
, ,	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Chain of Custody.
	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Sample is dried by heating prior to analysis.
	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
	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 distinguish visibly 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 Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
	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 the degree of friability.
	UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
	International Organization for Standardization / International Electrotechnical Commission.
. ,	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).
	Limit of Reporting.
, , ,	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)].
	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
	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 5370:2024* Sampling and qualitative
	identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
Trace Analysis	An analytical procedure is 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 to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is 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-
	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



### Comments

Volume Measurement : David Edwards-Davis, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

### 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	N/A
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

### Asbestos Counter/Identifier:

Geronimo Jr Abrot Senior Analyst-Asbestos

### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

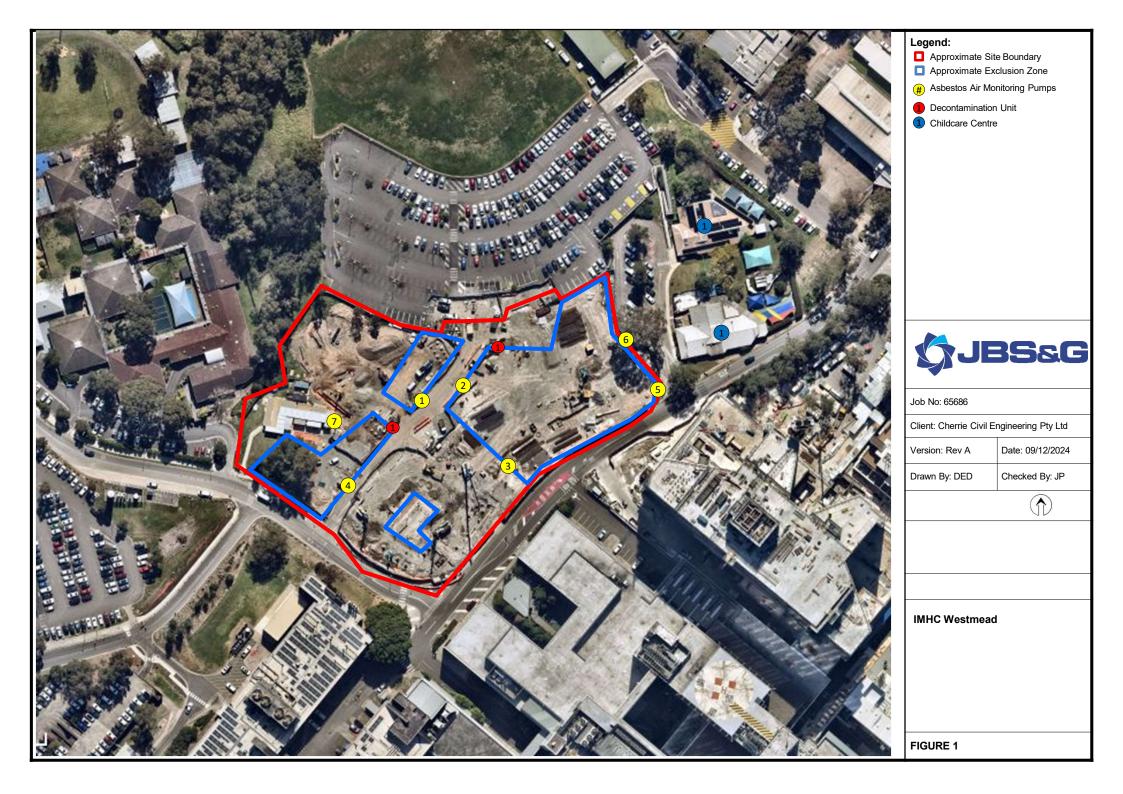
\* Indicates NATA accreditation does not cover the performance of this service

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.



## 2 Daily Sample Locations





### JBS&G (65686 - 164,154)

### AMR328 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

11 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

### AMR328: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Tuesday 10 December 2024.** Daily sample locations are shown in **Attachment 2.** 

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

\_\_\_\_\_

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





### Asbestos Air Monitoring Results



## Certificate of Analysis

## **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1169494-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 10, 2024
Date Reported	Dec 10, 2024

### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 10, 2024
Report	1169494-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0022968	DM208717	AC035	LOC1: LP7, NE ADJ TO P14 + LP6	7:03	15:05	2.0	2.0	0/100	< 0.01
24-De0022969	DM208729	AC142	LOC2: BIRSB, WEST ADJ TO P14	7:05	15:07	2.0	2.0	0/100	< 0.01
24-De0022970	DM208718	AC152	LOC3: BIRSB, CENTRE OPPOSITE RETAINING WALL	7:07	15:09	2.0	2.0	0/100	< 0.01
24-De0022971	DM208701	AC027	LOC4: LP9, EAST ADJ HAUL RD CATTLE GRID	7:11	15:12	2.0	2.0	0/100	< 0.01
24-De0022972	DM208719	AC132	LOC5: BIRSB, REDBANK RD CORNER CCC CARPARK		15:15	2.0	2.0	0/100	< 0.01
24-De0022973	DM208691	AC119	LOC6: BIRSB, EAST ADJ CCC	7:17	15:17	2.0	2.0	0/100	< 0.01
24-De0022974	DM208716	AC161	LOC7: LP7, SW ADJ TO SITE SHEDS	7:21	15:21	2.0	2.0	0/100	< 0.01
24-De0022975	DM208706	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 10, 2024

Holding Time 24 Indefinite

•••			nvironme	ent Testing Aust	ralia Pty Ltd					Eurofins ARL Pty Ltd	Eurofins Enviro	nment Testing NZ Ltd		
web: www.eurofinsanz.com email: EnviroSales@eurofins.com		ABN: 50 005 085 521								ABN: 91 05 0159 898	NZBN: 9429046024954			
		6 Monterey R Dandenong S VIC 3175 +61 3 8564 5	6 Monterey Road         19/8 Lewalan Street           Dandenong South         Grovedale           VIC 3175         VIC 3216           +61 3 8564 5000         +61 3 8564 5000           NATA# 1261         NATA# 1261		Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Mitchell ACT 2911 3400 +61 2 6113 8091		Brisbane 1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402
Ad	dress:	JBS & G Austra	S & G Australia (NSW) P/L vel 8, 179 Elizabeth St dnev						Order No Report #: Phone: Fax:	.:		Received: Due: Priority: Contact Name:	Dec 10, 202 Dec 10, 202 Same day Milad Nouja	4
Pro Pro	oject Name: oject ID:	IMHC WESTM 65686	EAD								Eurofin	s Analytical Servi	ces Manager :	Andrew Black
Sydi	Sample Detail			Asbestos Fibre Count & Concentration ×										
	ney Laboratory		Site #	18217			X							
No	rnal Laboratory Sample ID	Sample Date	Samp		trix L	AB ID								
1	DM208717	Dec 10, 2024	7:03A		S24-D	e0022968	Х	•						
2	DM208729	Dec 10, 2024	7:05A			e0022969	Х	1						
3	DM208718	Dec 10, 2024	7:07A			e0022970	Х	1						
4	DM208701	Dec 10, 2024	7:11A			e0022971	Х							
5	DM208719	Dec 10, 2024	7:15A			e0022972	Х							
6	DM208691	Dec 10, 2024	7:17A			e0022973	Х							
7	DM208716	Dec 10, 2024	7:21A			e0022974	Х							
8	DM208706	Dec 10, 2024		Air	S24-D	e0022975	Х	]						
				8										



### Internal Quality Control Review and Glossary General

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

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

Weighted Average	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (%wA).
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
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004. It may include (but is not limited to) actinolite, anthophyllite, or tremolite asbestos.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
Trace Analysis	An analytical procedure is used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
SRA	Sample Receipt Advice.
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
PCM	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
MMVF	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
LOR	graticule area of the specific microscope used for the analysis (a). Limit of Reporting.
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
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
HSG264	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
HSG248	UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
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 the degree of friability.
Fibre Count Fibre ID	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003 Fibre Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Fibro Count	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, although FA may be more difficult to distinguish visibly and may be assessed as AF.
FA	Fibrous Asbestos. Asbestos-containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become
DS	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
Dry	Sample is dried by heating prior to analysis.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
сос	Chain of Custody.
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
Asbestos Content (as asbestos)	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
AS	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004. Australian Standard.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 5370:2024* Sampling and
AFM	Airborne Fibre Monitoring, e.g., by the MFM.
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".
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.
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 (Pa). This estimate is not NATA-accredited.
Weighted Average (of asbestos):	$\%_{WA} = \sum \frac{(m \times P_A)_X}{x}$
Asbestos Content (as asbestos):	$\% w/w = \frac{(m \times P_A)}{M}$
Calculations Airborne Fibre Concentration:	$C = \binom{A}{\alpha} \times \binom{N}{n} \times \binom{1}{r} \times \binom{1}{r} = K \times \binom{N}{n} \times \binom{1}{v}$
L/min min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r) Time (t), e.g. of air sample collection period
g/kg L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
g, kg g/kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m) Concentration in grams per kilogram
F/mL	Airborne fibre filter loading as Fibres (N) per Fields counted (n) Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
% w/w: F/fld	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
Units	
l luita	



### Comments

Volume Measurement : DAVID EDWARDS-DAVIS, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

### 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:

Geronimo Jr Abrot Senior Analyst-Asbestos

### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

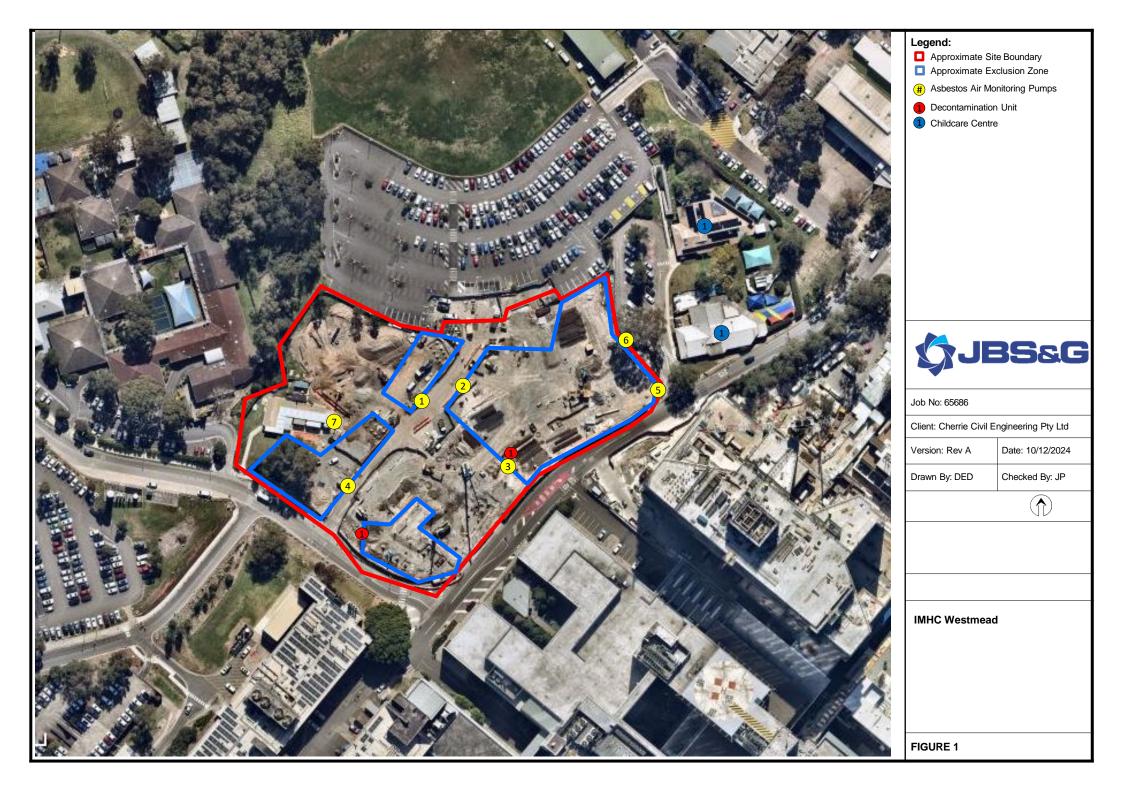
\* Indicates NATA accreditation does not cover the performance of this service

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.



## 2 Daily Sample Locations





### JBS&G (65686 - 164,155)

### AMR329 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

12 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

### AMR329: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Wednesday 11 December 2024.** Daily sample locations are shown in **Attachment 2.** 

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

\_\_\_\_\_

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





### Asbestos Air Monitoring Results



## Certificate of Analysis

## **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1170022-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 11, 2024
Date Reported	Dec 11, 2024

### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 11, 2024
Report	1170022-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0027195	DM208711	AC167	LOC1: LP7, NE ADJ TO P14 + LP6	7:04	15:01	2.0	2.0	0/100	< 0.01
24-De0027196	DM208708	AC152	LOC2: BIRSB, WEST ADJ TO P14	7:06	15:03	2.0	2.0	0/100	< 0.01
24-De0027197	DM208708	AC027	LOC3: BIRSB, CENTRE ADJ DECON 1	7:08	15:05	2.0	2.0	0/100	< 0.01
24-De0027198	DM208709	AC142	LOC4: BIRSB, UPPER RAMP ADJ DECON 2	7:11	15:08	2.0	2.0	0/100	< 0.01
24-De0027199	DM208698	AC035	LOC5: BIRSB, CORNER REDBANK RD + DRAGONFLY DR	7:14	15:12	2.0	2.0	0/100	< 0.01
24-De0027200	DM208730	AC132	LOC6: BIRSB, REDBANK RDCORNER CCC CARPARK	7:17	15:16	2.0	2.0	0/100	< 0.01
24-De0027201	DM208702	AC161	LOC7: BIRSB, EAST ADJ CCC	7:19	15:18	2.0	2.0	0/100	< 0.01
24-De0027202	DM208715	AC119	LOC8: LP7, SW ADJ TO SITE SHEDS	7:24	15:23	2.0	2.0	0/100	< 0.01



Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0027203	DM208772	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 11, 2024

Holding Time 24 Indefinite

••			Environme	ent Testing Aust	tralia Pty Ltd					Eurofins ARL Pty Ltd	Eurofins Enviro	nment Testing NZ Ltd			
	eurofin	ABN: 50 00								ABN: 91 05 0159 898	NZBN: 9429046024	124954			
web: wv	wv.eurofins.com.au	6 Monterey Dandenong VIC 3175 +61 3 8564	6 Monterey Road         19/8 Lewa           Dandenong South         Grovedale           VIC 3175         VIC 3216           +61 3 8564 5000         +61 3 856           NATA# 1261         NATA# 12		19/8 Lewalan Street         179 Magowar Road           Grovedale         Girraween           VIC 3216         NSW 2145           +61 3 8564 5000         +61 2 9900 8400           NATA# 1261         NATA# 1261		Street	Brisbane           1/21 Smallwood Place           Murarrie           QLD 4172           T: +61 7 3902 4600           NATA# 1261           Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402	
Co Ad	dress:	JBS & G Aust Level 8, 179 E Sydney NSW 2000	lizabeth	W) P/L St					Order No. Report #: Phone: Fax:			Received: Due: Priority: Contact Name:	Dec 11, 202 Dec 11, 202 Same day Milad Nouja	24	
		IMHC WESTN 65686	IEAD								Eurofin	s Analytical Servi	ces Manager :	Andrew Black	
Sydı	ney Laboratory -		ample D				Asbestos Fibre Count & Concentration								
	rnal Laboratory	11417 # 120		0217			~	-							
No	Sample ID	Sample Date	e Sampl		trix L	AB ID		-							
1	DM208711	Dec 11, 2024			S24-D	0e0027195	Х								
2		Dec 11, 2024				e0027196	Х								
3	DM208708	Dec 11, 2024				e0027197	Х								
4		Dec 11, 2024				e0027198	Х								
5		Dec 11, 2024				e0027199	Х	1							
6		Dec 11, 2024	1			De0027200	Х	1							
7		Dec 11, 2024				0e0027201	Х	1							
8		Dec 11, 2024	7:24AN			0e0027202	Х	1							
							Х	1							
9	DM208772	Dec 11, 2024		Air	S24-D	e0027203	~								



### Internal Quality Control Review and Glossary General

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

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

Please refer to the most recent vel	rsion of the Sample Preservation and Container Guide for holding times (QS3001).
Units	
% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
F/fld F/mL	Airborne fibre filter loading as Fibres (N) per Fields counted (n) Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Ansonie noise teorem devices ample (M) or as bestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL L/min	Volume, e.g. of air as measured in AFM (V = r x t) 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:	$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{c}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{c}\right)$
Albome Fibre Concentiation.	$C = \left(\frac{1}{n}\right) \times \left(\frac{1}{n}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{1}{n}\right) \times \left(\frac{1}{r}\right)$
Asbestos Content (as asbestos):	$\% w/w = \frac{(m \times P_A)}{M}$
Weighted Average (of asbestos):	$\mathscr{Y}_{0_{WA}} = \sum \frac{(m \times P_A)_X}{x}$
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 <sub>A</sub> ). This estimate is not NATA-accredited.
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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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
Eller Original	generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to distinguish visibly 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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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 the degree of friability.
HSG248	UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
HSG264	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
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)].
MMVF	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
PCM	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
Trace Analysis	An analytical procedure is 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 to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is 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-
Woightod Average	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

Volume Measurement : DAVID EDWARDS-DAVIS, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

### 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:

Geronimo Jr Abrot Senior Analyst-Asbestos

### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

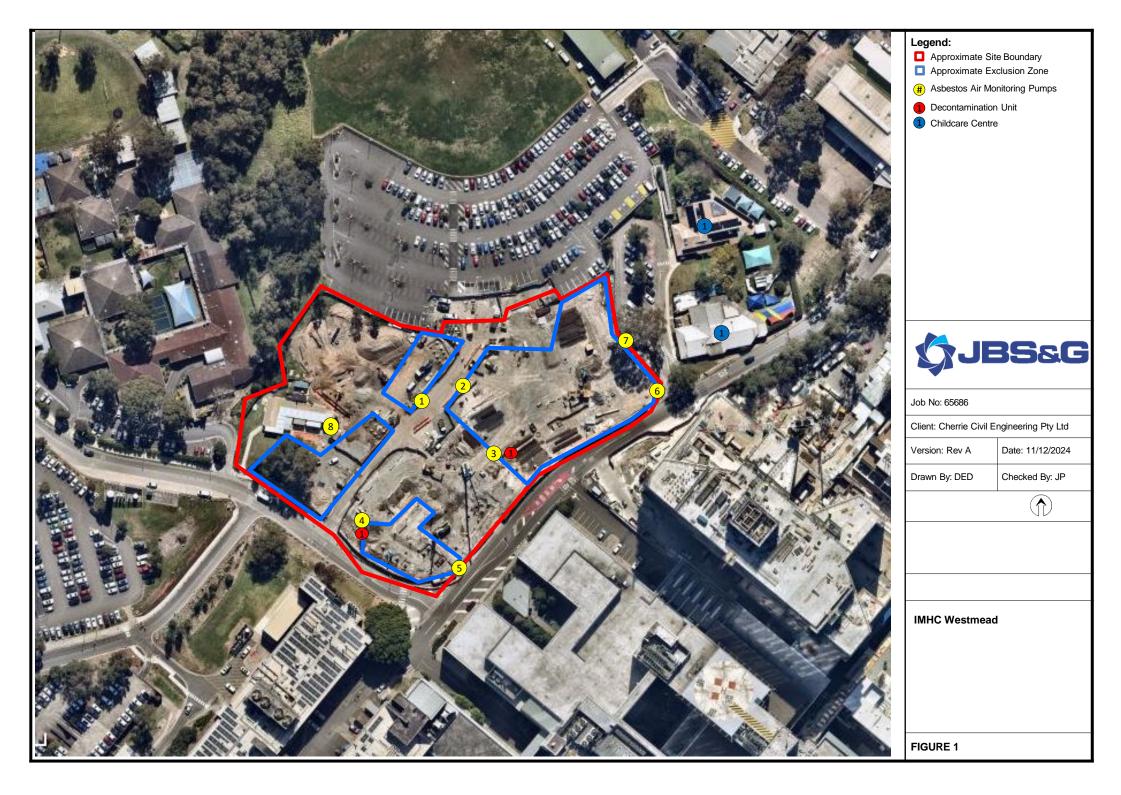
\* Indicates NATA accreditation does not cover the performance of this service

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.



## 2 Daily Sample Locations





### JBS&G (65686 - 164,157)

### AMR330 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

13 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

### AMR330: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Thursday 12 December 2024.** Daily sample locations are shown in **Attachment 2.** 

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

\_\_\_\_\_

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





### Asbestos Air Monitoring Results



## Certificate of Analysis

## **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1170591-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 12, 2024
Date Reported	Dec 12, 2024

### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 12, 2024
Report	1170591-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0031766	DM165082	AC167	LOC1: LP7, NE ADJ TO P14 + LP6	7:21	15:15	2.0	2.0	0/100	< 0.01
24-De0031767	DM165072	AC142	LOC2: BIRSB, WEST ADJ TO P14	7:23	15:17	2.0	2.0	0/100	< 0.01
24-De0031768	DM165087	AC152	LOC3: BIRSB, CENTRE ADJ TO DECON1	7:25	15:19	2.0	2.0	0/100	< 0.01
24-De0031769	DM165108	AC027	LOC4: BIRSB, UPPER RAMP ADJ TO DECON2	7:27	15:23	2.0	2.0	0/100	< 0.01
24-De0031770	DM164995	AC132	LOC5: LP9, ADJ TO ENTRY GATE SOUTH	7:29	15:25	2.0	2.0	0/100	< 0.01
24-De0031771	DM165069	AC119	LOC6: BIRSB, REDBANK RD CORNER CCC CARPARK	7:33	15:28	2.0	2.0	0/100	< 0.01
24-De0031772	DM165081	AC035	LOC7: BIRSB, EAST ADJ CCC	7:35	15:31	2.0	2.0	0/100	< 0.01
24-De0031773	DM165097	AC161	LOC8: LP7, SW ADJ TO SITE SHEDS	7:39	15:35	2.0	2.0	0/100	< 0.01



Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0031774	DM164979	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 12, 2024

Holding Time 24 Indefinite

			Environme	ent Testing Aust	tralia Pty Ltd					Eurofins ARL Pty Ltd	Eurofins Enviro	onment Testing NZ Ltd	l		
	eurofin	ABN: 50 00	5 085 521							ABN: 91 05 0159 898	NZBN: 9429046024954				
web: wv	ww.eurofins.com.au inviroSales@eurofinsanz	6 Monterey Dandenong VIC 3175 +61 3 8564	6 Monterey Road         19/8 Lewala           Dandenong South         Grovedale           VIC 3175         VIC 3216           +61 3 8564 5000         +61 3 8564           NATA# 1261         NATA# 1261		19/8 Lewalan Street         179 Magowar Road         Unit 1,2 E           Grovedale         Girraween         Mitchell           vIC 3216         NSW 2145         ACT 2911           F61 3 8564 5000         +61 2 9900 8400         +61 2 611           NATA# 1261         NATA# 1261         NATA# 1261			Brisbane 1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402	
Co Ad	dress:	JBS & G Aust Level 8, 179 E Sydney NSW 2000	lizabeth	W) P/L St					Order No Report #: Phone: Fax:			Received: Due: Priority: Contact Name:	Dec 12, 202 Dec 12, 202 Same day Milad Nouja	24	
		IMHC WESTN 65686	IEAD								Eurofin	s Analytical Servi	ces Manager :	Andrew Black	
Sydi	ney Laboratory -		ample D				Asbestos Fibre Count & Concentration ×								
	rnal Laboratory							-							
No	Sample ID	Sample Date	e Samp Tim		trix L	AB ID									
1	DM165082	Dec 12, 2024	3:15PI	M Air	S24-D	De0031766	х								
2	DM165072	Dec 12, 2024	3:17PI	M Air	S24-D	De0031767	Х								
3		Dec 12, 2024				De0031768	Х	]							
4		Dec 12, 2024				De0031769	Х	1							
5		Dec 12, 2024				De0031770	Х	1							
6		Dec 12, 2024				De0031771	Х	1							
7		Dec 12, 2024				De0031772	Х	1							
8		Dec 12, 2024	3:35PI			De0031773	Х	1							
							Х	1							
9	DM164979	Dec 12, 2024	3:15PI	M Air	S24-L	De0031774	~								



### Internal Quality Control Review and Glossary General

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

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

Units	
	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
	Airborne fibre filter loading as Fibres (N) per Fields counted (n) Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
	Concentration in grams per kilogram 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:	$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$
Ashastas Cantant (as ashastas);	$\% w/w = \frac{(m \times P_A)}{M}$
Asbestos Content (as asbestos):	$90 W/W = \frac{1}{M}$
Weighted Average (of asbestos):	$\mathscr{H}_{WA} = \sum \frac{(m \times P_A)_x}{x}$
Tormo	
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 (Pa). This estimate is not NATA-accredited.
	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.
	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 Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Australian Standard.
· · · ·	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
сос	Chain of Custody.
	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Sample is dried by heating prior to analysis.
	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
	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 distinguish visibly 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 Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
	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 the degree of friability. UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
	International Organization for Standardization / International Electrotechnical Commission.
, ,	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected evepiece
	graticule area of the specific microscope used for the analysis (a).
	Limit of Reporting.
, ,	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 5370:2024* Sampling and qualitative
	identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
•	An analytical procedure is used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is not limited to) actinolite, anthophyllite, or tremolite asbestos.
	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of 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 Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (%wa).



### Comments

Volume Measurement : Milad Noujaim, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

### 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	N/A
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

### Asbestos Counter/Identifier:

Geronimo Jr Abrot Senior Analyst-Asbestos

### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

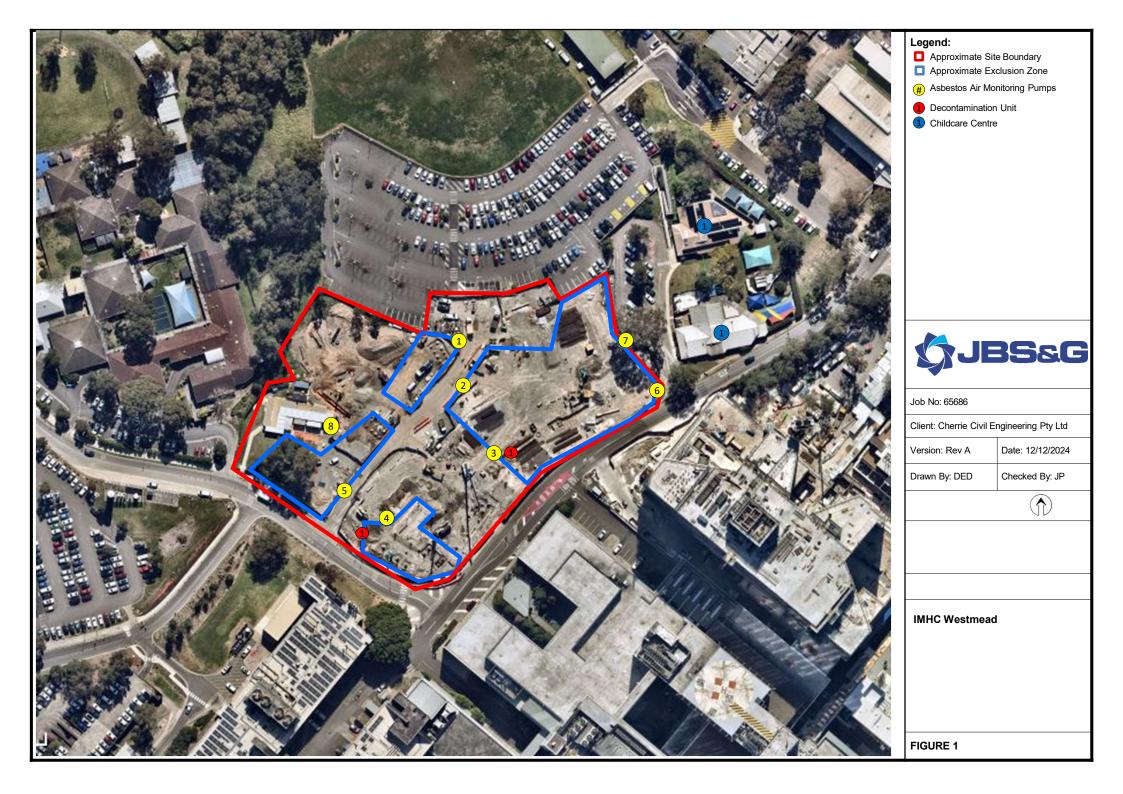
\* Indicates NATA accreditation does not cover the performance of this service

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

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## 2 Daily Sample Locations





### JBS&G (65686 - 164,159)

### AMR331 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

16 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

# AMR331: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Friday 13 December 2024.** Daily sample locations are shown in **Attachment 2**.

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

\_\_\_\_\_

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





# Asbestos Air Monitoring Results



# Certificate of Analysis

# **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1171529-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 16, 2024
Date Reported	Dec 16, 2024

### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 13, 2024
Report	1171529-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0038944	DM164984	AC035	LOC1: LP7, NE ADJ TO LP6 & P14	7:03	14:52	2.0	2.0	0/100	< 0.01
24-De0038945	DM165002	AC027	L0C2: BIRSB, WEST ADJ TO P14	7:05	14:54	2.0	2.0	0/100	< 0.01
24-De0038946	DM165091	AC119	LOC3: BIRSB, CENTRE ADJ TO DECON	7:07	14:56	2.0	2.0	0/100	< 0.01
24-De0038947	DM165089	AC142	LOC4: LP9, ADJ TO ENTRY GATE SOUTH	7:09	14:58	2.0	2.0	0.5/100	< 0.01
24-De0038948	DM165073	AC132	LOC5: BIRSB, UPPER RAMP ADJ TO DECON 2	7:11	14:59	2.0	2.0	0/100	< 0.01
24-De0038949	DM164975	AC167	LOC6: BIRSB, REDBANK RD CORNER OF CCC CARPARK	7:13	15:02	2.0	2.0	0/100	< 0.01
24-De0038950	DM165070	AC161	LOC7: BIRSB, EAST ADJI TO CCC	7:15	15:04	2.0	2.0	0/100	< 0.01
24-De0038951	DM165083	AC152	LOC8: LP8, SW ON FENCE ADJ TO SITE SHEDS	7:19	15:09	2.0	2.0	0/100	< 0.01



Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0038952	DM164967	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 16, 2024

Holding Time 24 Indefinite

Eurofins Environment Testing Australia Pty Ltd ABN: 50 005 085 521										Eurofins ARL Pty Ltd	Eurofins Environment Testing NZ Ltd NZBN: 9429046024954					
web: www.eurofins.com.au email: EnviroSales@eurofinsanz.co		6 Monterey Road 19/8 Lew Dandenong South Groveda VIC 3175 VIC 3211 +61 3 8564 5000 +61 3 85 nz.com NATA# 1261 NATA# 1		19/8 Lewalan Street         179 Magowar Road         Unit 1,2 E           Grovedale         Girraween         Mitchell           VIC 3216         NSW 2145         ACT 2911           +61 3 8564 5000         +61 2 9900 8400         +61 2 611           NATA# 1261         NATA# 1261         NATA# 1261			cre Street         1/21 Smallwood Place         1/2 Frost           Murarrie         Mayfield         QLD 4172         NSW 230           8091         T:+61 7 3902 4600         +61 2 494         NATA# 1261         NATA# 1261		Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	ABN: 91 05 0159 898 Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	NZBN: 9429046024 Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	4954 Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402		
Ad	ldress	JBS & G Aus Level 8, 179 Sydney NSW 2000 IMHC WEST	Elizabeth S						Order No Report #: Phone: Fax:			Received: Due: Priority: Contact Name:	Dec 16, 202 Dec 16, 202 Same day Milad Nouja	24		
Pro		65686	VILAD								Eurofin	s Analytical Servi	ces Manager :	Andrew Black		
Sample Detail							Asbestos Fibre Count & Concentration ×									
	ney Laboratory - ernal Laboratory	- NATA # 120	i Sile # i	0217			^	-								
No	Sample ID	Sample Dat	e Sampl Tim		trix L	AB ID		-								
1	DM164984	Dec 13, 2024			S24-D	e0038944	Х									
2	DM165002	Dec 13, 2024	1 2:54PN	Air Air	S24-D	e0038945	Х	]								
3	DM165091	Dec 13, 2024	1 2:56PN	Air Air	S24-D	e0038946	Х									
4	DM165089	Dec 13, 2024	1 2:58PN	Air Air	S24-D	e0038947	Х									
5	DM165073	Dec 13, 2024	1 2:59PN	Air Air	S24-D	e0038948	Х									
6		Dec 13, 2024				e0038949	Х	]								
7		Dec 13, 2024				e0038950	Х	]								
8		Dec 13, 2024		Air Air		0e0038951	Х	]								
9	DM164967	Dec 13, 2024	1	Air	S24-D	e0038952	Х	]								
Test	Counts						9	]								



### Internal Quality Control Review and Glossary General

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

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

Units	
	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
	Airborne fibre filter loading as Fibres (N) per Fields counted (n) Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
	Concentration in grams per kilogram 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:	$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$
Ashastas Cantant (as ashastas);	$\% w/w = \frac{(m \times P_A)}{M}$
Asbestos Content (as asbestos):	$90 W/W = \frac{1}{M}$
Weighted Average (of asbestos):	$\mathscr{H}_{WA} = \sum \frac{(m \times P_A)_x}{x}$
Tormo	
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 (Pa). This estimate is not NATA-accredited.
	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.
	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 Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Australian Standard.
· · · ·	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
сос	Chain of Custody.
	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Sample is dried by heating prior to analysis.
	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
	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 distinguish visibly 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 Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
	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 the degree of friability. UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
	International Organization for Standardization / International Electrotechnical Commission.
, ,	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected evepiece
	graticule area of the specific microscope used for the analysis (a).
	Limit of Reporting.
, ,	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 5370:2024* Sampling and qualitative
	identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
•	An analytical procedure is used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is not limited to) actinolite, anthophyllite, or tremolite asbestos.
	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of 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 Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (%wa).



#### Comments

Volume Measurement : Milad Noujaim, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

#### 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	N/A
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

### Asbestos Counter/Identifier:

Geronimo Jr Abrot Senior Analyst-Asbestos

#### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

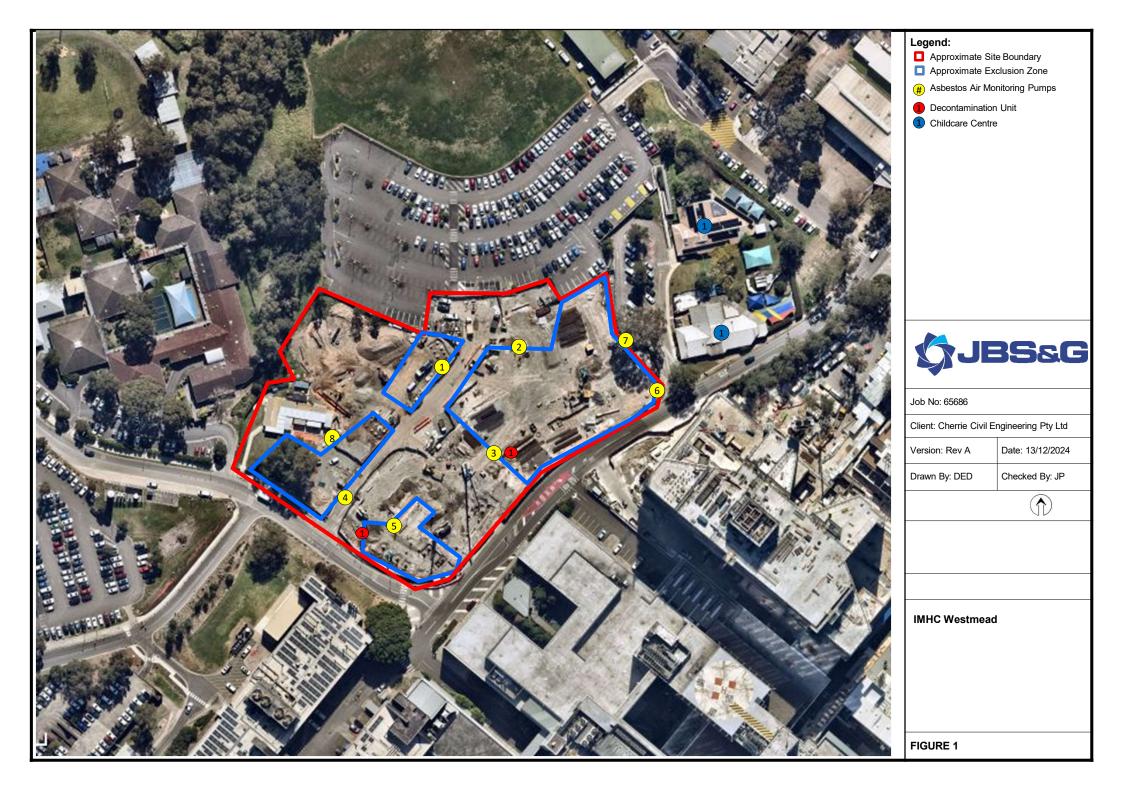
\* Indicates NATA accreditation does not cover the performance of this service

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

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# 2 Daily Sample Locations





### JBS&G (65686 - 164,161)

### AMR332 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

17 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

# AMR332: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Monday 16 December 2024.** Daily sample locations are shown in **Attachment 2.** 

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

\_\_\_\_\_

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





# Asbestos Air Monitoring Results



# Certificate of Analysis

# **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1171642-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 16, 2024
Date Reported	Dec 16, 2024

### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 16, 2024
Report	1171642-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0039926	DM165093	AC167	LOC1: LP7, NE ADJ TO P14 & LP6	7:03	15:02	2.0	2.0	0/100	< 0.01
24-De0039927	DM165078	AC027	L0C2: BIRSB, WEST ADJ TO P14	7:05	15:04	2.0	2.0	0/100	< 0.01
24-De0039928	DM164961	AC142	LOC3: BIRSB, CENTRE ADJ TO DECON 1	7:09	15:06	2.0	2.0	0/100	< 0.01
24-De0039929	DM164980	AC152	LOC4: BIRSB, UPPER RAMP ADJ TO DECON 2	7:11	15:07	2.0	2.0	1/100	< 0.01
24-De0039930	DM164959	AC035	LOC5: BIRSB, HAUL RD ADJ TO CATTLE GRID	7:13	15:10	2.0	2.0	0/100	< 0.01
24-De0039931	DM165000	AC161	LOC6: BIRSB, REDBANK RD CORNER OF CCC CARPARK	7:17	15:15	2.0	2.0	0/100	< 0.01
24-De0039932	DM164999	AC132	LOC7: BIRSB, EAST ADJI TO CCC	7:19	15:17	2.0	2.0	0/100	< 0.01
24-De0039933	DM164998	AC119	LOC8: LP8, SW ON FENCE ADJ TO SITE SHEDS	7:22	15:22	2.0	2.0	0/100	< 0.01



Eurofins Sample No.	Client Sample ID	Pump ID	Location		End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0039934	DM164973	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 16, 2024

Holding Time 24 Indefinite

web: www.eurofins.com.au email: EnviroSales@eurofinsanz.com			invironment Te	esting Aust	ralia Pty Ltd				Eurofins ARL		Eurofins Environment Testing NZ Ltd				
		6 Monterey F Dandenong S VIC 3175 +61 3 8564 5	Melbourne         Geelong           6 Monterey Road         19/8 Lewalar           Dandenong South         Grovedale           VIC 3175         VIC 3216           +61 3 8564 5000         +61 3 8564 5           NATA# 1261         NATA# 1261		Monterey Road         19/8 Lewalan Street         1           andenong South         Grovedale         0           C 3175         VIC 3216         1           11 3 8564 5000         +61 3 8564 5000         +           ATA# 1261         NATA# 1261         N		Sydney         Canberra           t179 Magowar Road         Unit 1,2 Dacre 1           Girraween         Mitchell           NSW 2145         ACT 2911           +61 2 9900 8400         +61 2 6113 803           NATA# 1261         NATA# 1261           Site# 18217         Site# 25466		Murarrie Mayfield West QLD 4172 NSW 2304		1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261	ABN: 91 05 0159 898 Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554		NZBN: 9429046024 Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	954 Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308
	dress:	JBS & G Austr Level 8, 179 E Sydney NSW 2000	alia (NSW) I lizabeth St	P/L					Order No Report #: Phone: Fax:	.: 1171642 02 8245 0300			Received: Due: Priority: Contact Name:	Dec 16, 2024 3:50 PM Dec 16, 2024 Same day : Milad Noujaim	
Pro Pro		IMHC WESTM 65686	EAD										s Analytical Servi	ces Manager :	Andrew Black
Sample Detail					Asbestos Fibre Count & Concentration ×										
	ney Laboratory - rnal Laboratory	- NATA # 1201	Sile # 1021	1			~	-							
No	Sample ID	Sample Date	Sampling Time	Mat	trix L	AB ID		-							
1	DM165093	Dec 16, 2024	7:03AM	Air	S24-D	e0039926	Х	]							
2	DM165078	Dec 16, 2024	7:05AM	Air	S24-D	e0039927	Х								
3	DM164961	Dec 16, 2024	7:09AM	Air	S24-D	e0039928	Х	ļ							
4		Dec 16, 2024	7:11AM	Air		e0039929	Х								
5		Dec 16, 2024	7:13AM	Air		e0039930	Х	-							
6		Dec 16, 2024	7:17AM	Air		e0039931	Х								
7		Dec 16, 2024	7:19AM	Air	1	e0039932	Х	ļ							
8		Dec 16, 2024	7:22AM	Air		e0039933	Х								
9	•	Dec 16, 2024		Air	S24-D	e0039934	Х	-							
Test	Counts						9	]							



### Internal Quality Control Review and Glossary General

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

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

Units	
	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
	Airborne fibre filter loading as Fibres (N) per Fields counted (n) Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
	Concentration in grams per kilogram 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:	$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$
Ashastas Cantant (as ashastas);	$\% w/w = \frac{(m \times P_A)}{M}$
Asbestos Content (as asbestos):	$90 W/W = \frac{1}{M}$
Weighted Average (of asbestos):	$\mathscr{H}_{WA} = \sum \frac{(m \times P_A)_x}{x}$
Tormo	
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 (Pa). This estimate is not NATA-accredited.
	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.
	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 Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Australian Standard.
, ,	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
сос	Chain of Custody.
	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Sample is dried by heating prior to analysis.
	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
	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 distinguish visibly 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 Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
	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 the degree of friability. UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
	International Organization for Standardization / International Electrotechnical Commission.
, ,	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected evepiece
	graticule area of the specific microscope used for the analysis (a).
	Limit of Reporting.
, ,	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 5370:2024* Sampling and qualitative
	identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
•	An analytical procedure is used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is not limited to) actinolite, anthophyllite, or tremolite asbestos.
	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of 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 Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (%wa).



#### Comments

Volume Measurement : DAVID EDWARDS-DAVIS, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

#### 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:

Geronimo Jr Abrot Senior Analyst-Asbestos

#### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

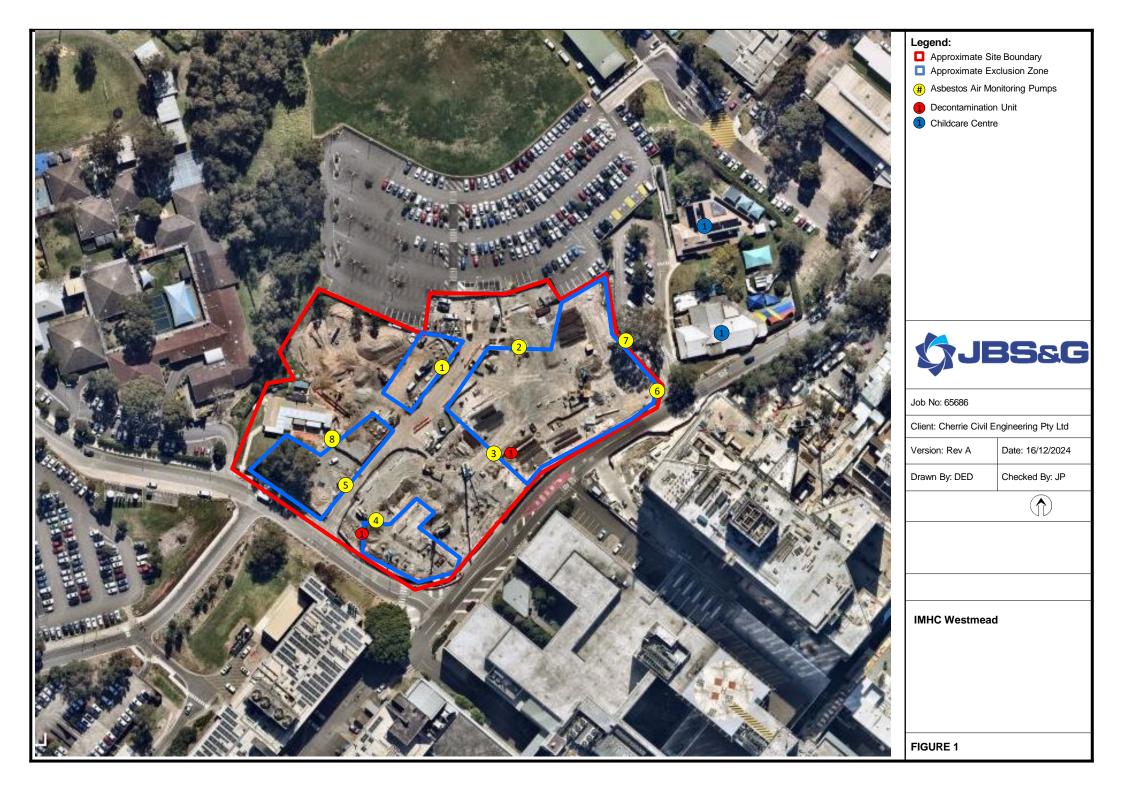
\* Indicates NATA accreditation does not cover the performance of this service

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.



# 2 Daily Sample Locations





### JBS&G (65686 - 164,163)

### AMR333 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

18 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

## AMR333: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Tuesday 17 December 2024.** Daily sample locations are shown in **Attachment 2.** 

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

\_\_\_\_\_

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





# Asbestos Air Monitoring Results



# Certificate of Analysis

# **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1172041-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 17, 2024
Date Reported	Dec 17, 2024

### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 17, 2024
Report	1172041-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location		End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0043021	DM164983	AC027	LOC1: LP7, NE ADJ P14 + LP6	7:03	11:47	2.0	2.0	0/100	< 0.01
24-De0043022	DM164978	AC167	LOC2: BRISB, WEST ADJ P14	7:05	11:49	2.0	2.0	0/100	< 0.01
24-De0043023	DM165063	AC035	LOC3: BRISB CENTRE ADJ DECON1	7:07	11:51	2.0	2.0	0/100	< 0.01
24-De0043024	DM165071	AC142	LOC4: BRISB, UPPER RAMP ADJ DECON2		11:54	2.0	2.0	0/100	< 0.01
24-De0043025	DM165068	AC152	LOC5: LP9 HAUL RD ADJ CATTLE GRID	7:09	11:57	2.0	2.0	0/100	< 0.01
24-De0043026	DM164976	AC132	LOC6: BRISB, REDBANK RD CORNER CCC CARPARK	7:15	12:01	2.0	2.0	0/100	< 0.01
24-De0043027	DM164964	AC119	LOC7: BRISB, EAST ADJ CCC	7:17	12:03	2.0	2.0	0/100	< 0.01
24-De0043028	DM164971	AC161	LOC8: LP7, SW ADJ SITE SHEDS	7:21	12:08	2.0	2.0	0/100	< 0.01



Eurofins Sample No.	Client Sample ID	Pump ID	Location		End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0043029	DM165094	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 17, 2024

Holding Time 24 Indefinite

🔅 eurofins				Testing Aust	tralia Pty Ltd					RL Pty Ltd	Eurofins Environment Testing NZ Ltd				
		6 Monterey F	6 Monterey Road 19/8 Lewala		Sydney 179 Magowar Road Girraween	Canberra war Road Unit 1,2 Dacre S Mitchell		Brisbane 1/21 Smallwood Place Murarrie	Newcastle 1/2 Frost Drive Mayfield West	ABN: 91 05 0159 898 Perth 46-48 Banksia Road		NZBN: 9429046024 Auckland 35 O'Rorke Road Penrose,	Auckland (Focus) Unit C1/4 Pacific Rise,	Christchurch 43 Detroit Drive Rolleston,	Tauranga 1277 Cameron Road,
	ww.eurofins.com.au EnviroSales@eurofinsanz	VIC 3175 +61 3 8564 5	VIC 3216 4 5000 +61 3 8564 5000 61 NATA# 1261		NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	ACT 2911 +61 2 6113 809 NATA# 1261 Site# 25466	91	QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554		Auckland 1061 +64 9 526 4551 IANZ# 1327	Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 7675 +64 3 343 5201 IANZ# 1290	Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402
Co Ad	dress:	JBS & G Austra Level 8, 179 El Sydney NSW 2000	G Australia (NSW) P/ 8, 179 Elizabeth St 2000						Order No Report #: Phone: Fax:	: 1172	2041 245 0300		Received: Due: Priority: Contact Name:	Dec 17, 202 Dec 17, 202 Same day Milad Nouja	24
Pro Pro		IMHC WESTM 65686	EAD									Eurofin	s Analytical Servi	ces Manager :	Andrew Black
Sample Detail Sydney Laboratory - NATA # 1261 Site # 18217					Asbestos Fibre Count & Concentration										
	rnal Laboratory							]							
No	Sample ID	Sample Date	Samplin Time	g Ma	trix L	.AB ID									
1	DM164983	Dec 17, 2024	11:47AM	Air	S24-D	De0043021	Х	-							
2		Dec 17, 2024	11:49AM	Air		De0043022	Х	4							
3	DM165063	Dec 17, 2024	11:51AM	Air	S24-D	De0043023	Х	-							
4	1	Dec 17, 2024	11:54AM	Air		De0043024	Х	-							
5		Dec 17, 2024	11:57AM	Air		De0043025	Х	4							
6		Dec 17, 2024	12:01PM	Air		De0043026	Х	4							
7		Dec 17, 2024	12:03PM	Air		De0043027	Х	4							
8		Dec 17, 2024	12:08PM	Air		De0043028	Х	4							
9	• •	Dec 17, 2024		Air	S24-D	De0043029	X	4							
Test	Counts						9	]							



### Internal Quality Control Review and Glossary General

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

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

Units	
	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
	Airborne fibre filter loading as Fibres (N) per Fields counted (n) Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
	Concentration in grams per kilogram 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:	$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$
Ashastas Cantant (as ashastas);	$\% w/w = \frac{(m \times P_A)}{M}$
Asbestos Content (as asbestos):	$90 W/W = \frac{1}{M}$
Weighted Average (of asbestos):	$\mathscr{H}_{WA} = \sum \frac{(m \times P_A)_x}{x}$
Tormo	
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 (Pa). This estimate is not NATA-accredited.
	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.
	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 Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Australian Standard.
· · · ·	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
сос	Chain of Custody.
	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Sample is dried by heating prior to analysis.
	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
	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 distinguish visibly 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 Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
	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 the degree of friability. UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
	International Organization for Standardization / International Electrotechnical Commission.
, ,	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected evepiece
	graticule area of the specific microscope used for the analysis (a).
	Limit of Reporting.
, ,	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 5370:2024* Sampling and qualitative
	identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
•	An analytical procedure is used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is not limited to) actinolite, anthophyllite, or tremolite asbestos.
	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of 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 Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (%wa).



#### Comments

Volume Measurement : David Edwards-Davis, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

#### 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:

Geronimo Jr Abrot Senior Analyst-Asbestos

#### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

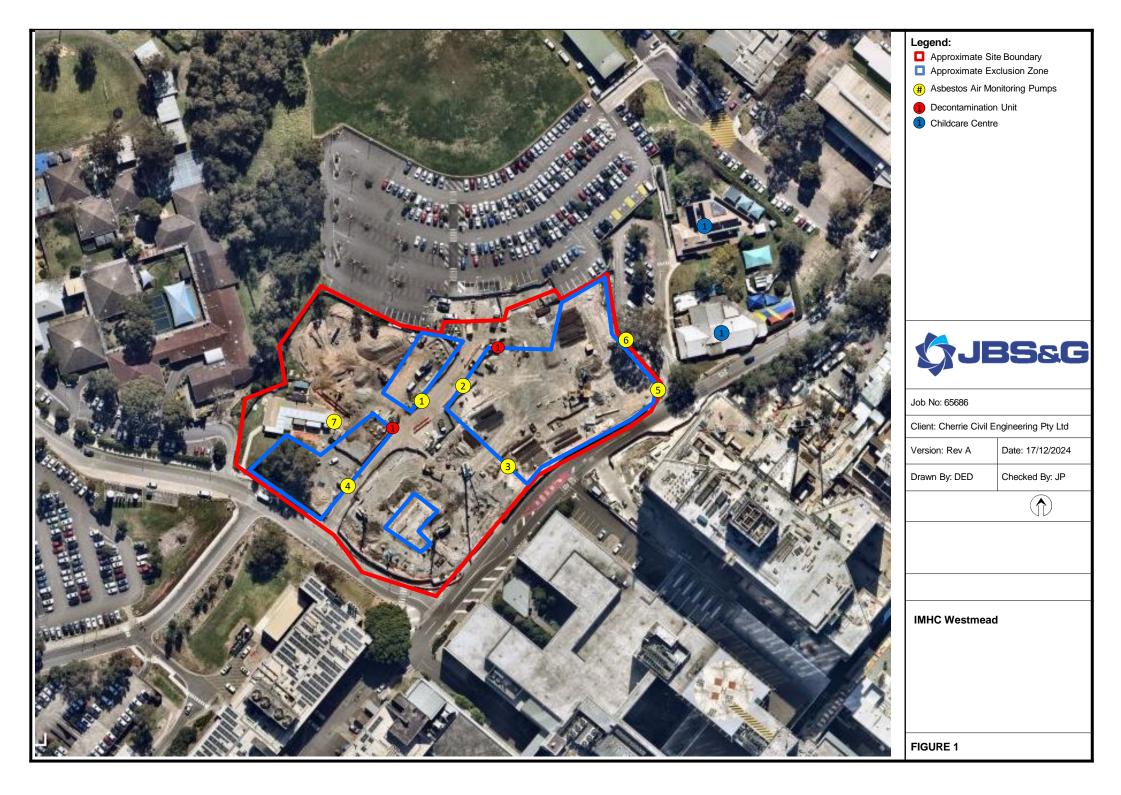
\* Indicates NATA accreditation does not cover the performance of this service

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

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# 2 Daily Sample Locations





### JBS&G (65686 - 164,163)

### AMR334 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

19 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

# AMR334: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Wednesday 18 December 2024.** Daily sample locations are shown in **Attachment 2.** 

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

\_\_\_\_\_

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





# Asbestos Air Monitoring Results



# Certificate of Analysis

# **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1172041-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 17, 2024
Date Reported	Dec 17, 2024

### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 17, 2024
Report	1172041-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0043021	DM164983	AC027	LOC1: LP7, NE ADJ P14 + LP6	7:03	11:47	2.0	2.0	0/100	< 0.01
24-De0043022	DM164978	AC167	LOC2: BRISB, WEST ADJ P14	7:05	11:49	2.0	2.0	0/100	< 0.01
24-De0043023	DM165063	AC035	LOC3: BRISB CENTRE ADJ DECON1	7:07	11:51	2.0	2.0	0/100	< 0.01
24-De0043024	DM165071	AC142	LOC4: BRISB, UPPER RAMP ADJ DECON2	7:11	11:54	2.0	2.0	0/100	< 0.01
24-De0043025	DM165068	AC152	LOC5: LP9 HAUL RD ADJ CATTLE GRID	7:09	11:57	2.0	2.0	0/100	< 0.01
24-De0043026	DM164976	AC132	LOC6: BRISB, REDBANK RD CORNER CCC CARPARK	7:15	12:01	2.0	2.0	0/100	< 0.01
24-De0043027	DM164964	AC119	LOC7: BRISB, EAST ADJ CCC	7:17	12:03	2.0	2.0	0/100	< 0.01
24-De0043028	DM164971	AC161	LOC8: LP7, SW ADJ SITE SHEDS	7:21	12:08	2.0	2.0	0/100	< 0.01



Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0043029	DM165094	BLANK	BLANK	-				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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 17, 2024

Holding Time 24 Indefinite

				Testing Aust	tralia Pty Ltd						RL Pty Ltd		nment Testing NZ Ltd				
	eurofin	6 Monterey F	6 Monterey Road 19/8 Lewalan Street 179 Magowar Road Unit 1,2 Dacre S			Brisbane Newcastle Street 1/21 Smallwood Place 1/2 Frost Drive			ABN: 91 05 0 Perth 46-48 Banksi Welshpool		NZBN: 9429046024 Auckland 35 O'Rorke Road Penrose,	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington,	Tauranga 1277 Cameron Road, Gate Pa,				
	ww.eurofins.com.au EnviroSales@eurofinsanz	VIC 3175 +61 3 8564 5	VIC 3 6000 +61 3 NATA:		Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Mitchell ACT 2911 +61 2 6113 809 NATA# 1261 Site# 25466	91	Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	Weishpool WA 6106 +61 8 6253 4 NATA# 2377 Site# 2370 &		Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland 1061 +64 9 525 0568 IANZ# 1308	Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402		
Co Ad	dress:	JBS & G Austra Level 8, 179 El Sydney NSW 2000	8, 179 Elizabeth St		& G Australia (NSW) P/L 8, 179 Elizabeth St ey 2000						Order No Report #: Phone: Fax:	: 1172	2041 245 0300		Received: Due: Priority: Contact Name:	Dec 17, 202 Dec 17, 202 Same day Milad Nouja	24
Pro Pro	Project Name: IMHC WESTMEAD Project ID: 65686											Eurofin	s Analytical Servi	ces Manager :	Andrew Black		
Sydi	ney Laboratory -		ample Det				Asbestos Fibre Count & Concentration										
	rnal Laboratory							]									
No	Sample ID	Sample Date	Samplin Time	ig Ma	trix L	.AB ID											
1	DM164983	Dec 17, 2024	11:47AM	Air	S24-D	De0043021	Х	-									
2		Dec 17, 2024	11:49AM	Air		De0043022	Х	4									
3	DM165063	Dec 17, 2024	11:51AM	Air	S24-D	De0043023	Х	-									
4	1	Dec 17, 2024	11:54AM	Air		De0043024	Х	-									
5		Dec 17, 2024	11:57AM	Air		De0043025	Х	4									
6		Dec 17, 2024	12:01PM	Air		De0043026	Х	4									
7		Dec 17, 2024	12:03PM	Air		De0043027	Х	4									
8		Dec 17, 2024	12:08PM	Air		De0043028	X	4									
9	• •	Dec 17, 2024		Air	S24-E	De0043029	X	4									
Test	Counts						9	]									



#### Internal Quality Control Review and Glossary General

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

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

Units	
	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
	Airborne fibre filter loading as Fibres (N) per Fields counted (n) Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
	Concentration in grams per kilogram 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:	$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$
Ashastas Cantant (as ashastas);	$\% w/w = \frac{(m \times P_A)}{M}$
Asbestos Content (as asbestos):	$90 W/W = \frac{1}{M}$
Weighted Average (of asbestos):	$\mathscr{H}_{WA} = \sum \frac{(m \times P_A)_x}{x}$
Tormo	
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 (Pa). This estimate is not NATA-accredited.
	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.
	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 Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
	Australian Standard.
· · · ·	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
сос	Chain of Custody.
	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Sample is dried by heating prior to analysis.
	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
	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 distinguish visibly 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 Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
	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 the degree of friability. UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
	International Organization for Standardization / International Electrotechnical Commission.
, ,	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected evepiece
	graticule area of the specific microscope used for the analysis (a).
	Limit of Reporting.
, ,	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 5370:2024* Sampling and qualitative
	identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
•	An analytical procedure is used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is not limited to) actinolite, anthophyllite, or tremolite asbestos.
	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of 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 Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (%wa).



#### Comments

Volume Measurement : David Edwards-Davis, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

#### 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:

Geronimo Jr Abrot Senior Analyst-Asbestos

#### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

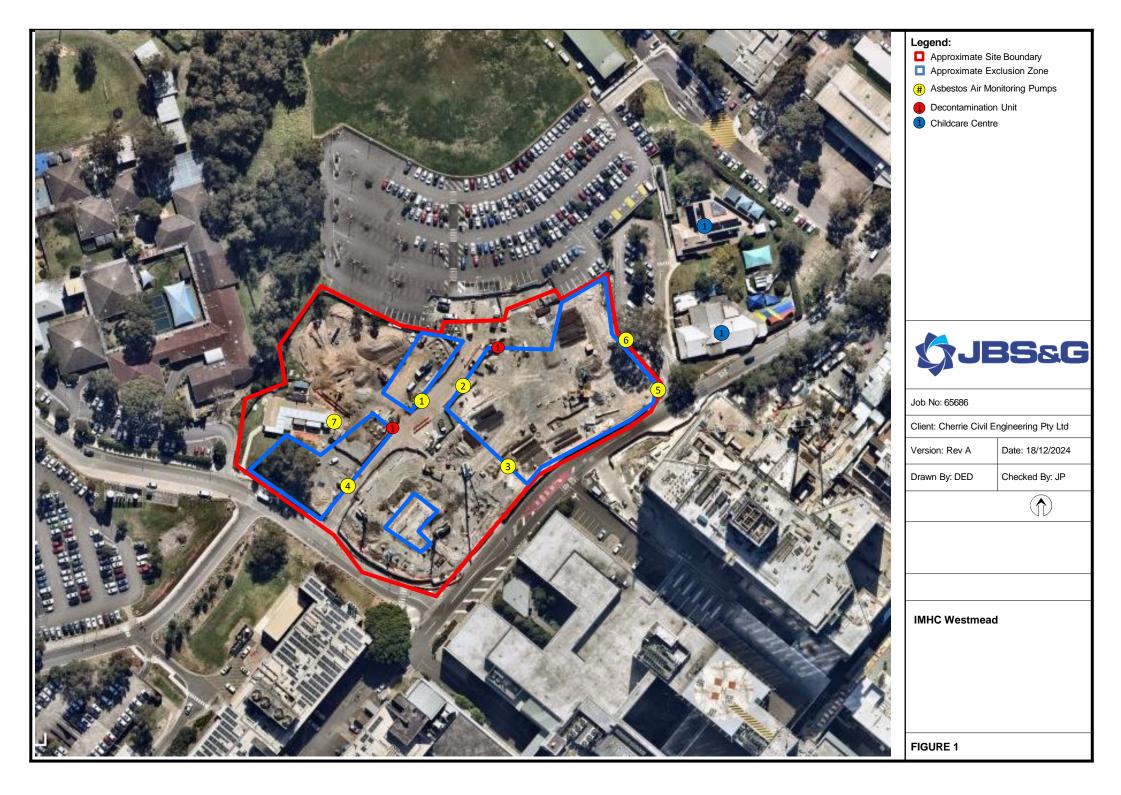
\* Indicates NATA accreditation does not cover the performance of this service

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.



### 2 Daily Sample Locations





#### JBS&G (65686 - 164,164)

#### AMR335 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

20 December 2024

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

#### AMR335: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Thursday 19 December 2024.** Daily sample locations are shown in **Attachment 2.** 

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

\_\_\_\_\_

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





#### Asbestos Air Monitoring Results



### Certificate of Analysis

### **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1173244-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 19, 2024
Date Reported	Dec 19, 2024

#### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 19, 2024
Report	1173244-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0051561	DM212393	AC152	LOC1: LP7, NE ADJ TO P14 & LP6	7:12	14:31	2.0	2.0	0/100	< 0.01
24-De0051562	DM212350	AC167	L0C2: BIRSB, WEST ADJ TO P14	7:14	14:33	2.0	2.0	0/100	< 0.01
24-De0051563	DM212375	AC142	LOC3: BIRSB, CENTRE ADJ TO DECON 1	7:16	14:35	2.0	2.0	0/100	< 0.01
24-De0051564	DM212411	AC035	LOC4: BIRSB, UPPER RAMP ADJ TO DECON 2	7:18	14:38	2.0	2.0	0/100	< 0.01
24-De0051565	DM212378	AC027	LOC5: LP9, HAUL RD ADJ TO CATTLE GRID	7:21	14:41	2.0	2.0	0/100	< 0.01
24-De0051566	DM212396	AC119	LOC6: BIRSB, REDBANK RD CORNER OF CCC CARPARK	7:25	14:45	2.0	2.0	0/100	< 0.01
24-De0051567	DM212347	AC161	LOC7: BIRSB, WEST ADJI TO CCC	7:27	14:47	2.0	2.0	0/100	< 0.01
24-De0051568	DM212365	AC132	LOC8: LP8, SW ON FENCE ADJ TO SITE SHEDS	7:31	14:52	2.0	2.0	1/100	< 0.01



Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0051569	DM212405	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 19, 2024

Holding Time 24 Indefinite

	C.		invironment T	esting Aust	tralia Pty Ltd					Eurofins ARL Pty Ltd		onment Testing NZ Ltd	I		
web: w	ww.eurofins.com.au	6 Monterey F Dandenong S VIC 3175 +61 3 8564 5	wendburne         Geenong         Sol           6 Monterey Road         19/8 Lewalan Street         17           Dandenong South         Grovedale         Grovedale           VIC 3175         VIC 3216         Ni           +61 3 8564 5000         +61 3 8564 5000         +6           NATA# 1261         NATA# 1261         Ni		Monterey Road         19/8 Lewalan Street         179 Magov           andenong South         Grovedale         Girraween           IC 3175         VIC 3216         NSW 2145           31 3 8564 5000         +61 3 8564 5000         +61 2 9900           ATA# 1261         NATA# 1261         NATA# 1261		Ilan Street         179 Magowar Road         Unit 1,2 Dacre S           Girraween         Mitchell           NSW 2145         ACT 2911           4 5000         +61 2 9900 8400         +61 2 6113 809'           61         NATA# 1261         NATA# 1261		Brisbane         Newcastle         Pe           9 Street         1/21 Smallwood Place         1/2 Frost Drive         46           Murarrie         Mayfield West         W           QLD 4172         NSW 2304         W           191         T: +61 7 3902 4600         +61 2 4968 8448         +6           NATA# 1261         NATA# 1261         NATA#		ABN: 91 05 0159 898 Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	NZBN: 9429046024 Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402
Ad	dress:	JBS & G Austr Level 8, 179 E Sydney NSW 2000	izabeth Sť	P/L					Order No Report #: Phone: Fax:			Received: Due: Priority: Contact Name:	Dec 19, 202 Dec 19, 202 Same day Milad Nouja	24	
Pro		IMHC WESTM 65686	EAD								Eurofin	s Analytical Servi	ces Manager :	Andrew Black	
Sample Detail															
	ney Laboratory -	• NATA # 1261	Site # 182	7			Х	-							
No	rnal Laboratory Sample ID	Sample Date	Sampling Time	ı Ma	trix L	AB ID		-							
1	DM212393	Dec 19, 2024	2:31PM	Air	S24-D	0e0051561	Х	-							
2		Dec 19, 2024	2:33PM	Air		e0051562	Х								
3		Dec 19, 2024	2:35PM	Air		e0051563	Х								
4		Dec 19, 2024	2:38PM	Air		e0051564	Х								
5		Dec 19, 2024	2:41PM	Air		e0051565	Х	1							
6		Dec 19, 2024	2:45PM	Air		e0051566	Х	1							
7		Dec 19, 2024	2:47PM	Air		e0051567	Х	1							
8		Dec 19, 2024	2:52PM	Air		e0051568	Х	1							
9		Dec 19, 2024		Air		e0051569	Х	]							
Test	Counts				•		9	]							



#### Internal Quality Control Review and Glossary General

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

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

Please refer to the most recent ver	rsion of the Sample Preservation and Container Guide' for holding times (QS3001).
Units	
% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
F/fld F/mL	Airborne fibre filter loading as Fibres (N) per Fields counted (n) 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 L, mL	Concentration in grams per kilogram Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Arborne 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:	$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{t}\right)$
Asbestos Content (as asbestos):	$\% w/w = \frac{(m \times A)}{M}$
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 <sub>A</sub> ). This estimate is not NATA-accredited.
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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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 distinguish visibly 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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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 the degree of friability.
HSG248	UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
HSG264	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
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)].
MMVF	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF).
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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
PCM	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
Trace Analysis	An analytical procedure is 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 to AS 5370.2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is 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).
J	ζ ····································



#### Comments

Volume Measurement : David Edwards-Davis, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

#### 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	N/A
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

#### Asbestos Counter/Identifier:

Geronimo Jr Abrot Senior Analyst-Asbestos

#### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

Glenn Jackson Managing Director

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

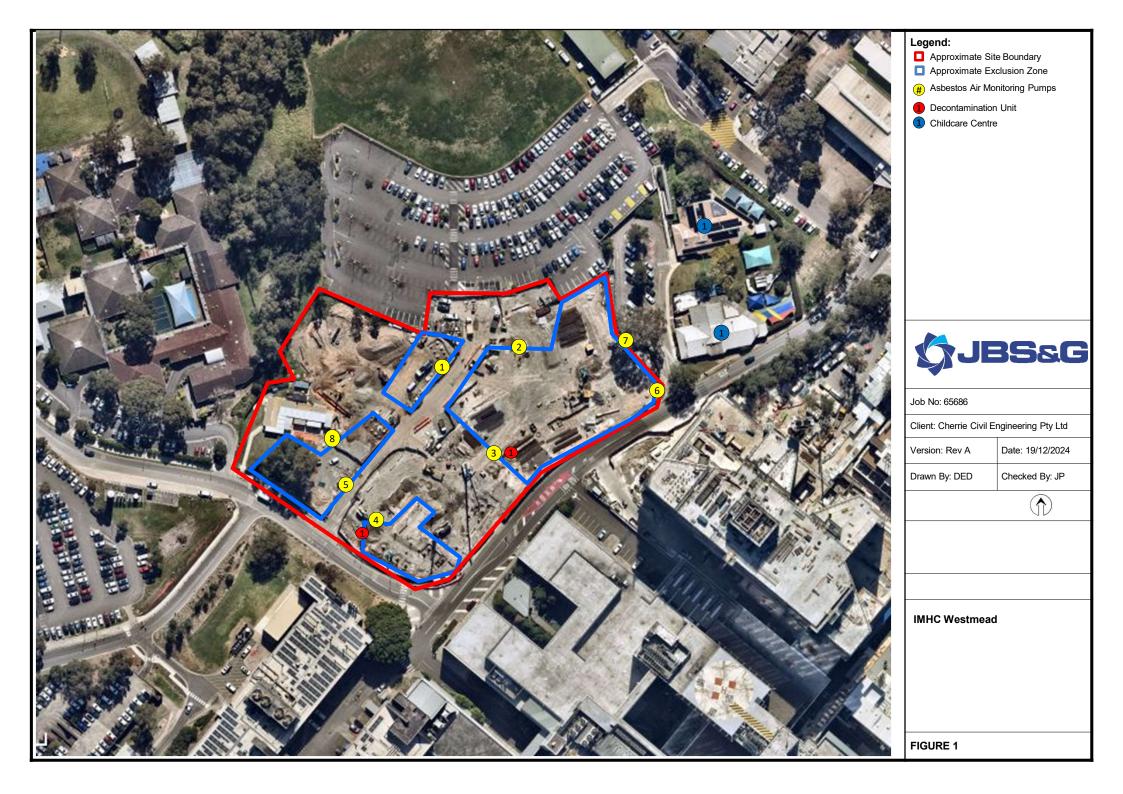
\* Indicates NATA accreditation does not cover the performance of this service

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.



### 2 Daily Sample Locations





#### JBS&G (65686 - 164,165)

#### AMR336 Airborne Asbestos Fibre Monitoring Report, Westmead IMHC (Rev 0)

6 January 2025

Taariq Van Heerden Cherrie Civil Engineering Pty Ltd Via email: taariq@cherriecivil.com.au

#### AMR336: Airborne Asbestos Fibre Monitoring Report Westmead Integrated Mental Health Complex (IMHC) Redevelopment Project

Dear Taariq,

Please find as **Attachment 1**, the airborne asbestos fibre monitoring results for works associated with the Westmead Integrated Mental Health Complex (IMHC) redevelopment project within the Westmead Hospital Precinct, located at the corner of Redbank Road and Dragonfly Drive, Westmead NSW (the site) on **Friday 20 December 2024.** Daily sample locations are shown in **Attachment 2**.

All air monitoring was completed in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling, and analytical procedures.

All reported results were satisfactory and conform with the minimum action level of 0.01 fibres /mL for control monitoring as outlined in:

- Work, Health and Safety (2017) Regulation; and
- Safework NSW (2022) Code of Practice How to Safely Remove Asbestos.

\_\_\_\_\_

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email <u>mnoujaim@jbsg.com.au</u>.

Yours sincerely:

M.Nouja:m

Milad Noujaim Environmental Consultant SafeWork NSW Licensed Asbestos Assessor (LAA 002002) JBS&G Australia Pty Ltd





#### Asbestos Air Monitoring Results



### Certificate of Analysis

### **Environment Testing**

JBS & G Australia (NSW) P/L Level 8, 179 Elizabeth St Sydney NSW 2000



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:	Milad Noujaim
Report	1173576-AFC
Project Name	IMHC WESTMEAD
Project ID	65686
Received Date	Dec 20, 2024
Date Reported	Dec 20, 2024

#### **METHODOLOGY:**

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is 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)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.



Project Name	IMHC WESTMEAD
Project ID	65686
Date Sampled	Dec 20, 2024
Report	1173576-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0054268	DM212436	AC142	LOC1: LP7, NE ADJ TO P14 & LP6	6:52	11:31	2.0	2.0	0.5/100	< 0.01
24-De0054269	DM212408	AC167	L0C2: BIRSB, WEST ADJ TO P14	6:54	11:33	2.0	2.0	0/100	< 0.01
24-De0054270	DM212417	AC152	LOC3: BIRSB, CENTRE ADJ TO DECON 1	6:56	11:35	2.0	2.0	0/100	< 0.01
24-De0054271	DM212432	AC027	LOC4: BIRSB, UPPER RAMP ADJ TO DECON 2	6:58	11:37	2.0	2.0	0/100	< 0.01
24-De0054272	DM208474	AC035	LOC5: BIRSB, HAUL RD ADJ TO CATTLE GRID	7:01	11:40	2.0	2.0	0/100	< 0.01
24-De0054273	DM212437	AC119	LOC6: BIRSB, REDBANK RD CORNER OF CCC CARPARK	7:04	11:44	2.0	2.0	0/100	< 0.01
24-De0054274	DM212435	AC132	LOC7: BIRSB, EAST ADJ TO CCC	7:06	11:46	2.0	2.0	0/100	< 0.01
24-De0054275	DM212418	AC161	LOC8: LP8, SW ON FENCE ADJ TO SITE SHEDS	7:10	11:50	2.0	2.0	0/100	< 0.01



Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-De0054276	DM212420	BLANK	BLANK					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

Asbestos - LTM-ASB-8010

Testing SiteExtractedSydneyDec 20, 2024

Holding Time 24 Indefinite

			invironment Te	esting Austr	alia Pty Ltd				Eurofins ARL Pty Ltd	Eurofins Environment Testing NZ Ltd NZBN: 9429046024954					
web: w	ww.eurofins.com.au	6 Monterey R Dandenong S VIC 3175 +61 3 8564 5	Monterey Road         19/8 Lewalan S           andenong South         Grovedale           C 3175         VIC 3216           11 3 8564 5000         +61 3 8564 500           XTA# 1261         NATA# 1261		Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre S Mitchell ACT 2911 +61 2 6113 809 NATA# 1261 Site# 25466		Brisbane 1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	ABN: 91 05 0159 898 Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402	
Ad	dress:	JBS & G Austra Level 8, 179 El Sydney NSW 2000	lizabeth Sť	P/L					Order No Report #: Phone: Fax:			Received: Due: Priority: Contact Name:	Dec 20, 202 Dec 20, 202 Same day Milad Nouja	24	
Pro		IMHC WESTM 65686	EAD								Eurofin	s Analytical Servi	ces Manager :	Andrew Black	
Sud			ample Deta				Asbestos Fibre Count & Concentration ×								
		NATA # 1261	ATA # 1261 Site # 18217					-							
No	rnal Laboratory Sample ID	Sample Date	Sampling Time	Mat	rix L	AB ID		-							
1	DM212436	Dec 20, 2024	11:31AM	Air	S24-D	e0054268	Х								
2		Dec 20, 2024	11:33AM	Air		e0054269	Х								
3		Dec 20, 2024	11:35AM	Air		e0054270	Х								
4		Dec 20, 2024	11:37AM	Air		e0054271	Х	]							
5		Dec 20, 2024	11:40AM	Air		e0054272	Х	]							
6		Dec 20, 2024	11:44AM	Air		e0054273	Х	]							
7		Dec 20, 2024	11:46AM	Air	S24-D	e0054274	Х	]							
8	DM212418	Dec 20, 2024	11:50AM	Air	S24-D	e0054275	Х								
9	DM212420	Dec 20, 2024		Air	S24-D	e0054276	Х								
Test	Counts						9								



#### Internal Quality Control Review and Glossary General

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

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

Weighted Average	Contaminated Sites in Western Australia (updated 2021), including Appendix Four: Laboratory analysis Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (%wA).
WA DOH	actinolite, anthophyllite, or tremolite asbestos. Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-
UMF	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication. Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 5370:2024* Sampling and gualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 It may include (but is not limited to)
Trace Analysis UK HSE HSG	An analytical procedure is used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix. United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
SRA Trace Analysis	Sample Receipt Advice.
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
PCM	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
-	identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
NEPM (also ASC NEPM) Organic	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended). Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 5370:2024* Sampling and qualitative
	NOTE: previously known as "synthetic mineral fibre" (SMF).
MFM (also NOHSC:3003) MMVF	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)]. Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres.
LOR	Limit of Reporting.
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).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
HSG264	UK HSE HSG264, Asbestos: The Survey Guide (2012), .ISBN: 9780717665020
HSG248	UK HSE HSG248, Asbestos: The Analysts Guide, 2 <sup>nd</sup> Edition (2021), ISBN: 9780616667079.
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 the degree of friability.
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
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, although FA may be more difficult to distinguish visibly and may be assessed as AF.
DS	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
Dry	Sample is dried by heating prior to analysis.
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004
COC Crocidolite	Chain of Custody. Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and
	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
AS	qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004. Australian Standard.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 5370:2024* Sampling and
AFM	material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable". Airborne Fibre Monitoring, e.g., by the MFM.
AF	NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm. 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
ACM	assumed to be 15% in accordance with WA DOH Appendix 2 (P <sub>A</sub> ). This estimate is not NATA-accredited. Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the
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
Weighted Average (of asbestos):	$\mathscr{H}_{WA} = \sum \frac{(m \times P_A)_X}{X}$
Asbestos Content (as asbestos):	$\% w/w = \frac{(m \times P_A)}{M}$
Calculations Airborne Fibre Concentration:	$C = \binom{A}{a} \times \binom{N}{a} \times \binom{1}{c} \times \binom{1}{c} = K \times \binom{N}{c} \times \binom{1}{c}$
min	Time (t), e.g. of air sample collection period
Ľ, mĽ L/min	Volume, e.g. of air as measured in AFM (V = r x t) Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
g, kg g/kg	Concentration in grams per kilogram
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C) Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
F/fld	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
Units % w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)



#### Comments

Volume Measurement : Milad Noujaim, JBS & G Australia (NSW) P/L, has been trained by Eurofins and they conducted the sampling 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)]methodology. Sampling pumps used by JBS & G Australia (NSW) P/L were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

#### 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:

Geronimo Jr Abrot Senior Analyst-Asbestos

#### Authorised by:

Sayeed Abu

Senior Analyst-Asbestos

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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### 2 Daily Sample Locations

