

JBS&G 67072 | 163,523

L02 (Curtain Wall Investigations – 105 Miller St North Sydney) Rev 0

18 November 2024

Callan Salter
Investa Office Developments Pty Ltd
Via email: CSalter @investa.com.au

L02: Supplementary Curtain Wall Investigations - 105-153 Miller Street, North Sydney NSW

Dear Callan,

1. Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by Investa Office Developments Pty Ltd (Investa, the Client) to provide hazardous material and occupation hygiene services for the commercial structure located at 105-153 Miller Street, North Sydney, NSW (the site). A Hazardous Building Materials Survey (JBS&G 2024¹) was conducted by JBS&G to identify hazardous building materials to the structure and assist with the planning of proposed redevelopment works including demolition, construction and refurbishment. The HBMS identified asbestos containing materials (ACM) in numerous areas of the building including the windows and curtain wall system forming façade elements to the east and west wings. Given the restricted access to internal components of some areas at the site, JBS&G 2024 recommended further investigation to previously inaccessible areas to determine the potential presence of additional hazardous materials.

The supplementary investigations detailed herein involved additional intrusive works to nominated components of the curtain wall system to investigate previously inaccessible aluminium joins and connections and inspect for the presence of further occurrences of asbestos and/or other hazardous materials. The supplementary works were conducted on Level 1 of the east wing, north portion, west side with this area deemed to be a suitable representation of the broader curtain wall features across the east and west wings of the structure.

This letter is a summary of the completed works during the curtain wall supplementary investigation and the findings made and should be read in conjunction with the findings in JBS&G 2024 and with reference to the Limitations included as **Attachment 1**.

2. Methodology

The supplementary investigations to the curtain wall were conducted from 30-31 October 2024 by Aaron Smith, one of JBS&G's experienced hazardous materials surveyors and a SafeWork NSW Licensed Asbestos Assessor (LAA 001 001). Mann Group NSW Pty Ltd were engaged by the Client to provide demolition and Class A asbestos removal services to assist with the works.

The supplementary investigations were limited to a representative area of the curtain wall system on Level 1 of the east wing, north portion, west side.

¹ Hazardous Building Materials Survey – 105 Miller Street North Sydney NSW. JBS&G Australia Pty Ltd, ref: 67072/162,151 (Rev A), dated 30 September 2024, (JBS&G 2024)

The investigations conducted are summarised as follows:

- Establishment of work area exclusion zone, controls and air quality monitoring;
- Access of representative windows and curtain wall system from both the interior office area and the ground level northern rooftop;
- Cutting, taping and breakage of glass windows and colour-back panels to access sealant materials concealed within glazing channels;
- Removal of corrugated aluminium spandrel panels;
- Use of grinder the cut cross sections through representative aluminium connections to windows and curtain wall elements; and
- Inspection, intrusive sampling and analysis of potential hazardous materials observed in previously inaccessible locations.

Representative samples of potential hazardous materials identified during the works were collected by JBS&G, placed into individual zip-lock bag and labelled with a unique Sample ID. Samples were transported to Eurofins, a NATA accredited laboratory. Under chain of custody procedures for their specified analysis.

Airborne asbestos fibre air monitoring was conducted around the investigation area during the intrusive works throughout the supplementary investigation. Air monitoring was completed in accordance with the National Occupational Health and Safety Commission's *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.

A summary of samples collected and their analytical results are included in **Section 3**.

3. Results

The results of representative samples collected during the supplementary investigations are summarised in **Table 1** below. Detailed laboratory results of analysis are included as **Attachment 3**.

Photographs relating to the assessment are included as **Attachment 2**.

Table 1 – Representative Sample Results

Sample ID	Material Type	Sample Location	Specified Analysis	Laboratory Result
CW-A1	Black, vitreous, hardened sealant material	Inner vision window (side glazing channel)	Asbestos	No asbestos detected
CW-A2	Dark grey, hardened sealant material	Inner vision window (upper glazing channel)	Asbestos	No asbestos detected
CW-A3	Clear caulking adhesive	Below base running tracks of interval vision windows	Asbestos	No asbestos detected
CW-A4	Grey, soft mastic material	Outer vision window (glazing channel)	Asbestos	Chrysotile asbestos detected
CW-A5	Grey, soft mastic material	Colour-back glass panel (glazing channel)	Asbestos	Chrysotile asbestos detected
CW-A6	Black bituminous coating to aluminium flashing strip	Cavity behind corrugated spandrel panel	Asbestos	No asbestos detected
CW-A7	Grey / brown, soft mastic material	Back of mullion / head transom connection in spandrel cavity	Asbestos	Chrysotile asbestos detected

CW-A8	White silicon material	Corking to sheet metal flashing in spandrel cavity (assumed retrofit)	Asbestos	No asbestos detected
CW-A9	Clear sticky tape (dark staining)	Adhesive tape fixing clear plastic sheet in spandrel cavity (assumed retrofit)	Asbestos	No asbestos detected
CW-A10	Black fibrous debris	3mm gap between mullion / base transom connection in spandrel cavity (between brackets to curtain wall / sill)	Asbestos	No asbestos detected

All reported results for the airborne asbestos fibre air monitoring conducted were satisfactory and reported to be less than 0.01 fibres /mL in all samples collected.

Asbestos fibre air monitoring reports are included as **Attachment 4**.

4. Conclusions

Based on the observations made during the supplementary curtain wall investigations conducted, the results of representative samples collected and with reference to the Limitations included as **Attachment 1**, the following conclusions are made:

- Asbestos mastic to the glazing channel of the outer vision windows and colour-back glass panels of the curtain wall that was previously identified in JBS&G 2024 was confirmed to be present;
- Additional asbestos mastic that had not previously been identified in JBS&G 2024 was identified behind a representative mullion / 'head' transom connection and is assumed to be present to similar locations throughout the curtain wall system. Exterior corrugated aluminium panels to the spandrels would need to be removed to access these areas.
- Due to time restraints and difficulty, complete inspection access behind a representative mullion / 'base' transom connection to the façade was not achieved. Whilst hazardous materials have not been identified previously to this connection it would be preferable to conduct an unconcealed inspection. If this can't be achieved externally some access may be possible from the internal side of the connection;
- Whilst no asbestos was identified to glazing channels of the internal vision windows sampled, as per JBS&G 2024, asbestos mastic should be assumed to these windows unless further investigation is conducted to demonstrate otherwise;
- The HBMS and register (JBS&G 2024) must be updated at the completion of all supplementary investigations to provide accurate information for tendering and demolition purposes; and
- The results of the asbestos fibre air monitoring conducted throughout the investigations were considered acceptable and did not identify any occurrence of airborne asbestos hazards as a result of the intrusive works undertaken.

Any materials deemed to be consistent with those detailed above should be assumed to have the same content and be treated accordingly. Should any additional suspected ACMs / hazardous materials be observed during future inspections, works should cease until a suitably qualified occupational hygienist can assess the suspected hazardous material and provide appropriate recommendations for management and/or removal.

Should you require clarification, please contact Aaron Smith on 0402 058 230 or by email ajsmith@jbsg.com.au.

Yours sincerely:



Aaron Smith
Associate - Occupational Hygiene
SafeWork NSW Licensed Asbestos Assessor
(LAA 001 001)
JBS&G Australia Pty Ltd

Reviewed/Approved by:



Michael Samuel
Principal – Hazardous Materials
SafeWork NSW Licensed Asbestos Assessor
(LAA 000157)

Attachments

1. Limitations
2. Photographic Log
3. Laboratory Certificate of Analysis
4. Asbestos Fibre Air Monitoring Reports

Attachment 1 – Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties. The report has been prepared specifically for the client for the purposes of the commission, and no warranties, express or implied, are offered to any third parties and no liability will be accepted for use or interpretation of this report by any third party.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose. This report should not be amended in any way without prior approval by JBS&G, or reproduced other than in full including all attachments as originally provided to the client by JBS&G.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements or agreed scope of work.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Attachment 2 – Photographic Log



Photograph 1: An exclusion zone and asbestos air monitoring were established for the investigation works.



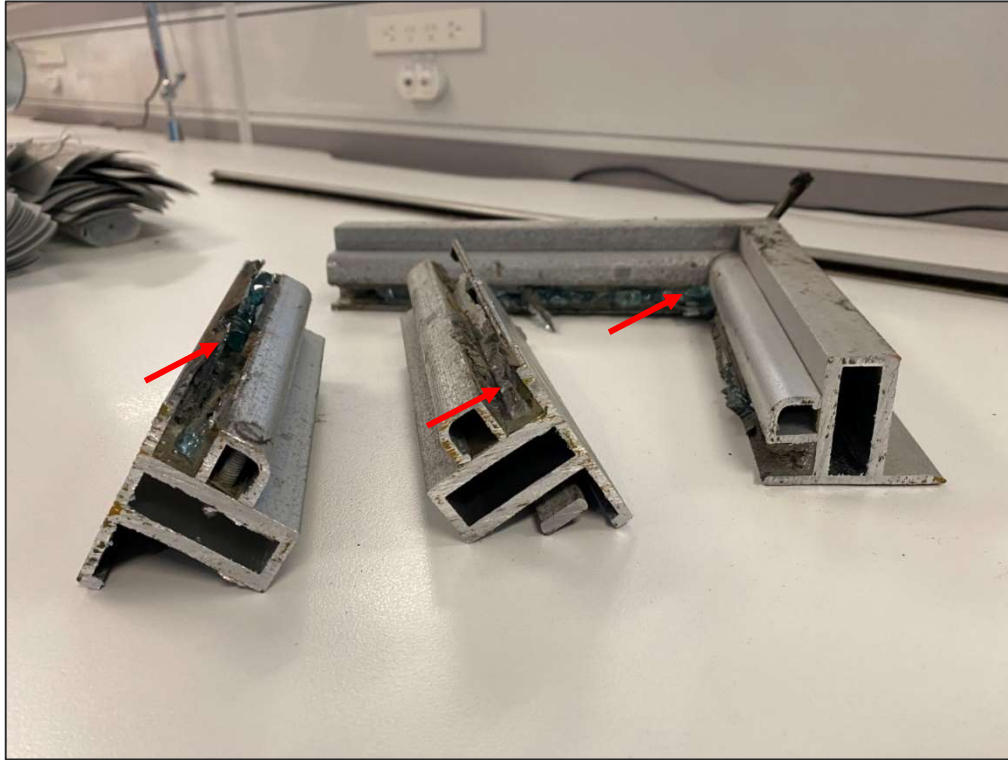
Photograph 2: Inner vision windows were removed, and sealant materials around glazing sampled. All collected samples were analysed for asbestos analysis by a NATA accredited laboratory.



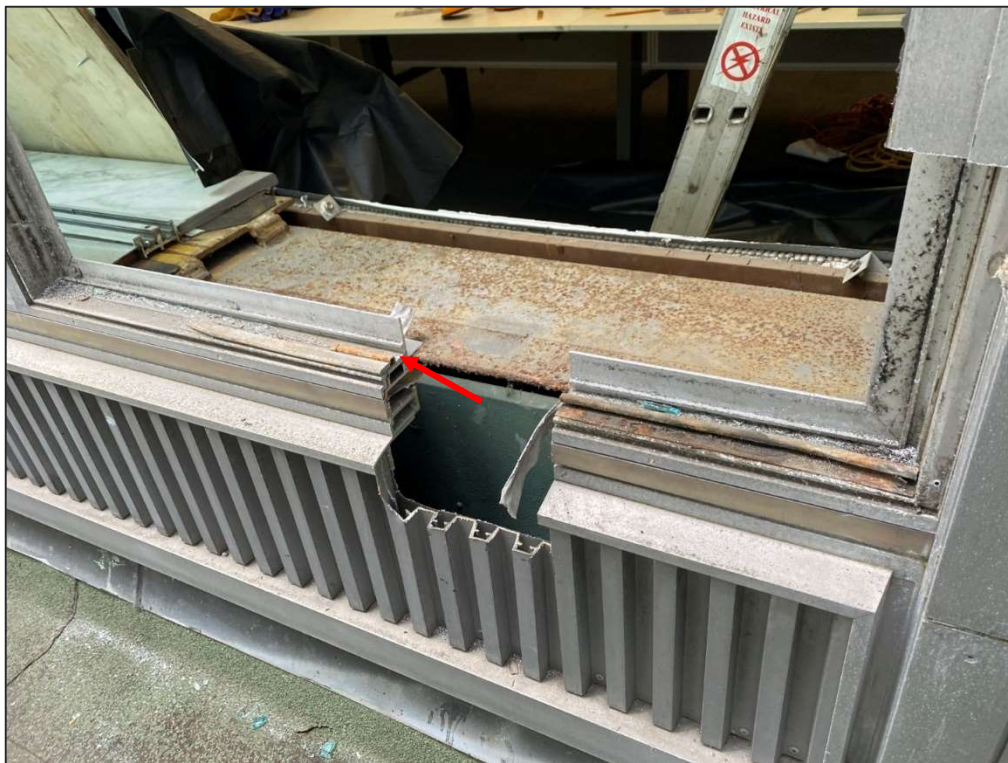
Photograph 3: Glazing channel of inner vision windows.



Photograph 4: Scaffolding was erected on the northern ground level rooftop to access the external façade.



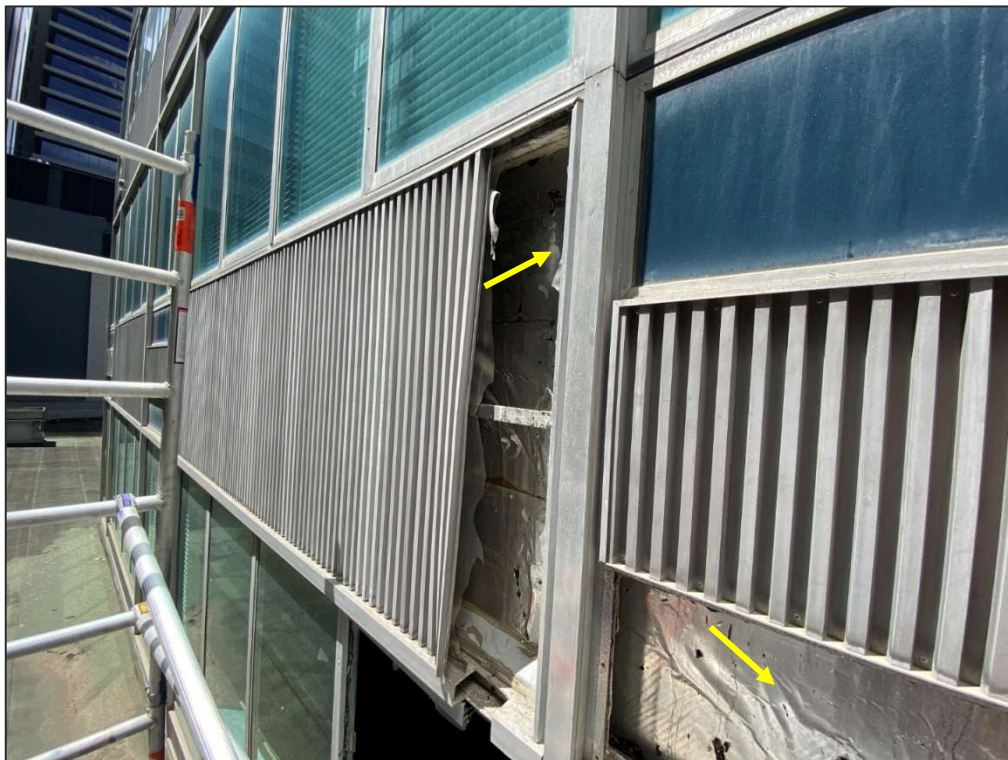
Photograph 5: The grey mastic to the outer vision windows contains asbestos.



Photograph 6: Sections were cut through selected aluminium joins of the curtain wall to conduct inspections and sampling as required.



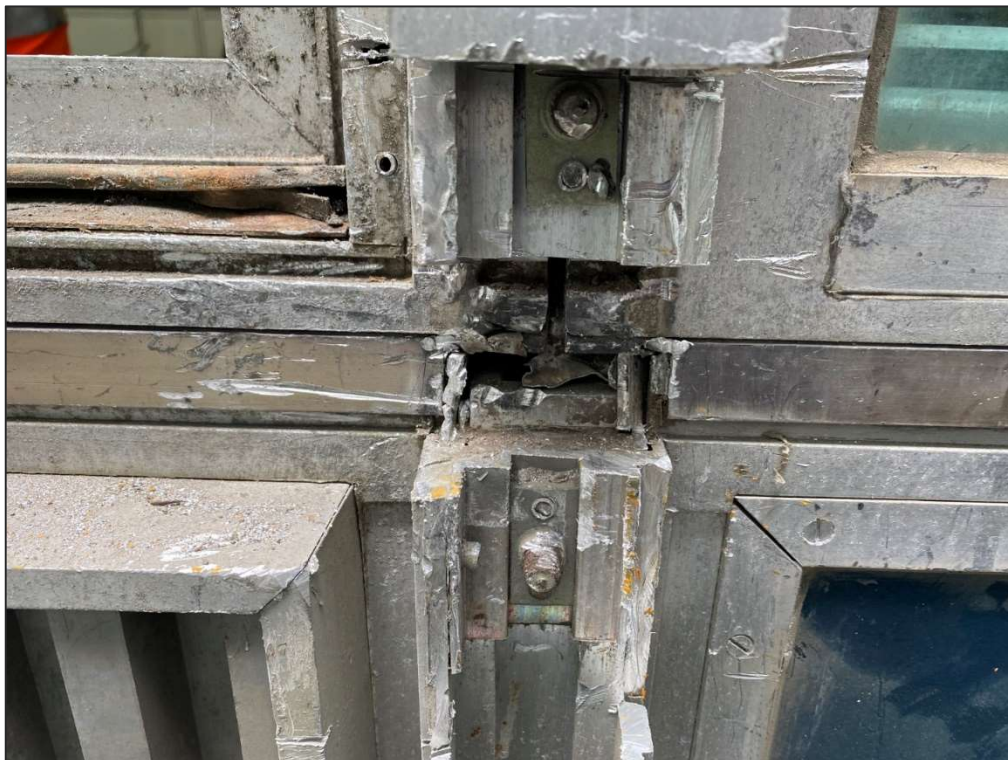
Photograph 7: The grey mastic surrounding the colour-back glass panels contain asbestos.



Photograph 8: Samples collected of black aluminium flashing, white silicon and clear adhesive tape materials within the spandrel cavity did not identify asbestos.



Photograph 9: As per Photo 8



Photograph 10: Front view of mullion / base transom connection to the curtain wall. Sample of debris in connection gap did not identify asbestos. No access was gained to the rear of the connection for inspection.



Photograph 11: Front view of mullion / head transom connection to the curtain wall.



Photograph 12: The grey /brown mastic identified at the rear of the mullion / head transom connection contains asbestos.

Attachment 3 - Laboratory Certificate of Analysis

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: Aaron J Smith
Report 1155799-AID
Project Name **NORTH SYDNEY**
Project ID **67072**
Received Date Nov 01, 2024
Date Reported Nov 06, 2024

Methodology:

Asbestos Fibre
 Identification

Conducted in accordance with the Australian Standard AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Man-made vitreous
 fibre (MMVF)

Fibres 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). Simple analytical procedures such as polarised light microscopy cannot detect or reliably identify asbestos in some types of commercial products containing asbestos, either because the fibres are below the resolution of optical microscopy or because the matrix material adheres too strongly to the fibres. For these types of products, electron microscopy may be necessary.

Subsampling Soil
 Samples

The sample submitted is dried and passed through a 10 mm sieve followed by a 2 mm sieve. All fibrous matter greater than 10 mm and greater than 2 mm and the material passing through the 2 mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 g to 60 g, then a subsampling routine based on ISO 3082:2017(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be subsampled for trace analysis, in accordance with AS 5370:2024.*

Bonded asbestos-
 containing material
 (ACM)

The material is first examined, and any fibres are isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 5370:2024*.

NOTE: Even after disintegration, it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting
 (LOR)

The performance limitation of the AS 5370:2024* method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory limit of reporting, per se. Examination of large sample size (e.g., 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 5370:2024*, and hence, NATA Accreditation does not cover the performance of this service (non-NATA results are shown with an asterisk).

NOTE: NATA News March 2014, p.7, states in relation to AS 4964-2004: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.

Project Name NORTH SYDNEY
Project ID 67072
Date Sampled Oct 30, 2024 to Oct 31, 2024
Report 1155799-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
CW-A1	24-No0003189	Oct 30, 2024	Approximate Sample 4g / 50x30x3mm Sample consisted of: Grey dried adhesive, fibrous material and glass	No asbestos detected. Organic fibre detected. No trace asbestos detected.
CW-A2	24-No0003190	Oct 30, 2024	Approximate Sample 1g / 40x30x3mm Sample consisted of: Grey putty material, sponge, wood chips and dried adhesive	No asbestos detected. Organic fibre detected. No trace asbestos detected.
CW-A3	24-No0003191	Oct 30, 2024	Approximate Sample <1g / 25x10x1mm Sample consisted of: Clear glue material	No asbestos detected. No trace asbestos detected.
CW-A4	24-No0003192	Oct 30, 2024	Approximate Sample 3g / 70x35x2mm Sample consisted of: Grey putty material	Chrysotile asbestos detected. Organic fibre detected.
CW-A5	24-No0003193	Oct 31, 2024	Approximate Sample 3g / 55x25x3mm Sample consisted of: Grey putty material	Chrysotile asbestos detected. Organic fibre detected.
CW-A6	24-No0003194	Oct 31, 2024	Approximate Sample 1g / 50x30x1mm Sample consisted of: Silver metal with adhesive and bituminous material attached	No asbestos detected. Organic fibre detected. No trace asbestos detected.
CW-A7	24-No0003195	Oct 31, 2024	Approximate Sample 18g / 50x45x3mm Sample consisted of: Brown putty material	Chrysotile asbestos detected. Organic fibre detected.
CW-A8	24-No0003196	Oct 31, 2024	Approximate Sample 1g / 40x15x4mm Sample consisted of: White sealant material	No asbestos detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
CW-A9	24-No0003197	Oct 31, 2024	Approximate Sample <1g / 50x20x1mm Sample consisted of: Black dust and organic debris on adhesive attached to plastic	No asbestos detected. Organic fibre detected. No trace asbestos detected.
CW-A10	24-No0003198	Oct 31, 2024	Approximate Sample <1g Sample consisted of: Black dust particles, organic debris and insect matter	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 06, 2024	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Nov 06, 2024	Indefinite



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

ABN: 50 005 085 521

ABN: 91 05 0159 898

NZBN: 9429046024954

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 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
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Company Name: JBS & G Australia (NSW) P/L

Address: Level 8, 179 Elizabeth St
Sydney
NSW 2000

Project Name: NORTH SYDNEY

Project ID: 67072

Order No.:

Report #: 1155799

Phone: 02 8245 0300

Fax:

Received: Nov 1, 2024 6:30 PM

Due: Nov 6, 2024

Priority: 3 Day

Contact Name: Aaron J Smith

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence / Presence
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	CW-A1	Oct 30, 2024		Building Materials	S24-No0003189		X
2	CW-A2	Oct 30, 2024		Building Materials	S24-No0003190		X
3	CW-A3	Oct 30, 2024		Building Materials	S24-No0003191		X
4	CW-A4	Oct 30, 2024		Building Materials	S24-No0003192		X
5	CW-A5	Oct 31, 2024		Building Materials	S24-No0003193		X
6	CW-A6	Oct 31, 2024		Building Materials	S24-No0003194		X
7	CW-A7	Oct 31, 2024		Building Materials	S24-No0003195		X
8	CW-A8	Oct 31, 2024		Building Materials	S24-No0003196		X
9	CW-A9	Oct 31, 2024		Building	S24-No0003197		X



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

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 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
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ABN: 91 05 0159 898

Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554
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NZBN: 9429046024954

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

Project Name: NORTH SYDNEY
Project ID: 67072

Order No.:
Report #: 1155799
Phone: 02 8245 0300
Fax:

Received: Nov 1, 2024 6:30 PM
Due: Nov 6, 2024
Priority: 3 Day
Contact Name: Aaron J Smith

Eurofins Analytical Services Manager : Andrew Black

Sample Detail					Asbestos - AS4964	Asbestos Absence / Presence
Sydney Laboratory - NATA # 1261 Site # 18217					X	X
				Materials		
10	CW-A10	Oct 31, 2024		Dust	S24-No0003198	X
Test Counts					1	9

Internal Quality Control Review and Glossary General

- 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.

Holding Times

Please refer to the most recent version 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	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

Calculations

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

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

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

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2</i> (PA). 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, <i>Asbestos: The Analysts Guide</i> , 2 nd Edition (2021), ISBN: 9780616667079.
HSG264	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (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, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 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, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
Weighted Average	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (%_{WA}).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	N/A
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Asbestos Counter/Identifier:

Bennel Jiri Senior Analyst-Asbestos

Authorised by:

Sayeed Abu Senior Analyst-Asbestos



Glenn Jackson
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.

CHAIN OF CUSTODY

[illegible]

1155799

Attachment 4 – Asbestos Fibre Air Monitoring Reports

JBS&G 67072 | 163,541

AMR004 Airborne Asbestos Fibre Monitoring Report, 105 Miller Street, North Sydney (Rev 0)

4 November 2024

Katharine Marsden
Development Manager
Investa Office Developments Pty Ltd
Via email: KMarsden@investa.com.au

AMR004: Airborne Asbestos Fibre Monitoring Report – 105 Miller Street, North Sydney, NSW

Dear Katharine,

Please find as **Attachment A**, the airborne asbestos fibre monitoring results for the investigation works completed at 105 Miller Street, North Sydney, NSW (the site) on **Wednesday 30 October 2024**.

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*.

Should you require clarification, please contact the undersigned on 02 8245 0300 or by email ajsmith@jbsg.com.au.

Yours sincerely:



Aaron Smith
Associate
SafeWork NSW Licensed Asbestos Assessor (LAA001001)
JBS&G Australia Pty Ltd

Attachment A - Asbestos Air Monitoring Results

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: Stuart Lumsden
Report 1155780-AFC
Project Name **NORTH SYDNEY**
Project ID **67072**
Received Date Nov 01, 2024
Date Reported Nov 01, 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 NORTH SYDNEY
Project ID 67072
Date Sampled Oct 30, 2024
Report 1155780-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-No0003085	DI475663	AC228	LEVEL 1, EAST WING, NORTH PORTION, WEST WINDOWS} ADJACENT EAST OF INVESTIGATION AREA	7:35	16:26	1.5	1.5	0/100	< 0.01
24-No0003086	DI475767	AC237	LEVEL 1, EAST WING, NORTH PORTION, WEST WINDOWS} ADJACENT SOUTH EAST OF INVESTIGATION AREA	7:38	16:30	1.5	1.5	0/100	< 0.01
24-No0003087	DI475662	AC244	LEVEL 1 LIFT LOBBY- EAST SIDE	7:41	16:22	1.5	1.5	0/100	< 0.01
24-No0003088	DI475668	AC245	LEVEL 1 EAST WING, NORTHERN END, WEST SIDE - ADJACENT NORTH OF INVESTIGATION AREA	7:45	16:24	1.5	1.5	0/100	< 0.01
24-No0003089	DI475686	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	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8010	Sydney	Nov 01, 2024	Indefinite



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

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 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
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Company Name: JBS & G Australia (NSW) P/L

Address: Level 8, 179 Elizabeth St
Sydney
NSW 2000

Project Name: NORTH SYDNEY

Project ID: 67072

Order No.:

Report #: 1155780

Phone: 02 8245 0300

Fax:

Received: Nov 1, 2024 6:30 PM

Due: Nov 1, 2024

Priority: Same day

Contact Name: Stuart Lumsden

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos Fibre Count & Concentration
Sydney Laboratory - NATA # 1261 Site # 18217						X
External Laboratory						
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	DI475663	Oct 30, 2024	7:35AM	Air	S24-No0003085	X
2	DI475767	Oct 30, 2024	7:38AM	Air	S24-No0003086	X
3	DI475662	Oct 30, 2024	7:41AM	Air	S24-No0003087	X
4	DI475668	Oct 30, 2024	7:45AM	Air	S24-No0003088	X
5	DI475686	Oct 30, 2024		Air	S24-No0003089	X
Test Counts						5

Internal Quality Control Review and Glossary General

- 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.

Holding Times

Please refer to the most recent version 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	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

Calculations

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

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

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

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2</i> (PA). 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, <i>Asbestos: The Analysts Guide</i> , 2 nd Edition (2021), ISBN: 9780616667079.
HSG264	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (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, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 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, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
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 : Aaron Smith, 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:

Sayed Abu Senior Analyst-Asbestos

Authorised by:

Laxman Dias 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.

JBS&G 67072 | 163,554

AMR005 Airborne Asbestos Fibre Monitoring Report, 105 Miller Street, North Sydney (Rev 0)

4 November 2024

Katharine Marsden
Development Manager
Investa Office Developments Pty Ltd
Via email: KMarsden@investa.com.au

AMR005: Airborne Asbestos Fibre Monitoring Report – 105 Miller Street, North Sydney, NSW

Dear Katharine,

Please find as **Attachment A**, the airborne asbestos fibre monitoring results for the investigation works completed at 105 Miller Street, North Sydney, NSW (the site) on **Thursday 31 October 2024**.

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*.

Should you require clarification, please contact the undersigned on 02 8245 0300 or by email ajsmith@jbsg.com.au.

Yours sincerely:



Aaron Smith
Associate
SafeWork NSW Licensed Asbestos Assessor (LAA001001)
JBS&G Australia Pty Ltd

Attachment A - Asbestos Air Monitoring Results

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: Stuart Lumsden
Report 1155787-AFC
Project Name **NORTH SYDNEY**
Project ID **67072**
Received Date Nov 01, 2024
Date Reported Nov 01, 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 NORTH SYDNEY
Project ID 67072
Date Sampled Oct 31, 2024
Report 1155787-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-No0003100	DI475672	AC228	LEVEL 1, EAST WING, NORTH PORTION, WEST WINDOWS-ADJACENT NORTH OF INVESTIGATION AREA	7:45	16:21	1.5	1.5	0/100	< 0.01
24-No0003101	DI475669	AC237	LEVEL 1, EAST WING, NORTH PORTION, WEST WINDOWS-ADJACENT EAST OF INVESTIGATION AREA	7:47	16:11	1.5	1.5	0/100	< 0.01
24-No0003102	DI475717	AC244	LEVEL 1, EAST WING, NORTH PORTION, WEST WINDOWS-ADJACENT EAST OF INVESTIGATION AREA	7:49	16:13	1.5	1.5	0/100	< 0.01
24-No0003103	DI475679	AC245	LEVEL 1 - LIFT LOBBY- EAST SIDE	7:52	16:18	1.5	1.5	0/100	< 0.01
24-No0003104	DI475665	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	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8010	Sydney	Nov 01, 2024	Indefinite



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

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 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
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Company Name: JBS & G Australia (NSW) P/L

Address: Level 8, 179 Elizabeth St
Sydney
NSW 2000

Project Name: NORTH SYDNEY

Project ID: 67072

Order No.:

Report #: 1155787

Phone: 02 8245 0300

Fax:

Received: Nov 1, 2024 6:29 PM

Due: Nov 1, 2024

Priority: Same day

Contact Name: Stuart Lumsden

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos Fibre Count & Concentration
Sydney Laboratory - NATA # 1261 Site # 18217						X
External Laboratory						
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	DI475672	Oct 31, 2024	4:21PM	Air	S24-No0003100	X
2	DI475669	Oct 31, 2024	4:11PM	Air	S24-No0003101	X
3	DI475717	Oct 31, 2024	4:13PM	Air	S24-No0003102	X
4	DI475679	Oct 31, 2024	4:18PM	Air	S24-No0003103	X
5	DI475665	Oct 31, 2024		Air	S24-No0003104	X
Test Counts						5

Internal Quality Control Review and Glossary General

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

Holding Times

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

Units

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

Calculations

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

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

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

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2</i> (PA). 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, <i>Asbestos: The Analysts Guide</i> , 2 nd Edition (2021), ISBN: 9780616667079.
HSG264	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (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, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 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, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
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 : Aaron Smith, 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:

Sayed Abu Senior Analyst-Asbestos

Authorised by:

Laxman Dias 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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