



Mirvac Projects Pty Ltd
Hazardous Materials Survey
Locomotive Workshop Building
Australian Technology Park

2 Locomotive Street
Eveleigh, NSW

9 August 2017

51142-110236 (Rev A)
JBS&G Australia Pty Ltd

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Abbreviations

Term	Definition
AC	Asbestos Cement
ACM	Asbestos Containing Material
ACD	Asbestos Containing Dust
ANZECC	Australian and New Zealand Environment Conservation Council
AMP	Asbestos Management Plan
COC	Chain of Custody
EPA NSW	Environmental Protection Authority, New South Wales
FA	Friable Asbestos
LCD	Lead Containing Dust
LP	Lead Paint
NATA	National Association of Testing Authorities, Australia
NEPC	National Environmental Protection Council
PCBs	Polychlorinated Biphenyls
PPE	Personal Protective Equipment
SMF	Synthetic Mineral Fibre
SWA	Safe Work Australia
WHS (WH&S)	Workplace Health and Safety

1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by Mirvac Pty Ltd (Mircvac, the client) to undertake a hazardous materials survey (HMS) of the Locomotive Workshop building located at 2 Locomotive Street, Eveleigh, NSW 2015 (the site). The site is legally identified as Lot 4000 in Deposited Plan (DP) 1194309 and occupies an area of approximately 2.7 hectares (ha). Refer to **Site Location** attached as **Figure 1**.

The Locomotive Workshop has been acquired by Mirvac and is currently being utilised for commercial use(s). It is understood that the internal layout of the Locomotive Workshop will be completely reconfigured as part of a major redevelopment project, with Bays 1-5 proposed for retail land use and Bays 6-16 proposed for commercial land use. It is further understood the Locomotive Workshop is heritage listed and redevelopment of the site will largely involve refurbishment with the foundations and building exterior retained. All modern fixtures within the Locomotive Workshop are proposed to be removed to highlight the buildings architecture and antiquity. This will involve demolition of the existing internal offices and other structures, which may have an impact on hazardous materials.

It is understood that hazardous materials assessments, and associated remedial and abatement works have been completed historically for the building. Nonetheless, an existing HMS held by the client and sighted by JBS&G was outdated and appeared deficient and incomplete.

It is speculated that removal of asbestos containing materials (ACMs) has occurred in the past, e.g. interior linings, fixings, and possibly an asbestos cement roof, etc. There is visual evidence that remediation of lead painted items throughout the Locomotive Workshop, e.g. heritage structural steel elements and machinery, has occurred previously. These remediation works would have involved removal of deteriorated and flaking lead based paints and application of a protective clear coat to stabilise, encapsulate and preserve the remediated lead painted surfaces.

During the completion of this HMS, the structures were inspected for the following hazardous materials:

- Asbestos containing materials (ACM);
- Asbestos containing dust (ACD);
- Lead based paints (LP);
- Lead containing Dust (LCD);
- Synthetic Mineral Fibres (SMF); and
- Polychlorinated biphenyls (PCB).

1.2 Objectives

The objective of the HMS was threefold, to:

- Review any existing documentation provided to JBS&G from the client pertaining to previous HMS or remedial works conducted at the site;
- Undertake a thorough inspection of accessible areas to determine the presence, quantity and condition of hazardous materials within the internal and external building structure; and
- Based on the findings of the HMS identify any risks to current and future occupants / visitors of the building, as well as construction workers involved in the upcoming demolition, redevelopment and refurbishment works.

The HMS and this report have been undertaken in accordance with the requirements of:

- *Work Health and Safety Act (2011).*
- *Work Health and Safety Regulation (2011).*
- *How to Safely Remove Asbestos Code of Practice, Safe Work Australia, (2016) (SWA 2016a).*
- *How to Manage and Control Asbestos in the Workplace Code of Practice, Safe Work Australia (2016) (SWA 2016b).*
- Australian Standard 4361.2 (1998) *Guide to Lead Paint Management - Part 2: Residential and Commercial Buildings (AS4361.2-1998).*
- National Occupational Health and Safety Commission's *National Standard for Synthetic Mineral Fibres [NOHSC:1004(1990)].*
- National Occupational Health and Safety Commission's *National Code of Practice for the Safe Use of Synthetic Mineral Fibres, [NOHSC:2006(1990)].* and
- Australian and New Zealand Environment Conservation Council's *Identification of PCB-containing Capacitors: An information booklet for Electricians and Electrical Contractors, (ANZECC 1997).*

1.3 Hazardous Building Materials Survey Limitations

Whilst all reasonable care has been taken by JBS&G during the completed HMS, this report is limited due to:

- Only safely accessible areas of the site were surveyed.
- Access restrictions to operational areas such as energised services, gas, air conditioning/heating, pressurised vessels, chemical lines etc.
- Potential materials located in areas in which they could not reasonably be envisaged or anticipated.
- No intrusive works were conducted during this investigation.
- Limited access to internal building components e.g. set floor, walls, ceiling cavities etc., in which case only representative areas were inspected with the hand tools available to the JBS&G consultant for non-destructive investigation.
- Plant and machinery identified on site that could not be accessed/inspected without destructive means due to its heritage value was not sampled. No dismantling of heritage machinery was undertaken.

It should be noted that building works undertaken between the 1930s - 1980s may have general occurrences of ACMs in areas which are not readily accessible with the hand tools available for the survey. These areas and materials include, inter alia:

- Fibre Cement Sheeting (FCS) used as packing to bearers and joists in the underfloor void or as boxing/shuttering to concrete formwork.
- FCS packing between window/door frames and timber studs, and
- Compressed FCS underneath tiled floor areas.

Whilst all care is taken by the consultants to uncover hidden materials, not all areas can be accessed within the allowable timeframe without more industrial (power) tools. As such, only minor destructive sampling techniques were employed to gain access. Consequently, without substantial demolition of selected parts the building, it is not possible to guarantee that every source of

hazardous material has been detected. JBS&G recommends that areas inaccessible during the survey be inspected as the demolition progresses. If suspected hazardous materials are observed, confirm the presence or absence of hazardous materials through laboratory testing.

In the event suspected hazardous materials are identified during strip out or demolition which are not included in this report, JBS&G recommends that works should cease and an assessment of the materials undertaken by a competent person for further appropriate recommendations.

No one section or part of a section of this report is to be taken as giving an overall idea of this report. Each section is to be read in conjunction with the whole of this report, including the appendices and attachments.

2. Methodology

2.1 Hazardous Materials

This HMS involved the assessment of materials in both:

- Currently occupied / accessible areas, such as ground and mezzanine level offices and public areas readily accessible by standing height or A-frame ladder, e.g. plant rooms, under carpet, office ceiling spaces; and
- Currently unoccupied / inaccessible areas, such as those areas only accessible via the use of an Elevated Work Platform (EWP), e.g. high masonry walls, structural steel columns, purlins, roof trusses, mezzanine gantries, overhead cranes, elevated exterior awnings and roof, etc.

2.1.1 Asbestos Containing Materials and Asbestos Containing Dust

Representative samples of suspected ACM's and ACD's were collected where possible and placed into a zip-lock bags. These were subsequently delivered to a NATA accredited laboratory for analysis using polarised light microscopy in conjunction with dispersion staining techniques. Similar materials to those analysed or other materials known to contain asbestos from the consultant's experience (e.g. Electrical backing boards, corrugated asbestos cement roofs and older fibre cement sheeting) or materials not accessible may also be presumed to contain asbestos as per the relevant Code of Practice.

At the time of inspection, the following details were recorded:

- Location.
- Type of material.
- Accessibility.
- Condition.
- Friability, and
- Volume/dimensions.

2.1.2 Lead Based Paint

Australian Standard AS4361.2 (1998) *Guide to Lead Paint Management Part 2: Residential & Commercial Buildings* defines lead paints as those in which the lead content (calculated as lead metal) is in excess of 1.0 percent by weight of the dry film. This can be determined by field spot tests, laboratory testing or the use of portable X-ray fluorescence (XRF) field tests. Due to the heritage nature of items potentially coated with lead paint and to minimise potential damage, XRF field screening was the primary testing method applied.

In addition to XRF field tests, selected representative paint samples were collected where possible with minimal disturbance and delivered to a NATA accredited laboratory for analysis using inductively coupled plasma optical emission spectrometry.

2.1.3 Lead Containing Dust

To assist with the risk assessment, representative samples of accumulated or settled dust were collected and delivered to a NATA accredited laboratory for analysis via ICP-OES.

Where significant quantities of dust were observed, a bulk sample was collected for analysis of lead concentration by weight. Where very minor levels of dust were observed that would prevent a bulk sample being collected, swab sampling of settled dust was undertaken in accordance with the requirements outlined in the Australian Standard AS4361.2 (1998) *Guide to Lead Paint Management*

Part 2: Residential & Commercial Buildings, Appendix C (AS 4361.2-1998), to determine a concentration of lead per square metre.

Where bulk dust samples were collected from accessible internal surfaces, the reported concentration of lead were compared against a conservative assessment criteria of 300 mg/kg, adopted as per Health Investigation Level A (HIL-A) outlined in the *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)*, National Environment Protection Council (NEPC 2013). This criteria was selected given the potential for human exposure during soft strip out, demolition and refurbishment works.

Where non-bulk lead dust samples (swab samples) were collected, the concentration of lead was compared against the appropriate lead dust clearance level outlined in AS 4361.2-1998, as follows:

- Interior floors: 1 mg/m² (as lead)
- Interior window sills: 5 mg/m² (as lead)
- Exterior surfaces: 8 mg/m² (as lead)

Lead swab sampling was completed and calculated in accordance with sampling procedure stated in AS 4361.2-1998, Appendix C, based on a sampling area of 30cm x 30cm (0.09m²).

2.1.4 Polychlorinated Biphenyls

Old fluorescent light fittings and other appliances which may contain capacitors containing PCB dielectric oil were identified by inspection and evaluation with the consultant's experience of similar light fittings and appliances. Where possible and safe to do so, a representative light fitting was opened to reveal the capacitor make and model for comparison against known PCBs as listed in the ANZECC (1997) list of PCB containing capacitors.

2.1.5 Synthetic Mineral Fibres

SMF containing materials were either sampled as per the asbestos methodology or presumed to contain SMF from the consultant's experience of similar materials.

2.2 Other

No dismantling or destructive sampling of heritage machinery on display throughout the building was undertaken. Sampling and analysis of transformer oils associated with heritage machinery for PCBs was not within the scope of this assessment.

2.3 Inaccessible Areas

As per the *Code of Practice for the Management and Control of Asbestos in the Workplace*, any areas not accessible must be recorded as such. Where hazardous materials are suspected to be contained within inaccessible areas, these shall be documented in this report and the associated Hazardous Materials Register (**Appendix A**).

3. Site Description

The Locomotive Workshop site sits within the ATP precinct which is strategically located approximately 5km south of the Sydney CBD, 8km north of Sydney airport and within 200m of Redfern Railway Station. The site, DP 1194309 with a site area circa 27,210 m² is located within the City of Sydney local government area (LGA).

The Locomotive Workshop commenced construction in 1887 and consists of a very large brick building divided into 16 bays running north-south. Each bay was originally used for one or more trades required to repair or manufacture locomotives and their components. Bays 1 to 4, at the east end, contained trades such as blacksmithing and boiler making, while Bays 5 to 15 contained the machining, tooling and assembly areas. Refer to **Site Layout** attached as **Figure 2**.

The building is of masonry construction with a concrete floor and metal roof and presents as a two-storey structure. A series of small annexes have been built along the southern side of the building. Internally, the building is supported on a steel frame and metal roof trusses, which have been incorporated within the redevelopment of the building. Items of heritage machinery have been placed on display throughout the bays of the building. Only Bays 1 and 2 at the east end of the building are substantially original, with the remaining bays having been converted to commercial office space, function and exhibition areas in a variety of styles, circa 1996.

The type, location, friability, accessibility and approximate quantities of identified and suspected hazardous materials are provided in the Hazardous Materials Register in **Appendix A**. Photographs taken during the HMS are presented in **Appendix B**. A summary of the observations made during the HMS is included in the following sections.

4. Survey Findings

The HMS was conducted in July 2017 by Aaron Smith, one of JBS&G's experienced hazardous materials surveyors and a SafeWork NSW Licensed Asbestos Assessor (LAA 001001).

The survey findings below have been separated into building materials, settled dusts and heritage machinery. A tabulated summary of the hazardous materials identified at the site is provided in the Hazardous Materials Register in **Appendix A**.

4.1 General Summary

As a general summary, the following hazardous materials were identified within internal areas of the Locomotive Workshop:

- The silver / grey paint adhered to the structural steel heritage columns, beams, crane rails, purlins and black roof trusses throughout the bay is lead based paint. The columns and beams commonly penetrate ceiling spaces of the offices and amenities in the building.
- Lead paint systems occur randomly on sections of the internal masonry walls, including the four perimeter walls and internal dividing wall between Bays 5 and 6. The distribution of lead paint on the internal brick walls appears to be inconsistent. Although the off-white paint at the exposed surface does not generally contain lead, it is anticipated that older patchily distributed undercoats and paint films beneath the surface layer contain lead.
- A proportion of the arched heritage window frames located around the internal perimeter walls contain lead paint. The distribution of lead paint on the arched heritage window frames appeared to be inconsistent.
- The mustard coloured timber windows located on the elevated internal and external perimeter walls, Levels 1 and 2, typically contain lead.
- Asbestos paper lining, classified as friable, is present in several of the older electrical switchboards and fuse boxes located within Bays 1 and 2 as well as the Southeast Annex and Boiler House located to the south of Bays 1 and 2. It is noted that some of these older electrical housing could not be opened and may contain ACMs.
- Bituminous asbestos backing boards associated with electrical, fuse and switch gear were identified in the old blacksmithing areas of Bays 1 and 2, Southeast Annex and Boiler House, as well as the majority of the operator cabins of the overhead travelling cranes within Bays 4 - 8, 10 - 14 and 16. Asbestos backing boards were also identified within the heritage machinery display in Bay 10 (one board) and on the upper northern wall of Bay 10 (three boards).
- The jib cranes located within Bays 1 and 2 and associated southern annexes, and in Bay 10 contain lead based paint.
- SMF ceiling tiles occur throughout the majority of office and amenity areas in the building.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located within the ceiling cavities of most ground level and Level 1 offices and amenities.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located on top of the flat roofs of the Level 1 offices, theatres and function centres within Bays 3, 5 - 7, 9, 15 and 16.
- Water / air-conditioning pipework insulated with SMF traverses the upper internal north and south walls of the Locomotive Workshop.

- SMF insulation batts are present in the ceiling cavities of some of the Level 1 and Level 2 offices and amenities.
- No older styled fluorescent light fittings suspected of containing PCB capacitors were identified during the survey.
- No suspected asbestos containing fire doors were identified during the survey.
- Lead contaminated settled dusts are present on office rooftops and other horizontal surfaces, e.g. window sills and upper wall ledges, throughout the Locomotive Workshop.
- The majority of the heritage machinery and equipment throughout Bays 1 and 2 as well as on floor display in Bays 3 - 5, 8, 10 and 15 contain lead based paint.
- The majority of the overhead travelling cranes within Bays 4 - 8, 10 - 14 and 16 contain lead based paint.

4.2 External Building

The external building structure of the Locomotive Workshop is constructed with brick walls and corrugated iron (colourbond) clad roof sections for each of the 16 bays. Original brick annexes are attached to the southern ends of bays 3, 9 and 10. Newer metal framed, sheet metal clad plant rooms and HV substations adjoin the southern ends of bays 6, 7 and 16. Semi enclosed lean-to structures, the Southeast Annex and Boiler House, are located at the southern ends of bays 1 and 2 respectively. The main air-conditioning plant and chiller room are located to the adjacent southwest of Bay 16. Sheet metal clad structures referred to as 'Pigeon Coupes' are located on the rooftop at the northern ends of bays 3, 4 and 5.

A summary of the relevant observations made during the completion of the HMS of the external areas of the Locomotive Workshop is discussed in the following sections.

4.2.1 Southeast Annex and Boiler House

A summary of the relevant observations made during survey of the Southeast Annex (Bay 1) and Boiler House (Bay 2) external to the Locomotive Workshop are as follows:

- An exposed flange gasket attached to a hanging pipe in the northwest corner of the southeast annex is presumed to contain asbestos, and have been damaged.
- The bituminous backing board within the fuse box located on the wall to the adjacent north of the boilers is presumed to contain asbestos.
- Not all of the older style electrical switch and fuse boxes located on the northern wall of the southeast annex and boiler house could be opened. These boxes should be presumed to contain possible ACMs (asbestos paper lining or backing boards) until confirmed otherwise.
- Flange gaskets of older steel pipework located on the lean-to roof of the southeast annex are presumed to contain asbestos.
- A sample of the mastic putty applied around the timber window frames on the external south wall of the southeast annex, was not found to contain asbestos (Ext-A01).
- Analysis and XRF screening of the mustard coloured double doors to the external south of Bay 1 identified lead paint (Ext-LP01), this paint is deteriorating and flaking.
- XRF screening of the arched heritage window on the western wall of the southeast annex, identified lead paint.
- XRF screening of the orange fuse box and electrical control box in the Boiler House identified lead paint.

- XRF screening of the yellow steel framework for the boiler gantry identified lead paint.
- Support stanchions for the grey above-ground fuel tanks between Bays 1 and 2 did not identify lead paint.

Settled Dust Sampling

- A lead dust swab sample collected of accumulated dust settled on the window sill below the arched heritage window on the western internal wall of the southeast annex, identified lead concentrations of 43µg, calculated as 0.48 mg/m², below the dust swab criteria of 5mg/m² (Ext-LD01).

Heritage Machinery / Equipment

- All non-rubber gaskets associated with unrestored pipe flanges and pressure control valves for the four boilers are presumed to contain asbestos.
- A sample of the calcium silicate refractory sampled from Boiler 3 was not found to contain asbestos (Ext-A02).
- XRF screening of the black De Bergue Electric Shears identified lead paint.
- XRF screening of the yellow 10 CWL Crane Jib identified lead paint.
- XRF screening of the silver 10 CWL Crane Jib identified lead paint.
- XRF screening of the black boilers (furnaces and steam drums) did not identify lead paint, the boilers have been recently restored.
- XRF screening of the orange gen-sets for each of the boilers identified lead paint.
- Water and steam drums associated with the four water tube-boilers are insulated with SMF.

4.2.2 General Exterior

- A representative sample of the mastic putty applied around the arched heritage windows around the building was not found to contain asbestos (Ext-A03). This sample was collected from the external south wall of the Bay 9 southern annex.
- A representative sample of the cementitious mortar bonding brickwork on the upper northeast corner wall of the building was not found to contain asbestos (Ext-A04).
- A sample of the gasket material between valves fitting on top of the two cylindrical water vessels adjacent the eastern wall, south end of the building, was found to contain non-friable asbestos (Ext-A05). Other gaskets of identical material were noted on the vessels.
- A representative sample of the mastic putty applied around the upper mustard coloured rectangular window frames around the building was not found to contain asbestos (Ext-A06). This sample was collected from on the upper external south wall of Bay 2.
- A representative sample of the pointing material used between the sandstone copings around the building was not found to contain asbestos (Ext-A07). This sample was collected from the upper southern wall of Bay 5.
- Flange gaskets of associated with heritage steel pipework traversing the northern wall of the building may contain asbestos.
- XRF screening of the mustard coloured, timber double arched doors on the south side of bays 1, 2 and 10 (south annex) identified lead paint. Remaining similar doors on this side of the building have been replaced and finished with non-lead containing acrylic paint. All mustard coloured, timber double arched doors on the north side of building are newer replacement doors, coated with an acrylic non-lead based paint.

- XRF screening of the main central mustard coloured, timber double arched door on the eastern side of the building identified lead paint.
- Spot XRF screening of the remaining mustard coloured, timber double arched doors on the north side of the Locomotive Workshop did not identify lead paint. Nonetheless if these doors are to be removed during upcoming refurbishment works, further confirmatory testing should be undertaken.
- XRF screening of the mustard coloured timber panelling on the north side of the Bay 8 did not identify lead paint. However, XRF screening of the older mustard coloured timber framed windows within the abovementioned panelling identified lead paint.
- XRF screening of the mustard coloured, timber entry doors on the south side of the Bay 3 annex (Pump House) identified lead paint.
- Analysis and XRF screening of the mustard coloured rectangular window frames on the upper northern, southern and western walls of the building identified lead paint (Ext-LP02), collected from the upper window frame on the south side of Bay 2.
- Analysis and XRF screening of the old white paint on the brick archways around entry doors on the north and south sides of the building, ground level, identified lead paint (Ext-LP03). This sample was collected from the brick archway on the south side of Bay 9.
- XRF screening of the arched heritage window frame located on the south side of Bay 4, adjacent to accumulators identified lead paint.
- XRF screening of the arched heritage window frame located on the western side of the Bay 9 southern annex identified lead paint.
- XRF screening of the old bay numbers painted in orange and white adjacent to the entry doors on the north and south sides of the building, ground level, identified lead paint.
- XRF screening of the silver alloy coloured exterior urinal and overlying window sill abutting the southern wall of the Bay 9/10 annex (Security), identified lead paint.
- XRF screening of the residual yellow and blue paint on the south brick wall of Bay 13 around the arched window identified lead paint. Paint debris was noted on the ground surfaces beneath this area.
- XRF screening of the residual yellow squares painted on the brickwork, ground level, south brick wall of Bay 15, identified lead paint.
- XRF screening of the grey lintel beam over the southern access into Bay 14 identified lead paint. XRF screening of the grey lintel beam over the southern access into Bay 8 did not identify lead paint. Similar beam traverses east-west across the upper northern walls of these bays.
- Old paint on steel and timber framing materials within the 'Pigeon Coupe' structure located on the rooftop at the northern end of Bay 4 is presumed to contain lead. No access was possible into the adjacent two Pigeon Coupes on roof of Bays 3 and 5.
- XRF screening of the grey steel rail tracks applied as window lintels on the upper northern wall of the building identified lead paint.
- XRF screening of the grey outriggers and external conveyor system that traverses the northern side of the building, sampled at Bay 9, did not identify lead paint. It appears this item has been restored with a new industrial coating.
- XRF screening of the yellow circular timber louvers located on the northern side of the building, Level 2, did not identify lead paint.

- XRF screening of the hydraulic accumulators (pressure vessels) on the south side of Bay 4 did not identify lead paint. It is understood that these have been recently restored.
- Ducting and pipework insulated with SMF is present in the new Boiler Room located on the south side of Bay 5 and 6, Level 1.
- No hazardous materials were noted in the Eastern Switch Room, located to the south of Bay 6 and 7, Level 1.
- The rubberised waterproofing membrane applied to the roofs of the newer annexes on the south side of the Locomotive Workshop, do not contain asbestos.
- No hazardous materials were noted in the Western Switch Room, located to the south of Bay 16, Level 1.
- No hazardous materials were noted in the Condenser and Chiller Compound, located along the western side of Bay 16, ground level. Pipework associated with the chiller units is insulated with foam.

4.3 Internal Building

4.3.1 Bay 1

Bay 1 at the east end of the building is open portal framed and relatively original with the southern half of the bay serving as a blacksmithing workshop and trade school and the Davy Press and associated heritage steam plant display occupying the northern portion of the bay. An overhead travelling crane is positioned on crane rail beams at Level 2 north.

A summary of the relevant observations made during survey of the internal areas of Bay 1 (building fabric and heritage machinery) is as follows:

Building Materials

- Individual compartments of the orange (Torq brand) heritage fuse box located on the central northern wall of Bay 1 are lined with asbestos paper lining, classified as friable (B1-A05-J117192). An orange Control Relay Box (Torq brand) on the north wall, ground level, adjacent to the abovementioned fuse box contains the same asbestos paper lining.
- Two bituminous backing boards within heritage fuse and switch boxes located on the central western side of Bay 1, south, are presumed to contain asbestos.
- Two bituminous backing boards within small heritage fuse boxes located on the central eastern wall of Bay 1, south, are presumed to contain asbestos.
- A sample of a flange gasket within an old water feed pipe into the Davy Intensifier, located in the southeast corner of Bay 1 north, Level 2, was found to contain non-friable asbestos (B1-A07).
- Old pipework associated with the former steam plant that traverses the upper east and west sides of the bay may house asbestos gaskets within flange joins (see Heritage Machinery section below).
- The silver / grey painted structural steel heritage columns throughout the bay contains lead (B1-LP01). The sample was collected from a column at the central west of Bay 1 south.
- XFR screening of multiple structural steel heritage columns, capitals, beams, downpipes, crane rails, purlins and roof truss components throughout the bay identified lead paint.
- Spot XRF screening of the white paint on the southern, eastern and northern masonry walls of Bay 1, ground level, did not identify lead paint. However, as lead based paints may be

present below the surface coating in areas not tested, these walls should be further assessed if disturbance to the paint in localised areas is to occur.

- Analysis and XRF screening of greyish beige coloured arched timber double doors on the southern wall of Bay 1 did not identify lead paint (B1-LP04). However, the mustard coloured paint on the external sides of these doors was identified as containing lead, see Section 4.2.1.
- XRF screening of the main east entry, mustard coloured arched timber double doors into Bay 1 / Central Road identified lead paint.
- XRF screening of the orange (Torq brand) heritage fuse box located on the central northern wall of Bay 1 identified lead paint.
- XRF screening of the white RSJ stanchion adjacent to the east wall of Bay 1, north, identified lead paint.
- XRF screening of the blue and white (top coats) and orange (undercoat) paint films applied to the Sub-Foreman's Office identified lead.
- SMF insulation is suspected in the ceiling cavity of the Sub-Foreman's Office.
- Water / air-conditioning and old steam pipework insulated with SMF traverses sections of the upper eastern, southern and western sides of Bay 1.

Settled Dust Sampling

- An asbestos dust sample collected from the dirt floor at the base of a column in the central west of Bay 1 south, did not identify asbestos (B1-AD01).
- A lead dust bulk sample collected from the dirt floor at the base of a column in the central west of Bay 1 south, identified lead concentrations of 46 mg/kg, below the adopted criteria of 300 mg/kg (B1-LD01).
- An asbestos dust sample collected from the dirt floor at the base of a column in the central east of Bay 1 north, did not identify asbestos (B1-AD02).
- A lead dust bulk sample collected from the dirt floor at the base of a column in the central east of Bay 1 north, identified lead concentrations of 160 mg/kg, below the adopted criteria of 300 mg/kg (B1-LD02).
- An asbestos dust sample collected from the top of the main roof support cross beam at the northwest corner of Bay 1 south, Level 2, did not identify asbestos (B1-AD03).
- A lead dust bulk sample collected from the top of main roof support cross beam at the northwest corner of Bay 1 south, Level 2, identified lead concentrations of 5000 mg/kg, above the adopted criteria of 300 mg/kg (B1-LD03).
- An asbestos dust sample collected from the top of the yellow CTW 10 Ton Jib Crane in the northeast corner of Bay 1 south, Level 2, did not identify asbestos (B1-AD04).
- A lead dust bulk sample collected from the top of the yellow CTW 10 Ton Jib Crane in the northeast corner of Bay 1 south, Level 2, identified lead concentrations of 960 mg/kg, above the adopted criteria of 300 mg/kg (B1-LD04).
- An asbestos dust sample collected from the top of the crane rail in the southeast of Bay 1 north, Level 2, did not identify asbestos (B1-AD05).
- A lead dust bulk sample collected from the top of the steam drum for the Davy Intensifier, located in the southeast corner of Bay 1 north, Level 2, identified lead concentrations of 130 mg/kg, below the adopted criteria of 300 mg/kg (B1-LD06).

Heritage Machinery / Equipment

- The refractory within representative Oil Furnace (1SSE) does not contain asbestos (B1-A01).
- The refractory within the HC Thornthwaite Furnace does not contain asbestos (B1-A02).
- A woven asbestos seal, classified as friable, is present around the top join of the HC Thornthwaite Furnace (B1-A03). This furnace does not appear to be operational.
- Calcium silicate based insulation around a furnace yolk stored adjacent to Oil Furnace (1SSE) does not contain asbestos (B1-A04).
- Asbestos containing gaskets are attached to the old steel water and steam pipes lying on the floor around the Davy equipment north of Central road (B1-A05- JI14761). Several of these gaskets have been ripped and disturbed and are in poor condition.
- A representative gasket between a valve flange for the Davy Intensifier water drum contains non-friable asbestos (B1-A06).
- All non-rubber gaskets on all Davy equipment and related redundant pipework are presumed to contain asbestos.
- No access was possible to the Overhead Travelling Crane located in Bay 4 north, however it is assumed to contain lead-based paint.
- Bituminous backing board/s located in the operator's cabin of the abovementioned crane are presumed to contain asbestos.
- Brake pads associated with the winch gear of the abovementioned crane are presumed to contain asbestos.
- Analysis and XRF screening of the orange coloured 7 CWT Jib Crane in Bay 1 south, identified lead paint (B1-LP02).
- XRF screening of the orange 3 x 10 CWT Jib Cranes in Bay 1 south, identified lead paint.
- Analysis and XRF screening of the green stanchion section of the No.6 Blower (No.755) identified lead paint (B1-LP03).
- XRF screening of the blue coloured Workbench Cupboard fixed to the east wall of Bay 1 south identified lead paint.
- XRF screening of the grey Brett Type Impact Punch identified lead paint.
- XRF screening of the grey Hydraulic Press identified lead paint.
- XRF screening of the grey Davy Press identified lead paint (B1-LP05).
- XRF screening of the grey Davy Cylindrical Vessel (State Rail Item 008684) identified lead paint.
- The majority of working furnaces within the bay are insulated with ceramic fibre filament (SMF).

4.3.2 Bay 2

The layout of Bay 2 is very similar to Bay 1 with the blacksmithing workshop and trade school south of Central Road and a heritage machinery and equipment display area to the north.

A summary of the relevant observations made during the survey of the internal areas of Bay 2 (building fabric and heritage machinery) is as follows:

Building Materials

- Individual compartments of the orange coloured, heritage Large Electrical Switchboard (Torq brand) located in the central west of Bay 2 south are lined with asbestos paper lining, classified as friable (B2-A01). Three similar orange electrical switch and fuse boxes are located in the central west of Bay 2 south.
- Compartments of the orange coloured, heritage Fuse Box (Torq brand) located in the southeast corner of Bay 2 north are lined with friable asbestos paper lining (B2-A03). A sample of the woven electrical wire insulation collected from this fuse box did not identify the presence of asbestos (B2-A04). The orange electrical box located in the southwest corner of Bay 2 north could not be completely opened and may contain ACMs.
- Bituminous backing boards, presumed to contain asbestos, are associated with the abovementioned orange electrical boxes.
- Old pipework associated with the former steam plant that traverses the upper east and west sides of the bay may house asbestos gaskets within flange joins.
- The roof membrane of the internal Sub-Foremans Office located at the south end of Bay 2 does not contain asbestos (B2-A02).
- A sample of the insulation around the unnamed furnace located in the central east of Bay 2 north did not identify asbestos (B2-A05).
- A sample of the refractory within the unnamed furnace located in the central west of Bay 2 north did not identify asbestos (B2-A06).
- The silver / grey painted structural steel heritage columns throughout the bay contain lead (B2-LP03), collected from the main silver cross beam at the northwest corner of Bay 2 south.
- XFR screening of multiple structural steel heritage columns, capitals, beams, downpipes, crane rails, purlins and roof truss components throughout the bay identified lead paint.
- Spot XRF screening of the white paint on the southern, western and northern masonry walls of Bay 2, ground level, did not identify lead paint. However as lead based paints may be present below the surface coating in areas not tested, these walls should be further assessed if disturbance to the paint is to occur.
- XRF screening of the off-white paint of the arched heritage window on the northern wall of Bay 2, east of the doorway, identified lead paint.
- Orange coloured heritage electrical, switch gear, fuse and power supply boxes located along the western side of Bay 2 south contain lead paint (B2-LP01). The sample was collected from the Large Electrical Switchboard (Torq brand).
- Orange coloured heritage electrical, switch gear, fuse and power supply boxes located at the south end of Bay 2 north contain lead paint (B2-LP07). The sample was collected from the main orange fuse box in southeast corner of Bay 2 north.
- XRF screening of the yellow 'Crane L4' metal sign attached to the northern wall, identified lead paint.
- SMF insulation is suspected in the ceiling cavity of the Sub-Foremans Office.
- Water / air-conditioning and old steam pipework insulated with SMF traverses sections of the upper eastern, southern and western sides of Bay 2.

Settled Dust Sampling

- An asbestos dust sample collected from the floor at the base of a column in the central west of Bay 2 south, did not identify asbestos (B2-AD01).
- A lead dust bulk sample collected from the dirt floor at the base of a column in the central west of Bay 2 south, identified lead concentrations of 1300 mg/kg, above the adopted criteria of 300 mg/kg (B2-LD01).
- An asbestos dust sample collected from the floor at the base of a column in the central west of Bay 2 north, did not identify asbestos (B2-AD02).
- A lead dust bulk sample collected from the dirt floor at the base of a column in the central east of Bay 2 north, identified lead concentrations of 1400 mg/kg, above the adopted criteria of 300 mg/kg (B2-LD02).
- A lead dust swab sample collected of accumulated dust settled on the window sill of the arched heritage window on the northern wall identified lead concentrations of 120µg, calculated as 1.3 mg/m², below the adopted dust swab criteria of 5mg/m² (B2-LD02 Swab).
- A lead dust swab sample collected from the main roof support cross beam at the southwest corner of Bay 2 north, Level 2, identified lead concentrations of 250µg, calculated as 2.8 mg/m², below the adopted dust swab criteria of 5mg/m² (B2-LD04).
- An asbestos dust sample collected from the top of a green enamel light in the northwest corner of Bay 2 south, Level 2, did not identify asbestos (B2-AD03).
- A lead dust swab sample collected from the top of a new metal clad water pipe in the northwest corner of Bay 2 south, Level 2, identified lead concentrations of 360µg, calculated as 4 mg/m², below the adopted dust swab criteria of 5mg/m² (B2-LD05).

Heritage Machinery / Equipment

- The grey stanchion of the One Ton Jib Crane located in Bay 2 south contains lead paint (B2-LP02).
- XRF screening of the grey and orange coloured 10 CWT and Central Jib Cranes located in Bay 2 south identified lead paint.
- XRF screening of the grey Landis Screw Cutting Machine identified lead paint.
- The yellow 2 SWL Jib Crane located in Bay 2 south contains lead paint (B2-LP03).
- XRF screening of the grey Bennie Metal Guillotine identified lead paint.
- Analysis and XRF screening of the grey Davis and Primrose Steam Hammer No.3 identified lead paint (B2-LP06).
- XRF screening of the grey Davis and Primrose Steam Hammer No.1 and No.2 identified lead paint.
- Analysis and XRF screening of the grey Davis and Primrose Steam Hammer No.4 did not identify lead paint (B2-LP05).
- XRF screening of the grey Frazing and Grinding Wheel identified lead paint (B2-LP04).
- XRF screening of the Lang and Sons Spring Coiler (MSC4) identified lead paint.
- XRF screening of the Department Double Floor Grinder identified lead paint.
- Old pipework associated with the steam plant in Bay 2 is insulated with SMF and may contain asbestos based gaskets.

- The majority of working furnaces within the bay are insulated with ceramic fibre filament (SMF).

4.3.3 Bay 3

The internal space of Bay 3 occupies two levels and has been fit-out with offices and plant rooms to the north of Central Road. A function and conference centre occupies the southern half of the bay.

A summary of the relevant observations made during survey of the internal areas of Bay 3 is as follows:

Building Materials

- The silver / grey paint adhered to the structural steel heritage columns, beams, crane rails, purlins and black roof trusses throughout the bay is lead based paint. These columns and beams penetrate the working spaces, function hall and office ceiling cavities of this bay.
- A sample of the vermiculate fire-rating insulation applied to a column within the Level 2 plant room, did not identify asbestos (B3-A01).
- Analysis and XRF screening of the lower northern white masonry wall, ground level, did not identify lead paint.
- Analysis and XRF screening of the upper northern white masonry walls accessed via the plant rooms of Bay 3 did not identify lead paint (B3-LP01). The sample was collected from the Level 2 plant room.
- Spot XRF screening of the white masonry walls within the Pump House located at the south end of Bay 3 did not identify lead paint.
- SMF ceiling tiles occur throughout most office and amenity areas in the north of the bay.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located within the ceiling cavities of the northern office areas and kitchen of the southern function hall.
- Fixed and flexible air-conditioning ductwork insulated with SMF is located on top of the flat roof of the southern function hall.
- Water / air-conditioning pipework insulated with SMF traverses the upper internal north and south walls of the bay.
- Hot water services observed in amenity, kitchenette and storage areas throughout the bay are insulated with SMF.
- Ducting, air-handling units, heating and chilled water pipework insulated with SMF is present in the plant rooms, located in the northern half of Bay 3.

Settled Dust Sampling

- An asbestos dust sample collected from the top of the flat roof of the southern function hall, Bay 3 south, Level 2, did not identify asbestos (B3-AD01).
- A lead dust bulk sample collected the top of the flat roof of the southern function hall, Bay 3 south, Level 2, identified lead concentrations of 2600 mg/kg, above the adopted criteria of 300 mg/kg (B3-LD01).
- A lead dust swab sample collected from the top of a steel rafter directly above Central Road and beneath the roof atrium, Level 2, identified lead concentrations of 1000µg, calculated as 11 mg/m², above the adopted dust swab criteria of 5mg/m² (B3-LD02). It is noted that the amount of settled dust in this location is minimal.

Heritage Machinery / Equipment

- Analysis and XRF screening of the green Fielding & Platt Pump located in the Pump House at the south end of Bay 3, identified lead paint (B3-LP02).
- XRF screening of the faded yellow Whitham Spring Coiler and silver Ryerson Spring Forming Machine in Bay 3, Central Road, did not identify lead paint.

4.3.4 Bay 4

Bay 4 is predominantly open plan apart from a three-level office structure with amenities in the northern portion of the bay. An air-conditioning plant room is located in the roof void above the Level 2 office.

A summary of the relevant observations made during survey of the internal areas of Bay 4 (building fabric and heritage machinery) is as follows:

Building Materials

- A sample of woven electrical wire attached to a roof truss in the northeast corner of Level 2, north did not identify the presence of asbestos (B4-A01).
- A sample collected of the pointing mortar used in the upper internal southern brick wall of Bay 4, Level 1, did not identify the presence of asbestos (B4-A02).
- The silver / grey painted structural steel heritage columns, beams, crane rails, purlins and black roof trusses throughout the bay contain lead (B4-LP04). The sample was collected from a structural beam located on Level 1, in the southeast of Bay 4. These columns and beams penetrate the working spaces ceiling cavities of the northern offices.
- Residual white, cream, grey and orange paints on the northern masonry wall of Bay 4, ground level, contains lead (B4-LP02). This paint was noted to be slightly peeling in areas.
- XRF screening of the white paint on the southern masonry wall of Bay 4, ground level and level 1, did not identify lead paint. However, as lead based paints may be present below the surface coating in areas not tested, these walls should be further assessed if localised disturbance to the paint is to occur.
- The residual greyish white paint on the arched heritage window frame located in the southeast and northeast corners of the bay, ground level, contain lead paint (B4-LP01 and B4-LP03). The other arched heritage window frames located on the north and south walls of the bay are presumed to contain lead. This paint is deteriorating and scaling in places and paint and dust debris have accumulated on the underlying window sill.
- XRF screening of the brown varnish skirting boards did not identify lead.
- XRF screening of the newer mezzanine gantry and support posts did not identify lead.
- SMF ceiling tiles occur within the northern office areas.
- Fixed and flexible air-conditioning ductwork insulated with SMF is located within the ceiling cavities of most ground level, Level 1 and Level 2 northern office areas.
- Water / air-conditioning pipework insulated with SMF traverses the upper, internal north and south walls.
- Hot water services observed in amenity, kitchenette and storage areas throughout the bay are insulated with SMF.
- Ducting and pipework insulated with SMF is present in the plant room located at the north end of Bay 4, above the Level 2 ceiling.

Settled Dust Sampling

- A lead dust bulk sample collected from the timber gantry of the Craven Overhead Travelling Crane located in Bay 4 north, Level 2, identified lead concentrations of 1800 mg/kg, above the adopted criteria of 300 mg/kg (B4-LD01).

Heritage Machinery

- The orange Arrol Overhead Travelling Crane L6 located in Bay 4 south contains lead paint (B4-LP05).
- XRF screening of the dark brown Overhead Travelling Crane located in Bay 4 north identified lead paint.
- Bituminous backing board/s located in the operator's cabin of the abovementioned cranes are presumed to contain asbestos.
- Brake pads associated with the winch gear of the abovementioned cranes are presumed to contain asbestos.
- XRF screening of both grey Spring Buckling Presses located in the central north and northeast of the bay identified lead paint. XRF screening of the grey paint on the concrete slab below the presses did not indicate lead.
- XRF screening of the grey Spring Coiler identified lead paint.
- XRF screening of the grey Hydraulic Press and Spring Tester identified lead paint.
- XRF screening of the grey Craven Spring Disassembler identified lead paint.

4.3.5 Bay 5

The internal space of Bay 5 occupies three levels and has been fit-out with the Fuji Xerox offices to the north of Central Road. A theatre occupies the majority of the southern half of the bay. An original heritage masonry road running north-south traverses the western side of Bay 5. The brick wall is exposed on the north side of the bay, however is predominantly concealed behind soft wall linings throughout the southern half of the bay.

A summary of the relevant observations made during survey of the internal areas of Bay 5 is as follows:

Building Materials

- The silver / grey paint adhered to the structural steel heritage columns, beams, crane rails, purlins and black roof trusses throughout the bay is lead based paint. These columns and beams penetrate the northern office ceiling cavities and working spaces (Fuji Xerox) and southern theatre / sound and light mixing room.
- Spot XRF screening of the northern, southern and western white masonry walls of Bay 5, did not identify lead paint. However, very limited access to the walls in Bay 5 south was possible due to the overlining gyprock. Lead based paints may be present below the surface coating in areas not tested or not accessed. These walls should be further assessed if disturbance to the paint in localised areas is to occur. Paints applied to the western walls of Bay 5 south, ground level and Level 1, should be assessed prior to demolition works in these areas.
- SMF ceiling tiles occur throughout most office and amenity areas in the north of the bay.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located within the ceiling cavities of the northern office areas.

- Fixed and flexible air-conditioning ductwork insulated with SMF is located on top of the flat roof of the southern theatre.
- Water / air-conditioning pipework insulated with SMF traverses the upper internal north and south walls of the bay.

Settled Dust Sampling

- Any settled dusts concealed behind the gyprock linings of the western wall of Bay 5 south, ground level and Level 1, should be assessed for lead contamination prior to demolition works in these areas.
- An asbestos dust sample collected from the top of the flat roof of the theatre, Bay 5 south, Level 2, did not identify asbestos (B5-AD01).
- An asbestos dust sample collected from the timber gantry of the Craven Overhead Travelling Crane located in Central Road, Level 2, did not identify asbestos (B5-AD02).
- A lead dust bulk sample collected from the top of the flat roof of the theatre, Bay 5 south, Level 2, identified lead concentrations of 2800 mg/kg, above the adopted criteria of 300 mg/kg (B5-LD01).

Heritage Machinery / Equipment

- XRF screening of the orange Craven Overhead Travelling Crane located in Bay 5, above Central Road, identified lead paint.
- Bituminous backing board/s located in the operator's cabin of the abovementioned crane are presumed to contain asbestos.
- Brake pads associated with the winch gear of the abovementioned crane are presumed to contain asbestos.
- XRF screening of the Johnston Spring Coiler at the south end of Bay 5, ground level, identified lead paint.

4.3.6 Bay 6

Bay 6 occupies two levels and is occupied by office suites on both sides of Central Road. An original heritage masonry road running north-south traverses the eastern side of Bay 6. This wall is exposed throughout the north side of the bay (Fuji) and is accessible on the south side of Bay 6, ground level, via a plenum access hatch located on the eastern side of the Mirvac offices.

A summary of the relevant observations made during survey of the internal areas of Bay 6 is as follows:

Building Materials

- The silver / grey paint adhered to the structural steel heritage columns, beams, crane rails, purlins and black roof trusses throughout the bay is lead based paint. These columns and beams penetrate the working spaces and ceiling cavities of the offices in this bay.
- Approximately 4 x square timber columns are present in the southern end of the bay, ground level (current Mirvac office). XRF screening of these timber columns identified lead paint. These columns and associated beams continue into the ceiling space of the ground level and are showing evidence of deterioration. It is presumed these timber members were once part of an older mezzanine structure. Similar timber columns were not observed in Bay 6 north (current Fuji Xerox tenancy).
- XRF screening of the white RSJ stanchion located in the southern end of the bay, ground level (current Mirvac kitchen) identified lead paint. Older paint systems were noted beneath

the white surface coat. This stanchion and associated beams continues into the ground level ceiling cavity. The beams in the ceiling cavity are the original greyish green colour.

- Spot XRF screening was conducted at multiple locations for the off-white paint applied to the northern, southern and eastern masonry walls of Bay 6, ground level and Level 1. The eastern wall of Bay 6 south, ground level (Mirvac office) is currently located in a plenum area behind gyprock wall sheeting. Spot XRF screening identified lead based paints on the southern and eastern walls of Bay 6 south, ground level. No lead was identified during the screening of paint applied to the northern wall.
- SMF ceiling tiles occur throughout most office and amenity areas throughout the bay.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located within the ceiling cavities of most ground level office and amenity areas. SMF insulation batts were also noted in these areas.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located on top of the flat roofs of the level 1 offices.
- Water / air-conditioning pipework insulated with SMF traverses the of upper internal north and south walls.

Settled Dust Sampling

- The eastern wall of Bay 6 south, ground level (Mirvac office) is currently located in a plenum area behind gyprock wall sheeting. Dust sampling conducted previously from the floor below the brick wall by JBS&G in September 2016, identified lead concentrations of 11,000 mg/kg, above the adopted criteria of 300 mg/kg.
- An asbestos dust sample collected from the top of the flat roof of the Level 1 southern office block, did not identify asbestos (B6-AD01).
- A lead dust bulk sample collected from the top of the flat roof of the Level 1 southern office block, identified lead concentrations of 3000 mg/kg, above the adopted criteria of 300 mg/kg (B6-LD01).
- An asbestos dust sample collected from the top of the flat roof of the Level 1 northern office block, did not identify asbestos (B6-AD02).
- A lead dust bulk sample collected from the top of the flat roof of the Level 1 northern office block, identified lead concentrations of 670 mg/kg, above the adopted criteria of 300 mg/kg (B6-LD02).
- A lead dust swab sample taken from the top of a data / electrical cable tray located above Central Road, Bay 6 Level 2, identified lead concentrations of 1700µg, calculated as 19 mg/m², which is above the adopted dust swab criteria of 5mg/m² (B6-LD03).

4.3.7 Bay 7

The layout of Bay 6 is very similar to Bay 7 with two levels occupied by office suites to both sides of Central Road. The heritage steel superstructure, i.e. columns, beams and trusses, surrounds the office suites, which is typical throughout the Locomotive Workshop.

A summary of the relevant observations made during survey of the internal areas of Bay 7 is as follows:

Building Materials

- The silver / grey paint adhered to the structural steel heritage columns, beams, crane rails, purlins and black roof trusses throughout the bay is lead based paint. These columns and beams penetrate the working spaces and ceiling cavities of the offices in this bay.
- Analysis and XRF screening of the white RSJ stanchion located in the southern end of the bay, ground level (current Mirvac kitchen) identified lead paint (B7-LP02). Older paint systems were noted beneath the white surface coat. This stanchion and associated beams continues into the ground level ceiling cavity; the beams in the ceiling cavity are the original greyish green colour.
- XRF screening of the white southern masonry wall of Bay 7, ground level, identified lead paint.
- XRF screening of the greyish white paint on the arched heritage window frames located on the south wall of the Bay 7, ground level, identified lead paint.
- XRF screening was conducted at multiple locations for the off-white surface paint applied to the northern and eastern masonry walls of Bay 7, ground level and Level 1, no lead was identified. No lead was identified from analysis of paint samples on the and eastern walls (B7-LP01), collected from the eastern wall Bay 7 south, ground level and (B7-LP03), collected from the eastern wall of Bay 7 north, Level 1.
- SMF ceiling tiles occur throughout most office and amenity areas throughout the bay.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located within the ceiling cavities of most ground level office and amenity areas. SMF insulation batts were also noted in these areas.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located on top of the flat roofs of the level 1 offices.
- Water / air-conditioning pipework insulated with SMF traverses the of upper internal north and south walls.

Settled Dust Sampling

- A lead dust swab sample collected from the upper side of a central ceiling tile within the ceiling cavity of Suite 7001, ground level of Bay 7 south (Mircvac Kitchen), identified lead concentrations of $<1\mu\text{g}$, calculated as 0.01 mg/m^2 , which is below the adopted dust swab criteria of 5mg/m^2 (B7-LD01).
- An asbestos dust sample collected from the top of the flat roof of the Level 1 southern office block, did not identify asbestos (B7-AD01).
- A lead dust bulk sample collected from the top of the flat roof of the Level 1 southern office block, identified lead concentrations of 2500 mg/kg , above the adopted criteria of 300 mg/kg (B7-LD02).
- An asbestos dust sample collected from the top of the flat roof of the Level 1 northern office block, did not identify asbestos (B7-AD02).
- A lead dust bulk sample collected from the top of the flat roof of the Level 1 northern office block, identified lead concentrations of 3800 mg/kg , above the adopted criteria of 300 mg/kg (B7-LD03).

Heritage Machinery / Equipment

- XRF screening of the orange Vaughan & Son 5 Ton Overhead Travelling Crane located in Bay 7 above Central Road identified lead paint.
- Bituminous backing board/s located in the operator's cabin of the abovementioned crane are presumed to contain asbestos.
- Brake pads associated with the winch gear of the abovementioned crane are presumed to contain asbestos.

4.3.8 Bay 8

Bay 8 is currently the central bay of the building. It is predominantly open plan apart from a two-level office structure in the northern portion of the bay. A café and items of heritage machinery are positioned around the open floor area.

A summary of the relevant observations made during the survey of the internal areas of Bay 8 (building fabric and heritage machinery) is as follows:

Building Materials

- The silver / grey paint adhered to the structural steel heritage columns, beams, crane rails, purlins and black roof trusses throughout the bay is lead based paint.
- Testing and XRF screening of the off-white / cream paint on the northern masonry wall of Bay 8, ground level east and west and level 1 west, did not identify lead paint (B8-LP01, B8-LP02 and B8-LP03).
- Testing and XRF screening of the off-white / cream paint on the steel lintel beam of Bay 8, level 1, above the southern glass entry doors, identified lead paint (B8-LP04). This paint was noted to be deteriorating and flaking. A similar beam traverses east-west across the upper northern wall of Bay 8.
- The off-white paint on the timber cable tray attached to the upper northern wall of Bay 9, Level 2, is assumed to be lead based paint.
- XRF screening of the newer mezzanine gantry and support posts did not identify lead paint.
- SMF ceiling tiles occur throughout most office and amenity areas in the north of the bay.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located within the ceiling cavities of most ground level and Level 1 office and amenity areas located in the north of Bay 8.
- Water / air-conditioning pipework insulated with SMF traverses the extent of the upper internal north and south walls.

Settled Dust Sampling

- A lead dust bulk sample collected from the upper wall ledge, Level 1 on the southern wall above the glass entry doors, identified lead concentrations of 1200 mg/kg, above the adopted criteria of 300 mg/kg (B8-LD01).
- A lead dust swab sample taken from the top of the cable tray located above the southern glass entry doors, identified lead concentrations of 3200µg, calculated as 36 mg/m², which is above the adopted dust swab criteria of 5mg/m² (B8-LD02).

Heritage Machinery

- XRF screening of the greyish green Genevoise Drilling and Boring Machine (1938), located in Bay 8 south, identified lead paint.

- XRF screening of the greyish green Genevoise Drilling and Boring Machine (1929), located in Bay 8 north, identified lead paint.

4.3.9 Bay 9

Bay 9 occupies two levels and is occupied by office suites on both sides of Central Road.

A summary of the relevant observations made during survey of the internal areas of Bay 9 is as follows:

Building Materials

- The silver / grey paint adhered to the structural steel heritage columns, beams, crane rails, purlins and black roof trusses throughout the bay is lead based paint. These columns and beams penetrate the working spaces and ceiling cavities of the offices in this bay.
- The off-white paint on the timber cable tray attached to the upper northern wall of Bay 9, Level 2, is assumed to be lead based paint.
- SMF ceiling tiles occur throughout most office and amenity areas throughout the bay.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located within the ceiling cavities of most ground level office and amenity areas.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located on top of the flat roofs of the level 1 offices.
- Water / air-conditioning pipework insulated with SMF traverses the of upper internal north and south walls.

Settled Dust Sampling

- A lead dust swab sample collected from the upper side of a central ceiling tile within the ceiling cavity of Suite 9003, ground level of Bay 9 south, identified lead concentrations of $<1\mu\text{g}$, calculated as 0.01 mg/m^2 , below the adopted dust swab criteria of 5mg/m^2 (B9-LD01).
- An asbestos dust sample collected from the top of the flat roof of the Level 1 southern office block, did not identify asbestos (B9-AD01).
- A lead dust bulk sample collected from the top of the flat roof of the Level 1 southern office block, identified lead concentrations of 1400 mg/kg , above the adopted criteria of 300 mg/kg (B9-LD02).
- An asbestos dust sample collected from the top of the flat roof of the Level 1 northern office block, did not identify asbestos (B9-AD02).
- A lead dust bulk sample collected from the top of the flat roof of the Level 1 northern office block, identified lead concentrations of 2300 mg/kg , above the adopted criteria of 300 mg/kg (B9-LD03).

4.3.10 Bay 10

Bays 10 – 14 are open plan and currently form the Dolton House function centre tenancy. There are no internal walls separating these bays. The heritage steel superstructure is emphasised as the main feature throughout this area, as too are the perimeter masonry walls and other heritage building features. The northern half of Bay 10 is completely occupied by a heritage machinery and equipment display area.

A summary of the relevant observations made during survey of the internal areas of Bay 10 (building fabric and heritage machinery) is as follows:

Building Materials

- The central bituminous backing board located on Level 2 of the northern masonry wall contain non-friable asbestos (B10-A02). The adjacent two bituminous backing boards are of identical material and are presumed to contain asbestos.
- The silver / grey paint adhered to the structural steel heritage columns, beams, crane rails, purlins and black roof trusses throughout the bay is lead based paint.
- Testing and XRF screening of the off-white / cream paint on the northern masonry wall of Bay 10, ground level, identified lead paint (B10-LP02), an underlying green paint film was noted in the area of testing. Testing and XRF screening of the off-white / cream paint on the upper northern wall and southern masonry wall of Bay 10, ground level, did not identify lead paint (B10-LP01). Nonetheless, as lead based paints may be present below the surface coating in areas not tested, these walls should be further assessed if localised disturbance to the paint is to occur.
- XRF screening of the off-white paint on the timber cable tray attached to the upper northern wall of Bay 10, Level 2, identified lead paint.
- XRF screening of the mustard coloured rectangular window frames on the upper northern and southern walls of the bay identified lead paint.
- XRF screening of the grey steel lined arched double doors on the south side of the bay did not identify lead paint.
- Water / air-conditioning pipework insulated with SMF traverses the upper internal north and south walls.

Settled Dust Sampling

- An asbestos dust sample collected from timber gantry attached to the upper northern wall of Bay 10, Level 2, did not identify asbestos (B10-AD01).
- A lead dust bulk sample collected from timber gantry attached to the upper northern wall of Bay 10, Level 2, identified lead concentrations of 80 mg/kg, below the adopted criteria of 300 mg/kg (B10-LD01).

Heritage Machinery

- The mastic putty applied around the windows of the Craven Bros Traverser located in the northern display area of Bay 10, was not found to contain asbestos (B10-A01).
- Bituminous backing board/s located in the display crane operator's cabin located in the northern display area of Bay 10, is presumed to contain asbestos. Further ACMs may be associated with the electrical wiring and components bagged and sealed next to the boards.
- XRF screening of the gold Craven 5 Ton Overhead Travelling Crane located above the northern display area of Bay 10 identified lead paint.
- XRF screening of the northernmost gold Craven 5 Ton Overhead Travelling Crane located in Bay 10 identified lead paint.
- Bituminous backing board/s located in the operator's cabin of the abovementioned cranes are presumed to contain asbestos.
- Brake pads associated with the winch gear of the abovementioned cranes are presumed to contain asbestos
- XRF screening of the green Tongyl Wheel Lathe identified lead paint.

- XRF screening of the blue Richards Vertical Borer identified lead paint.
- XRF screening of the yellow Massey Flange Press identified lead paint.
- XRF screening of the off-white Fielding & Pratt Wheel Press identified lead paint.
- XRF screening of the grey Churchill Grinder identified lead paint.
- XRF screening of the orange cabin for the 8 Ton Craven Overhead Travelling Crane located in the northern display area of Bay 10, identified lead paint.
- XRF screening of the yellow paint system on the Craven Bros Traverser located in the northern display area of Bay 10, identified lead paint (B10-LP03).
- XRF screening of the green Department Lathe identified lead paint.
- XRF screening of the blue Craven Axle & Journal Lathe identified lead paint.
- XRF screening of the greyish green Herbert Tool & Cutter Grinder identified lead paint.
- XRF screening of the orange Pneumatic Cap Riveter identified lead paint.
- XRF screening of the bluish grey Berry Hydraulic Pipe Press identified lead paint.
- XRF screening of the grey Stirk Planer identified lead paint.
- XRF screening of the yellowish cream Herbert Twin Drill & Borer identified lead paint.
- XRF screening and analysis of the cream Webster & Bennet 60" Vertical Borer did not identify lead paint (B10-LP04).

4.3.11 Bay 11

Bay 11 is open plan and currently forms part of the Dolton House function centre tenancy. The heritage steel superstructure is emphasised as the main feature throughout the bay. An overhead travelling crane is positioned on crane rail beams at Level 2.

A summary of the relevant observations made during survey of the internal areas of Bay 11 is as follows:

Building Materials

- Testing and XRF screening of the off-white / cream paint on the northern masonry wall of Bay 11, ground level, identified lead paint (B11-LP01), an underlying black paint film was noted in the area of testing. XRF screening of the southern wall, ground level and Level 1, did not identify lead paint.
- XRF screening of the structural steel heritage columns, beams and trusses throughout the bay identified lead paint.
- Representative XRF screening of the mustard coloured rectangular window frames on the upper northern and southern walls of the bay identified lead paint.
- XRF screening of the grey steel lined arched double doors on the south side of the bay did not identify lead paint.
- Water / air-conditioning pipework insulated with SMF traverses the upper internal north and south walls.

Settled Dust Sampling

- A lead dust bulk sample collected from the top of the upper ledges of the northern wall of Bay 11, identified lead concentrations of 1400 mg/kg, above the adopted criteria of 300 mg/kg (B11-LD01).

Heritage Machinery

- XRF screening of the Overhead Travelling Crane in the north of Bay 11 identified lead paint.
- Bituminous backing board/s located in the operator's cabin of the abovementioned crane are presumed to contain asbestos.
- Brake pads associated with the winch gear of the abovementioned crane are presumed to contain asbestos

4.3.12 Bay 12

Bay 12 is open plan and currently forms part of the Dolton House function centre tenancy. The heritage steel superstructure is emphasised as the main feature throughout the bay. An overhead travelling crane is positioned on crane rail beams at Level 2.

A summary of the relevant observations made during survey of the internal areas of Bay 12 is as follows:

Building Materials

- XRF screening of the structural steel heritage columns, beams and trusses throughout the bay identified lead paint.
- Testing and XRF screening of the off-white / cream paint on the southern masonry wall of Bay 12, ground level, did not identify lead paint (B12-LP01). Spot XRF screening of the lower and upper northern wall of Bay 12 did not identify lead paint.
- Testing and XRF screening of the off-white paint on the arched heritage window frame located on the southern wall of Bay 12, ground level, did not identify lead paint (B12-LP02).
- XRF screening of the white steel angle attached to the northern wall of Bay 12 identified lead paint.
- XRF screening of the mustard coloured rectangular window frames on the upper northern and southern walls of the bay identified lead paint.
- XRF screening of the grey steel lined arched double doors on the south side of the bay did not identify lead paint.
- Water / air-conditioning pipework insulated with SMF traverses the upper internal north and south walls.

Settled Dust Sampling

- A lead dust bulk sample collected from the dust settled on the window sill located below the arched heritage window in the northern wall of Bay 12, ground level, identified lead concentrations of 290 mg/kg, marginally below the adopted criteria of 300 mg/kg (B12-LD01).
- A lead dust bulk sample collected from the crane beam in the north of Bay 12, Level 2, identified lead concentrations of 6100 mg/kg, above the adopted criteria of 300 mg/kg (B12-LD02).

Heritage Machinery

- XRF screening of the orange Craven 5 Ton Overhead Travelling Crane in Bay 12 identified lead paint.
- Bituminous backing board/s located in the operator's cabin of the abovementioned crane are presumed to contain asbestos.

- Brake pads associated with the winch gear of the abovementioned crane are presumed to contain asbestos

4.3.13 Bay 13

Bay 13 is open plan and currently forms part of the Dolton House function centre tenancy. The heritage steel superstructure is emphasised as the main feature throughout the bay. An overhead travelling crane is positioned on crane rail beams at Level 2.

A summary of the relevant observations made during survey of the internal areas of Bay 13 is as follows:

Building Materials

- XRF screening of the structural steel heritage columns, beams and trusses throughout the bay identified lead paint.
- Testing and XRF screening of the off-white paint on the arched heritage window frames located on the northern wall of Bay 13, ground level, did not identify lead paint (B13-LP01).
- Spot XRF screening of the off-white lower and upper northern and southern walls of Bay 13 did not identify lead paint.
- Testing and XRF screening of the mustard coloured rectangular window frames on the upper northern wall of Bay 13, identified lead paint (B13-LP02).
- XRF screening of the grey steel lined arched double doors on the south side of the bay did not identify lead paint.
- Water / air-conditioning pipework insulated with SMF traverses the upper internal north and south walls.

Settled Dust Sampling

- A lead dust bulk sample collected from the main cable tray adjacent to the upper southern wall of Bay 13, identified lead concentrations of 1300 mg/kg, above the adopted criteria of 300 mg/kg (B13-LD02).

Heritage Machinery

- XRF screening of the orange Craven 5 Ton Overhead Travelling Crane in the north of Bay 13 identified lead paint.
- Bituminous backing board/s located in the operator's cabin of the abovementioned crane are presumed to contain asbestos.
- Brake pads associated with the winch gear of the abovementioned crane are presumed to contain asbestos

4.3.14 Bay 14

Bay 14 is open plan and currently forms part of the Dolton House function centre tenancy. The heritage steel superstructure is emphasised as the main feature throughout the bay. An overhead travelling crane is positioned on crane rail beams at Level 2.

A summary of the relevant observations made during survey of the internal areas of Bay 14 is as follows:

Building Materials

- XRF screening of the structural steel heritage columns, beams and trusses throughout the bay identified lead paint.

- Testing and XRF screening of the off-white paint on the arched heritage window frames located on the northern wall of Bay 14, ground level, identified lead paint (B14-LP01).
- XRF screening of the off-white / cream paint on the steel lintel beams on the north and south walls of Bay 14, Level 1, identified lead paint. The paint on these beams is deteriorated and flaking. A similar beam traverses east-west across the upper northern wall of Bay 14.
- XRF screening of the off-white / cream paint on the northern masonry wall of Bay 14, ground level, identified lead paint.
- XRF screening of the mustard coloured rectangular window frames on the upper northern and southern walls of the bay identified lead paint.
- Multiple spot XRF screening of the off-white paint on the lower and upper northern, western and southern walls of Bay 14, did not identify lead paint (B14-LP02). The sample was collected from the western wall, adjacent to the second column from the south wall.
- Water / air-conditioning pipework insulated with SMF traverses the extent of the upper internal north and south walls.

Settled Dust Sampling

- A lead dust swab sample taken dust settled on the window sill below the arched heritage window frame located on the northern wall, identified lead concentrations of 2.2µg, calculated as 0.02 mg/m², below the adopted dust swab criteria of 5mg/m² (B14-LD01).

Heritage Machinery

- XRF screening of the Vaughan and Sons Overhead Travelling Crane in the south of Bay 14 identified lead paint.
- Bituminous backing board/s located in the operator's cabin of the abovementioned crane are presumed to contain asbestos.
- Analysis of a brake pad sample associated with the winch gear of the abovementioned crane was found to contain non-friable asbestos (B14-A01).

4.3.15 Bay 15

Bay 15 extends to three levels and is occupied by office suites on both sides. An elevator has been installed adjacent to Central Road and a new steel gantry structure has been constructed to access individual the offices. Heritage steel columns, beams, crane rails and trusses have been incorporated into the office working areas. Heritage masonry walls surround all sides of the bay.

A summary of the relevant observations made during survey of the internal areas of Bay 15 is as follows:

Building Materials

- The silver / grey paint adhered to the structural steel heritage columns, beams, crane rails, purlins and black roof trusses throughout the bay is lead based paint. These columns and beams penetrate the working spaces and ceiling cavities of the offices in this bay.
- Paint sampling and XRF screening was conducted at multiple locations for the off-white / cream paint applied to the internal perimeter masonry walls of Bay 15, ground level and Level 1. None of the screening tests or laboratory results identified the presence of lead paint (B15-LP01, LP03, LP04, LP05, LP06, LP07 and LP08). The surface paint coating is deteriorated and flaking in places along the upper walls of Bay 15.
- XRF screening of the off-white paint applied to eastern wall on Central Road, adjacent to the glass access door to Bay 14, identified lead based paint. Analysis and XRF screening and

testing of the greyish white paint on the arched heritage window frames located on the southern wall of the bay, ground level, did not identify lead paint (B15-LP02). Nonetheless, XRF screening of two arched heritage window frames located on the northern wall of the bay indicated lead paint. This paint is deteriorating and scaling in places and paint and dust debris has accumulated on the underlying window sill.

- XRF screening of the newer mezzanine gantries and stairs did not identify lead paint.
- SMF ceiling tiles occur throughout most office and amenity areas throughout the bay.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located within the ceiling cavities of most ground level office and amenity areas. SMF insulation batts were also noted in these areas.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located on top of the flat roofs of the level 1 offices.
- Water / air-conditioning pipework insulated with SMF traverses the extent of the upper internal north and south walls.

Settled Dust Sampling

- An asbestos dust sample collected from the top of the sloping roof of the Level 2 southern office block, did not identify asbestos (B15-AD01).
- A lead dust bulk sample collected from the top of the flat roof of the Level 1 northern office amenities area, identified lead concentrations of 23000 mg/kg, above the adopted criteria of 300 mg/kg (B15-LD01).

Heritage Machinery

- XRF screening of the yellow Craven Drill identified lead paint.
- XRF screening of the greyish green Universal Grinder identified lead paint.
- XRF screening of the greyish green BSA Centreless Grinder identified lead paint.
- XRF screening of the greyish green Tool and Cutter Grinder did not identify lead paint.
- XRF screening of the grey 1914 Centreless Grinder identified lead paint.

4.3.16 Bay 16

Bay 16 extends to three levels on the north side and two levels on the south side and is occupied by office suites on both sides. Being the westernmost bay of the building, the western wall of Bay 16 forms an external wall, with heritage windows located along the length of Level 1. Heritage masonry walls traverse the eastern and western sides of the bay. Heritage steel columns, beams, crane rails and trusses have been incorporated into the office working areas.

A summary of the relevant observations made during survey of the internal areas of Bay 16 is as follows:

Building Materials

The silver / grey paint adhered to the structural steel heritage columns, beams, crane rails, purlins and black roof trusses throughout the bay is lead based paint. These columns and beams penetrate the working spaces and ceiling cavities of the offices in this bay, particularly the Level 2 areas.

- XRF screening of the six white RSJ stanchions located in the central hallway area of Bay 16 south, ground level, identified lead paint. These RSJ stanchions continue into the ground level set ceiling cavity.

- XRF screening of the mustard coloured timber windows located on the north, south and west walls, Level 2 identified lead paint.
- XRF screening was conducted at multiple locations for the off-white / cream paint applied to all internal perimeter masonry walls of Bay 16, levels ground, 1 and 2. Screening tests conducted on the central and southern sections of the eastern wall, ground level identified the presence of lead paint. Screening tests and analysis conducted on the north and south walls did not identify lead paint (B16-LP01), collected from the north wall, ground level. Screening tests conducted on the western masonry walls, all levels, did not identify lead paint (B16-LP02), collected from the central west wall of Level 1, north.
- XRF screening of the greyish white paint on the arched heritage window frames located on the north and south walls of the bay, ground level, did not identify lead paint.
- SMF ceiling tiles occur throughout most office and amenity areas throughout the bay.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located within the ceiling cavities of most ground level office and amenity areas. SMF insulation batts were also noted in these areas.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located on top of the flat roofs of the level 1 offices.
- Water / air-conditioning pipework insulated with SMF traverses the extent of the upper internal north and south walls.

Settled Dust Sampling

- A lead dust bulk sample collected from the top of the flat roof of the Level 1 southern office block, identified lead concentrations of 6200 mg/kg, above the adopted criteria of 300 mg/kg (B16-LD01).
- A lead dust bulk sample collected from the top of the flat roof of the Level 1 northern office block, identified lead concentrations of 2400 mg/kg, above the adopted criteria of 300 mg/kg (B16-LD02).

Heritage Machinery

- XRF screening of the dark brown Overhead Travelling Crane located in Bay 16 identified lead paint.
- Bituminous backing board/s located in the operator's cabin of the abovementioned cranes are presumed to contain asbestos.
- Brake pads associated with the winch gear of the abovementioned cranes are presumed to contain asbestos.

5. Results

5.1 Hazardous Materials

All identified hazardous materials are recorded in the Hazardous Materials Register in **Appendix A** with relevant photographs in **Appendix B**. NATA accredited laboratory analysis reports and chain of custody are provided in **Appendix C**.

5.1.1 Asbestos Containing Materials

ACM were identified by testing at an accredited NATA laboratory and/or visual inspection using the experience of the hazardous materials surveyor.

A summary of the results of laboratory testing for asbestos are provided in **Table A** below.

Table A: Asbestos Results Summary Table

Sample ID	Lab ID	Sample Location	Results	Friable or Non-Friable
EXTERNAL BUILDING – SOUTHEAST ANNEX & BOILER HOUSE				
Ext-A01	17-JI17200	SE Annex, ground level - external south wall - Mastic window putty	No Asbestos Detected	N/A
Ext-A02	17-JI17201	Boiler House, ground level - furnace of boiler - Calcium silicate refractory	No Asbestos Detected	N/A
EXTERNAL BUILDING – GENERAL				
Ext-A03	17-JI17202	Exterior Bay 9 south wall, ground level - arched heritage windows - Mastic window putty	No Asbestos Detected	N/A
Ext-A04	17-JI21072	Exterior – Bay 5 south brick wall, Level 1 - Cementitious mortar	No Asbestos Detected	N/A
Ext-A05	17-JI21073	Exterior - Cylindrical steel pressure vessels at SE corner of building, valve flange - Gasket	Chrysotile Asbestos Detected	Non-Friable
Ext-A06	17-JI21074	Exterior Bay 2 south perimeter upper wall, mustard rectangular window, Level 1 - Mastic window putty	No Asbestos Detected	N/A
Ext-A07	17-JI21075	Exterior upper perimeter walls, NE corner, sandstone copings, Level 2 - Pointing material	No Asbestos Detected	N/A
BAY 1 – INTERNAL				
B1-A01	17-JI4755	Bay 1 south, ground level – representative Oil Furnace - Refractory material	No Asbestos Detected	N/A
B1-A02	17-JI4756	Bay 1 south, ground level – HC Thornthwaite Furnace - Refractory material	No Asbestos Detected	N/A
B1-A03	17-JI4757	Bay 1 south, ground level – seal at top of HC Thornthwaite Furnace - Woven seal material	Chrysotile Asbestos Detected	Friable
B1-A04	17-JI4758	Bay 1 south, ground level – stored yolk adjacent oil furnace (1SSE) - Calcium silicate insulation	No Asbestos Detected	N/A
B1-A05 (JI14759)	17-JI4759	Bay 1 north, ground level – pipe on floor of Davy display area - Gasket	Chrysotile Asbestos Detected	Non-Friable
B1-A05 (JI17192)	17-JI17192	Bay 1 north, north wall, ground level - orange heritage fuse box - Asbestos paper lining	Chrysotile Asbestos Detected	Friable
B1-A06	17-JI14760	Bay 1 north, ground level – valve flange of Davy Intensifier - Gasket	Chrysotile Asbestos Detected	Non-Friable
B1-A07	17-JI21026	Bay 1, Level 2 - old water feed pipework into Davy Intensifier - Gasket	Chrysotile Asbestos Detected	Non-Friable

Sample ID	Lab ID	Sample Location	Results	Friable or Non-Friable
B1-AD01	17-JI14761	Bay 1 south, central west – Dust sample from dirt floor at base of column	No Asbestos Detected	N/A
B1-AD02	17-JI14763	Bay 1 north, central east – Dust sample from dirt floor at base of column	No Asbestos Detected	N/A
B1-AD03	17-JI21029	Bay 1 south, NW corner, Level 2 – Top of main roof beam - Dust	No Asbestos Detected	N/A
B1-AD04	17-JI21030	Bay 1 south, NE, Level 1 – Top of northernmost yellow CTW jib crane - Dust	No Asbestos Detected	N/A
B1-AD05	17-JI21031	Bay 1 north, SE corner, Level 2 – Top of crane rail - Dust	No Asbestos Detected	N/A
BAY 2 – INTERNAL				
B2-A01	17-JI4740	Bay 2 south, central west, ground level - orange heritage fuse boxes - Asbestos paper lining	Chrysotile asbestos detected	Friable
B2-A02	17-JI14748	Bay 2 south, south end, ground level – black membrane on roof of Sub-foreman's Office	No Asbestos Detected	N/A
B2-A03	17-JI4742	Bay 2 north, SE corner, ground level - orange heritage fuse box - Asbestos paper lining	Chrysotile asbestos detected	Friable
B2-A04	17-JI4743	Bay 2 north, SE corner, ground level - orange heritage fuse box - Wire insulation	No Asbestos Detected	N/A
B2-A05	17-JI4744	Bay 2 north, central east, ground level – unnamed furnace - Insulation	No Asbestos Detected	N/A
B2-A06	17-JI4745	Bay 2 north, central west, ground level – unnamed furnace - Refractory	No Asbestos Detected	N/A
B2-AD01	17-JI4746	Bay 2 south, central west – Dust sample from dirt floor at base of column	No Asbestos Detected	N/A
B2-AD02	17-JI4748	Bay 2 north, central west – Dust sample from dirt floor at base of column	No Asbestos Detected	N/A
B2-AD03	17-JI4742	Bay 2 south, NW corner, Level 2 – Top of green enamel light - Dust	No Asbestos Detected	N/A
BAY 3 – INTERNAL				
B3-A01	17-JI17195	Bay 3 north, Level 2 – Vermiculite insulation in plant room	No Asbestos Detected	N/A
B3-AD01	17-JI21036	Bay 3, Level 2 – Dust sample collected from the flat roof of the southern Function Hall - Dust	No Asbestos Detected	N/A
BAY 4 – INTERNAL				
B4-A01	17-JI4719	Bay 4 north, Level 2 – Woven electrical wire attached to roof truss	No Asbestos Detected	N/A
B4-A02	17-JI21041	Bay 4 south, Level 1 – Pointing mortar used in upper wall	No Asbestos Detected	N/A
BAY 5 – INTERNAL				
B5-AD01	17-JI21042	Bay 5, Level 2 – Dust sample collected from the flat roof of the southern Theatre	No Asbestos Detected	N/A
B5-AD02	17-JI21043	Bay 5, Level 2, Central Road – Dust sample collected from timber gantry of Overhead Travelling Crane	No Asbestos Detected	N/A
BAY 6 – INTERNAL				
B6-AD01	17-JI21045	Bay 6, Level 2 – Dust sample collected from the flat roof of the southern office block	No Asbestos Detected	N/A
B6-AD02	17-JI21046	Bay 6, Level 2 – Dust sample collected from the flat roof of the northern office block	No Asbestos Detected	N/A

Sample ID	Lab ID	Sample Location	Results	Friable or Non-Friable
BAY 7 – INTERNAL				
B7-AD01	17-JI21050	Bay 7, Level 2 – Dust sample collected from the flat roof of the southern office block	No Asbestos Detected	N/A
B7-AD02	17-JI21051	Bay 7, Level 2 – Dust sample collected from the flat roof of the northern office block	No Asbestos Detected	N/A
BAY 9 – INTERNAL				
B9-AD01	17-JI21059	Bay 9, Level 2 – Dust sample collected from the flat roof of the southern office block	No Asbestos Detected	N/A
B9-AD02	17-JI21060	Bay 9, Level 2 – Dust sample collected from the flat roof of the northern office block	No Asbestos Detected	N/A
BAY 10 – INTERNAL				
B10-A01	17-JI4732	Bay 10 northern display area, ground level – Craven Bros Traverser – Mastic window putty	No Asbestos Detected	N/A
B10-A02	17-JI21064	Bay 10 north, Level 2, northern upper masonry wall – Electrical board	Chrysotile asbestos detected	Non-Friable
B10-AD01	17-JI21063	Bay 10 north, Level 2 – Dust sample from timber cable tray fixed to upper northern wall	No Asbestos Detected	N/A
BAY 14 – INTERNAL				
B14-A01	17-JI21069	Bay 14, Level 2 – Brake pads associated with crane winch gear	Chrysotile asbestos detected	Non-Friable
BAY 15 – INTERNAL				
B15-AD01	17-JI22469	Bay 15, south Level 2 – Dust sample collected from sloping roof of the southern office block (Env. Strategies)	No Asbestos Detected	N/A

A summary of those materials or areas that are suspected to contain asbestos are included below in **Table B**.

Table B: Suspected ACM Summary Table

Location	Suspected Asbestos Material
EXTERNAL BUILDING – SOUTHEAST ANNEX & BOILER HOUSE	
Boiler House, ground level, north wall	Black electrical backing board
SE Annex, ceiling level, NW corner	Gaskets
SE Annex & Boiler House, Level 1, top of roof awning	Gaskets
Boiler House, ground level, unrestored boiler pipework and valves	Gaskets
BAY 1 – INTERNAL	
Bay 1 north, north wall, ground level - orange heritage relay box	Asbestos paper lining
Bay 1, Level 2 - old steam plant pipework, upper east and west walls of bay	Gaskets
Bay 1 south, Level 1 - central west	2 x Black electrical backing boards
Bay 1 south, Level 1 - central east wall	2 x Black electrical backing boards
BAY 2 – INTERNAL	
Bay 2, Level 2 - old steam plant pipework, plant areas and upper east and west walls of bay	Gaskets
Bay 2, ground level - orange heritage electrical / fuse boxes	Black electrical backing boards
BAY 4 – INTERNAL	
Bay 4, north and south Level 2 – Electrical boards in operators cabins of overhead travelling crane	Black electrical backing boards
Bay 4, north and south Level 2 – Brake pads associated with crane winch gear	Friction materials

Location	Suspected Asbestos Material
BAY 5 - INTERNAL	
Bay 5, Central Road, Level 2 – Electrical boards in operator’s cabin of overhead travelling crane	Black electrical backing boards
Bay 5, Central Road, Level 2 – Brake pads associated with crane winch gear	Friction materials
BAY 6 - INTERNAL	
Bay 6, Central Road, Level 2 – Electrical boards in operator’s cabin of overhead travelling crane	Black electrical backing boards
Bay 6, Central Road, Level 2 – Brake pads associated with crane winch gear	Friction materials
BAY 7 - INTERNAL	
Bay 7, Central Road, Level 2 – Electrical boards in operator’s cabin of overhead travelling crane	Black electrical backing boards
Bay 7, Central Road, Level 2 – Brake pads associated with crane winch gear	Friction materials
BAY 10 - INTERNAL	
Bay 10 northern display area, ground level – Crane operator’s cabin	Black electrical backing boards
Bay 10 north, Level 2, northern upper masonry wall	Black electrical backing boards x 2
Bay 10 north, Level 2 – Electrical boards in operator’s cabin of overhead travelling cranes	Black electrical backing boards
Bay 10 north, Level 2 – Brake pads associated with crane winch gear	Friction materials
BAY 11 – INTERNAL	
Bay 11 north, Level 2 – Electrical boards in operator’s cabin of overhead travelling crane	Black electrical backing boards
Bay 11 north, Level 2 – Brake pads associated with crane winch gear	Friction materials
BAY 12 – INTERNAL	
Bay 12, Level 2 – Electrical boards in operator’s cabin of overhead travelling crane	Black electrical backing boards
Bay 12, Level 2 – Brake pads associated with crane winch gear	Friction materials
BAY 13 - INTERNAL	
Bay 13, Level 2 – Electrical boards in operator’s cabin of overhead travelling crane	Black electrical backing boards
Bay 13, Level 2 – Brake pads associated with crane winch gear	Friction materials
BAY 14 - INTERNAL	
Bay 14, Level 2 – Electrical boards in operator’s cabin of overhead crane	Black electrical backing boards
BAY 16 - INTERNAL	
Bay 16, Level 2 – Electrical boards in operator’s cabin of overhead crane	Black electrical backing boards

5.1.2 Lead Based Paints and Lead Dusts

Representative paint and dust samples were collected during the HMS for laboratory testing. A summary of the results of laboratory testing for lead are provided in **Table C** below. It is noted that significant XRF screening was conducted during the HMS to assess the lead status of paint systems. Thus, only those samples submitted for confirmatory laboratory analysis are listed in **Table C**.

Table C: Lead Results Summary Table

Sample ID	Lab ID	Sample Location	Results	Condition
EXTERNAL BUILDING – SOUTHEAST ANNEX & BOILER HOUSE				
Ext-LP01	S17-JI17204	SE Annex, ground level, arched double doors on north wall - Mustard paint	Lead Based Paint 2.2% w/w	Fair
Ext-LD01	S17-JI17203	SE Annex, west wall, window sill below arched heritage window – Lead dust swab sample	0.5 mg/m ² , < 5 mg/m ² (below criteria)	
EXTERNAL BUILDING – GENERAL				
Ext-LP02	S17-JI17205	Exterior perimeter north, south and west upper walls, timber rectangular windows, Level 1- Mustard paint	Lead Based Paint 4.9% w/w	Fair
Ext-LP03	S17-JI21071	Exterior perimeter walls, brick archways over entry doors, ground level - White paint	Lead Based Paint 9.1% w/w	Good
BAY 1 – INTERNAL				
B1-LP01	S17-JI14750	Bay 1 south, central west, ground level - heritage structural steel column - Silver grey paint	Lead Based Paint 38% w/w	Good
B1-LP02	S17-JI14751	Bay 1 south, ground level – 7 CWT Jib Crane - Orange paint	Lead Based Paint 28% w/w	Good
B1-LP03	S17-JI14752	Bay 1 south, ground level – No.6 Blower (N0.755)- Green paint	Lead Based Paint 4.3% w/w	Good
B1-LP04	S17-JI14753	Bay 1 south, ground level – Arched timber double doors	Non-Lead Based Paint 0.32% w/w	N/A
B1-LP05	S17-JI14754	Bay 1 north, ground level – Davy Press - Grey paint	Lead Based Paint 11% w/w	Good
B1-LD01	S17-JI14762	Bay 1 south, central west – Dust sample from floor at base of column - Lead in floor dirt / dust sample	46 mg/kg < 300 mg/kg (below criteria)	N/A
B1-LD02	S17-JI14764	Bay 1 north, central east – Dust sample from floor at base of column - Lead in floor dirt / dust sample	160 mg/kg < 300 mg/kg (below criteria)	N/A
B1-LD03	S17-JI21027	Bay 1 south, NW corner, Level 2 – Top of main roof beam - Lead in dust sample	5000 mg/kg > 300 mg/kg (exceeding criteria)	-
B1-LD04	S17-JI21028	Bay 1 south, NE, Level 1 – Top of northernmost yellow CTW jib crane - Lead in dust sample	960 mg/kg > 300 mg/kg (exceeding criteria)	-
B1-LD06	S17-JI21032	Bay 1 north, SE corner, Level 2 – Top of Davy Intensifier steam drum - Lead in dust sample	130 mg/kg < 300 mg/kg (below criteria)	N/A
BAY 2 – INTERNAL				
B2-LP01	S17-JI14733	Bay 2 south, central west, ground level – Torq brand electrical switchboard - Orange paint	Lead Based Paint 5.5% w/w	Fair
B2-LP02	S17-JI14734	Bay 2 south, ground level – stanchion of One Ton CWT Jib Crane - Grey paint	Lead Based Paint 14% w/w	Good
B2-LP03 JI14735	S17-JI14735	Bay 2 south, NW corner, Level 2 - heritage structural steel beam - Silver grey paint	Lead Based Paint 10% w/w	Good
B2-LP03	S17-JI21033	Bay 2 south, ground level – stanchion of 2 SWL Jib Crane - Yellow paint	Lead Based Paint 1.9% w/w	Good
B2-LP04	S17-JI14736	Bay 2 north, ground level – Frazing & Grinding Wheel - Grey paint	Lead Based Paint 24% w/w	Good
B2-LP05	S17-JI14737	Bay 2 north, ground level – Davis & Primrose Steam Hammer No.4- Grey paint	Non-Lead Based Paint 0.07% w/w	N/A
B2-LP06	S17-JI14738	Bay 2 north, ground level – Davis & Primrose Steam Hammer No.3- Grey paint	Lead Based Paint 15% w/w	Good
B2-LP07	S17-JI14739	Bay 2 north, SE corner, ground level – Fuse box - Orange paint	Lead Based Paint 7.6% w/w	Fair

Sample ID	Lab ID	Sample Location	Results	Condition
B2-LD01	S17-JI14747	Bay 2 south, central west – Dust sample from floor at base of column - Lead in floor dirt / dust sample	1300 mg/kg > 300 mg/kg (exceeding criteria)	-
B2-LD02	S17-JI14749	Bay 2 north, central west – Dust sample from floor at base of column - Lead in floor dirt / dust sample	1400 mg/kg > 300 mg/kg (exceeding criteria)	-
B2-LD02 Swab	S17-JI17193	Bay 2 north, north wall, ground level – Window sill dust beneath arched heritage window - Lead dust swab sample	1.3 mg/m ² , < 5 mg/m ² (below criteria)	N/A
B2-LD04	S17-JI121034	Bay 2 south, NW corner, Level 2 – Top of main roof beam - Lead dust swab sample	2.8 mg/m ² , < 5 mg/m ² (below criteria)	N/A
B2-LD05	S17-JI121035	Bay 2 south, NW corner, Level 2 – Top of metal clad water pipe - Lead dust swab sample	4 mg/m ² , < 5 mg/m ² (below criteria)	N/A
BAY 3 – INTERNAL				
B3-LP01	S17-JI17194	Bay 3 north, Level 2 – Northern wall of plant room - White paint	Non-Lead Based Paint 0.05% w/w	
B3-LP02	S17-JI22467	Bay 3 south annex (Pump House), ground level – Fielding & Platt Pump - Green paint	Lead Based Paint 16% w/w	Good
B3-LD01	S17-JI21037	Bay 3, Level 2 – Dust sample collected from the flat roof of the southern Function Hall	2600mg/kg > 300mg/kg (exceeding criteria)	-
B3-LD02	S17-JI121039	Bay 3, Level 3, Central Road – Top of rafter directly below roof atrium panel - Lead dust swab sample	11 mg/m ² , > 5 mg/m ² (exceeding criteria)	-
BAY 4 – INTERNAL				
B4-LP01	S17-JI14714	Bay 4 south, SE corner, ground level – Heritage arched window frame - Off-white paint	Lead Based Paint 19% w/w	Fair
B4-LP02	S17-JI14715	Bay 4 north, ground level – Residual paint on northern wall - White, cream, grey & orange paints	Lead Based Paint 23% w/w	Good
B4-LP03	S17-JI14716	Bay 4 north, northern wall, ground level – Heritage arched window frame - Off-white paint	Lead Based Paint 16% w/w	Fair
B4-LP04	S17-JI14717	Bay 4 south, SE corner, Level 1 - Heritage structural steel beam - Silver grey paint	Lead Based Paint 20% w/w	Good
B4-LP05	S17-JI14718	Bay 4 south, Level 2 - Arrol Overhead Travelling Crane - Orange paint	Lead Based Paint 21% w/w	Good
B4-LD01	S17-JI21040	Bay 4, Level 2 – Dust sample collected from timber gantry of northern overhead crane	1800mg/kg > 300mg/kg (exceeding criteria)	-
BAY 5 – INTERNAL				
B5-LD01	S17-JI21044	Bay 5, Level 2 – Dust sample collected from the flat roof of the southern Theatre	2800mg/kg > 300mg/kg (exceeding criteria)	-
BAY 6 – INTERNAL				
B6-LD01	S17-JI21047	Bay 6, Level 2 – Dust sample collected from the flat roof of the southern office block	3000mg/kg > 300mg/kg (exceeding criteria)	-
B6-LD02	S17-JI21048	Bay 6, Level 2 – Dust sample collected from the flat roof of the northern office block	670mg/kg > 300mg/kg (exceeding criteria)	-
B6-LD03	S17-JI121049	Bay 6, Level 2 – Settled dust on top of cable tray above central road	19 mg/m ² , > 5 mg/m ² (exceeding criteria)	-
BAY 7 – INTERNAL				
B7-LP01	S17-JI17197	Bay 7 south, ground level – South masonry wall - Off-white surface paint	Non-Lead Based Paint 0.06% w/w	-

Sample ID	Lab ID	Sample Location	Results	Condition
B7-LP02	S17-JI17198	Bay 7, south, ground level – Steel RSJ stanchion within the working space and attached beams in the office ceiling spaces - White paint and undercoat	Lead Based Paint 3.4% w/w	Good
B7-LP03	S17-JI22468	Bay 7 north, Level 1 – North masonry wall - Off-white surface paint	Non-Lead Based Paint 0.01% w/w	N/A
B7-LD01	S17-JI17196	Bay 7 south, ground level – Swab sample from top side of ceiling tile of Suite 7001 (Mirvac kitchen)	0.01 mg/m ² , < 5 mg/m ² (below criteria)	N/A
B7-LD02	S17-JI21052	Bay 7, Level 2 – Dust sample collected from the flat roof of the southern office block	2500mg/kg > 300mg/kg (exceeding criteria)	-
B7-LD03	S17-JI21053	Bay 7, Level 2 – Dust sample collected from the flat roof of the northern office block	3800mg/kg > 300mg/kg (exceeding criteria)	-
BAY 8 – INTERNAL				
B8-LP01	S17-JI14720	Bay 8, ground level - North masonry wall, east side - White surface paint	Non-Lead Based Paint 0.09% w/w	N/A
B8-LP02	S17-JI14721	Bay 8, ground level - North masonry wall, west side - White surface paint	Non-Lead Based Paint 0.03% w/w	N/A
B8-LP03	S17-JI14722	Bay 8, Level 1 - North masonry wall, east - White surface paint	Non-Lead Based Paint 0.04% w/w	N/A
B8-LP04	S17-JI21056	Bay 8 south, Level 1 -Steel lintel beam spanning above main glass entry doors - Off-white surface paint	Lead Based Paint 2.3% w/w	Poor
B8-LD01	S17-JI21054	Bay 8 south, Level 2 – Dust sample collected from upper wall ledge above southern glass entry door	1200mg/kg > 300mg/kg (exceeding criteria)	-
B8-LD02	S17-JI121055	Bay 8 south, Level 2 –Swab sample of dust on cable tray above southern glass door	36 mg/m², > 5 mg/m² (exceeding criteria)	-
BAY 9 – INTERNAL				
B9-LD01	S17-JI17199	Bay 9 south, ground level – Swab sample from top side of central ceiling tile in Suite 9003	0.01 mg/m ² , < 5 mg/m ² (below criteria)	N/A
B9-LD02	S17-JI21057	Bay 9, Level 2 – Dust sample collected from the flat roof of the southern office block	1400mg/kg > 300mg/kg (exceeding criteria)	-
B9-LD03	S17-JI21058	Bay 9, Level 2 – Dust sample collected from the flat roof of the northern office block	2300mg/kg > 300mg/kg (exceeding criteria)	-
BAY 10 – INTERNAL				
B10-LP01	S17-JI17206	Bay 10 south, ground level – Southern wall - Off-white paint	Non-Lead Based Paint 0.02% w/w	N/A
B10-LP02	S17-JI17207	Bay 10 north, ground level – Northern wall - Off-white topcoat & exposed green undercoat paints	Lead Based Paint 14% w/w	Fair
B10-LP03	S17-JI17208	Bay 10 northern display area, ground level – Crane operator's cabin - Yellow paint	Lead Based Paint 1.7% w/w	Good
B10-LP04	S17-JI21061	Bay 10 northern display area, ground level – Webster & Bennet 60" Vertical Borer - Cream paint	Non-Lead Based Paint 0.04% w/w	N/A
B10-LD01	S17-JI21062	Bay 10 north, Level 2 – Dust sample from timber cable tray fixed to upper northern wall	80 mg/kg < 300 mg/kg (below criteria)	N/A

Sample ID	Lab ID	Sample Location	Results	Condition
BAY 11 – INTERNAL				
B11-LP01	S17-JI17209	Bay 11 north, ground level – Northern wall - Off-white topcoat & black undercoat paints	Lead Based Paint 13% w/w	Good
B11-LD01	S17-JI21065	Bay 11 north, Level 2 – Debris sample from upper wall ledge of northern wall	1400mg/kg > 300mg/kg (exceeding criteria)	-
BAY 12 – INTERNAL				
B12-LP01	S17-JI17210	Bay 12 south, ground level – Southern wall - Off-white paint	Non-Lead Based Paint 0.13% w/w	N/A
B12-LP02	S17-JI21066	Bay 12 south, ground level – Heritage arched window frame - Off-white paint	Non-Lead Based Paint 0.05% w/w	N/A
B12-LD01	S17-JI17211	Bay 12 north, ground level – Debris sample collected from northern window sill	290mg/kg < 300mg/kg (below criteria)	N/A
B12-LD02	S17-JI21067	Bay 12 north, Level 2 – Dust sample collected from crane beam	6100mg/kg > 300mg/kg (exceeding criteria)	-
BAY 13 – INTERNAL				
B13-LP01	S17-JI17212	Bay 13 north, ground level – Arched heritage windows on north wall - Off-white paint	Non-Lead Based Paint 0.06% w/w	N/A
B13-LD02	S17-JI21068	Bay 13 south, Level 2 – Dust sample collected from main cable tray above south wall	1300mg/kg > 300mg/kg (exceeding criteria)	-
BAY 14 – INTERNAL				
B14-LP01	S17-JI17213	Bay 14 north, ground level – Arched heritage windows on north wall - Off-white paint	Lead Based Paint 1.8% w/w	Fair
B14-LP02	S17-JI17214	Bay 14, ground level – Western masonry wall, adjacent 2 nd column from southern wall - Off-white paint	Non-Lead Based Paint 0.01% w/w	N/A
B14-LD01	S17-JI17215	Bay 14 north, ground level – Dust collected from window sill on northern wall - Lead dust swab sample	0.02 mg/m ² , < 5 mg/m ² (below criteria)	N/A
BAY 15 – INTERNAL				
B15-LP01	S17-JI14723	Bay 15, ground level – South masonry wall - Off-white surface paint	Non-Lead Based Paint 0.01% w/w	N/A
B15-LP02	S17-JI14724	Bay 15 south, ground level – Arched heritage window on south wall - Off-white surface paint	Non-Lead Based Paint 0.07% w/w	N/A
B15-LP03	S17-JI14725	Bay 15, ground level – East masonry wall, central south - Off-white surface paint	Non-Lead Based Paint 0.04% w/w	N/A
B15-LP04	S17-JI14726	Bay 15, ground level – East masonry wall, central north - Off-white surface paint	Non-Lead Based Paint 0.34% w/w	N/A
B15-LP05	S17-JI14727	Bay 15, ground level – North masonry wall - Off-white surface paint	Non-Lead Based Paint 0.03% w/w	N/A
B15-LP06	S17-JI14728	Bay 15, Level 1 – East masonry wall, central south - Off-white surface paint	Non-Lead Based Paint 0.03% w/w	N/A
B15-LP07	S17-JI14729	Bay 15, Level 1 – East masonry wall, central north - Off-white surface paint	Non-Lead Based Paint 0.04% w/w	N/A
B15-LP08	S17-JI14730	Bay 15, Level 1 – North masonry wall - Off-white surface paint	Non-Lead Based Paint 0.03% w/w	N/A

Sample ID	Lab ID	Sample Location	Results	Condition
B15-LD01	S17-JI22470	Bay 15 north Level 1 – Dust sample collected from top of the northern office / amenities area	23000mg/kg > 300mg/kg (exceeding criteria)	-
BAY 16 – INTERNAL				
B16-LP01	S17-JI14731	Bay 16, north, ground level – North masonry wall - Off-white surface paint	Non-Lead Based Paint 0.31% w/w	N/A
B16-LP02	S17-JI17216	Bay 16, north, Central Road, Level 1 – Central west wall - Off-white surface paint	Non-Lead Based Paint 0.16% w/w	N/A
B16-LD01	S17-JI22471	Bay 16, Level 2 – Dust sample collected from the flat roof of the southern office block	6200mg/kg > 300mg/kg (exceeding criteria)	-
B16-LD02	S17-JI22472	Bay 16, Level 2 – Dust sample collected from the flat roof of the northern office block	2400mg/kg > 300mg/kg (exceeding criteria)	-

Refer to **Dust Sampling Locations** attached as **Figure 3**.

5.1.3 Polychlorinated Biphenyls

No older style fluorescent light fittings housing potential PCB containing components were identified during the HMS. No dismantling or destructive sampling of heritage machinery on display throughout the building was undertaken.

5.1.4 Synthetic Mineral Fibres

In summary, SMF materials were identified or suspected in the following locations:

- SMF ceiling tiles occur throughout the majority of office and amenity areas in the building.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located within the ceiling cavities of most ground level and Level 1 offices and amenities.
- Fixed and flexible air-conditioning ductwork insulated with SMF is typically located on top of the flat roofs of the Level 1 offices, theatres and function centres within Bays 3, 5, 6, 7, 9, 15 and 16.
- Water / air-conditioning pipework insulated with SMF traverses the upper internal north and south walls of the Locomotive Workshop.
- SMF insulation batts are present in some ceiling cavities of some of the Level 1 and Level 2 offices and amenities. SMF insulation batts may be present in inaccessible plasterboard wall cavities.

5.2 Inaccessible Areas

The following areas were deemed inaccessible during the HMS:

- No access was possible into the majority of wall cavities alongside the shared masonry wall between Bays 5 and 6 south. It is suspected that lead based paint and / or lead contaminated dusts may be present behind the soft wall linings concealing the brick wall on each of the levels in these locations. It is recommended that destructive investigation with paint and particularly dust sampling are completed in this area prior to commencement of any demolition works in this area.
- Access and inspection into ceiling spaces of office and amenity areas throughout the building were limited. Representative ceiling cavity areas were inspected where possible.
- Sheet metal clad structures referred to as ‘Pigeon Coupes’ are located on the rooftop at the northern ends of bays 3, 4 and 5. Visual inspection only was possible into the Pigeon Coupe

on the Bay 4 roof via the use of an EWP to access an inspection hatch located in the interior of Bay 4 north. No possible access was found into the adjacent two Pigeon Coupes on the rooftops of Bays 3 and 5.

- No access was gained into the HV substations located to the south of Bay 6 / 7 and 16. Keys to these areas are kept with the asset owner.

6. Conclusions and Recommendations

6.1 Hazardous Materials

Identified and suspected hazardous materials were identified across the site as the result of laboratory testing, XRF screening and visual identification. It is understood that while the internal fit-out of the Locomotive Workshop is proposed for demolition as part of its redevelopment, the building is to remain operational until these works commence.

The following recommendations are made to mitigate any potentially harmful effects due to the presence of identified hazardous materials for current site occupants as well as in preparation for the proposed demolition works.

6.1.1 Suspected and Identified Asbestos Containing Materials

All ACMs within the Locomotive Workshop suspected and identified during the HMS, are associated the heritage items that will not be disturbed as part of the redevelopment works. Accordingly, the following recommendations are made for management and/or removal of the ACMs:

- Asbestos containing gaskets exposed on several open pipe flanges located on the floor of the Davy equipment display area in Bay 1 north, are in a poor state of condition and should be removed.
- Suspected asbestos containing gaskets exposed on two suspended pipe flanges in the northwest corner of the Southeast Annex, located to the external south of Bay 1, are in a poor state of condition and should be removed.
- In accordance with *How to Manage and Control Asbestos in the Workplace Code of Practice*, Safe Work Australia (2016) (SWA 2016b), all ACMs should be labelled, particularly the friable ACMs identified in Bay 1 and Bay 2. It is noted that none of the ACMs identified during the HMS were labelled.
- A Class A (friable) or Class B (on-friable) licensed asbestos removalist must be engaged to remove the abovementioned ACMs as well as any other ACMs identified in the Hazardous Materials Register (**Appendix A**) that may be disturbed by redevelopment works. Removal and disposal of asbestos materials must be undertaken in accordance with the Work Health and Safety Regulation (2011) and Safe Work Australia Code of Practice '*How to Safely Remove Asbestos*' (2016).
- While not mandatory during the removal of non-friable ACMs, it is considered best practice and recommended that asbestos fibre air monitoring is undertaken during all asbestos removal works.
- Following removal works, a clearance inspection shall be completed by a licensed asbestos assessor to ensure that asbestos materials have been removed to a satisfactory standard. Following the completion of the clearance inspection, a clearance certificate shall be issued by the licensed asbestos assessor to confirm that the ACMs have been satisfactorily removed.

6.1.2 Lead Based Paints

Lead based paints identified in Hazardous Materials Register (**Appendix A**) should be managed in accordance with Australian Standard AS4361.2 (1998) *Guide to Lead Paint Management Part 2: Residential & Commercial Buildings*. All lead based paints identified during the HMS are associated with the heritage building fabric. It is understood that apart from several localised areas, i.e. mustard painted external timber arched double doors, these lead based paints applied to heritage components will not be disturbed as part of the redevelopment works.

There is visual evidence that remediation of lead painted items throughout the Locomotive Workshop, e.g. heritage structural steel elements and machinery, has occurred previously. As a result, apart from several areas, the majority of lead based paint systems identified during the HMS were in stable state of condition. In general, the lead based paints applied to the structural steel columns, beams and roof trusses, and heritage equipment items are in an excellent state of condition and have been sealed with a protective clear coat to stabilize and preserve the lead painted surfaces. In general, the lead based surface paints and potential residual undercoats applied to the internal masonry walls of the building bays are in good condition, particularly the lower wall surfaces. Although paints applied to upper interior walls are beginning to deteriorate, blister and flake in some elevated locations, in general they are in good condition.

The following items / lead based paint systems identified at the site are displaying evidence of deterioration:

- The mustard coloured paint on the exterior timber arched double doors located at the south end of Bay 1, Southeast Annex (minor to moderate peeling).
- The mustard coloured paint on the exterior timber rectangular windows set into the upper north, south and western walls of the building (minor peeling).
- Old bay numbers painted in orange and white paints on the northern and southern exterior walls of each bay, adjacent to arched doorways (minor peeling).
- The off-white coloured paint applied to main steel lintel beams spanning the current former access points on the interior north and south walls of Bay 8 and Bay 14 (moderate peeling).
- The off-white coloured paint applied to several of the interior heritage arched windows located on the north and south walls of the bays (minor peeling).
- The off-white coloured paint on the interior upper perimeter walls of the bays (minor to moderate peeling).

It is recommended that the abovementioned deteriorated paints are remediated, sealed and stabilised under controlled conditions by an experienced hazardous materials contractor. Following lead based paint remediation works, a clearance inspection shall be completed by a competent person to ensure that remediation has been adequately completed and to confirm the absence of residual lead contamination.

It is noted that whilst the majority of paint applied to the internal walls was identified as non-lead based paint, it is suspected that older undercoats are concealed beneath surface paint in random locations. Thus, for the purpose of management, it is recommended that all interior walls are treated as potentially containing lead based paint. If these painted walls need to be disturbed during the redevelopment works they should be assumed to contain lead based paint unless specifically tested to determine otherwise at the proposed points of disturbance.

6.1.3 Polychlorinated Biphenyls

No older style fluorescent light fittings housing potential PCB containing components were identified during the HMS. No dismantling or destructive sampling of heritage machinery on display throughout the building was undertaken. Sampling and analysis of transformer oils associated with heritage machinery for PCBs was not within the scope of this assessment. Testing of machinery oils to confirm PCB status should be undertaken if leaking is identified or to be if any dismantling, maintenance and disturbance is anticipated.

6.1.4 Synthetic Mineral Fibres

The synthetic mineral fibres encountered during this inspection were generally contained and deemed to be low risk. These SMF materials can be removed with the building and demolition waste

with care taken not to generate fibres. Appropriate PPE is recommended including the use of P2 respirator as minimum and appropriate removal methodology as outlined in [NOHSC: 1004(1990)] and [NOHSC: 2006(1990)].

6.1.5 Contaminated Dusts

As documented in Section 4, sampling and analysis of accumulated dusts settled overtime on elevated horizontal surfaces was undertaken to assist with the risk assessment. Although no asbestos was detected in the collected samples, lead contaminated dusts were identified within the Locomotive Workshop. Lead concentrations exceeding the adopted criteria were detected on the majority of the flat roof sections for the Level 1 offices, function centre and theatre, as well as some elevated wall ledges, cable trays and elevated heritage equipment in bays 1 and 2. Apart from two dust / dirt samples with elevated lead concentrations collected from the exposed soil floor in Bay 2, these locations were generally only accessible via the use of an EWP. Apart from tradesman using an EWP to undertake maintenance works, these dusts remain undisturbed and are not currently accessible to users and visitors of the building. On this basis, the dusts do not currently present a lead related risk. The following general recommendations are made for management and/or removal of the lead contaminated dusts:

- Dusts to be potentially disturbed should be cleaned up and / or suitably encapsulated prior to the proposed demolition of the internal structures, refer Section 6.4.
- A suitable Lead Management Plan, either stand alone or part of a broader hazardous materials plan, should be prepared for the building based on its current uses. The plan would need to be updated following the proposed demolition and redevelopment work.
- Any persons potentially accessing flat elevated surfaces where dusts have accumulated, e.g. office roofs, elevated wall ledges, cable trays, ducting, pipework, Level 2 ceiling spaces, etc. must only do so in accordance with the appropriate management plan.

6.2 Inaccessible Areas

Areas inaccessible during the current HMS should be inspected by a suitably qualified competent person prior to any works commencing. Any suspected hazardous materials should be sampled by a suitably qualified competent person prior to any works commencing.

6.3 Unexpected Finds

Any materials deemed to be consistent with those detailed in the Hazardous Materials Register that have not been previously identified should be presumed to have the same content and be treated accordingly.

Should any additional suspected hazardous materials be observed during or prior to demolition works, works should cease until a suitably qualified consultant can assess the suspected hazardous material and provide appropriate recommendations for management and/or removal.

6.4 Remediation Options for Demolition Works

Lead based paints and lead contaminated dusts were identified as the primary hazard with regards to redevelopment works and future long-term management of hazardous materials at the site. All ACMs identified during the HMS are associated the heritage items, and it is understood that these will not be disturbed as part of the redevelopment works.

As requested by the client, remedial option summaries have been provided to assist with planning for the demolition and redevelopment of the Locomotive Workshop. A suitable clean-up and remediation option should be selected based on the proposed works, degree of future access by site users / maintenance contractors and long-term management of risk. The options provided are as follows:

6.4.1 Option 1 – Comprehensive

A comprehensive clean-up and remediation program, would include the following:

- Adequate removal and / or encapsulation of identified dusts accumulated on structures and services to be demolished and/or disturbed.
- Controlled demolition in accordance with procedures prepared specifically to minimise risk to workers completing the work.
- Following demolition and removal of all demolition materials and carpets, etc., removal of flaking paints and wash down of all horizontal / lead painted surfaces, i.e. roof trusses, elevated ledges, internal walls, etc., to remove accumulated dusts. It is noted that in general, only minor quantities of settled dust were observed on the Level 3 steel roof trusses.
- Following clearance to confirm adequacy of works, application of a protective clear coat to required areas to stabilise and preserve the paint membranes and minimise long-term generation of loose flaking paint and lead dust debris.
- Long-term management of remaining hazardous materials in accordance with a management plan.

6.4.2 Option 2 – Intermediate

An intermediate clean-up and remediation program, would include the following:

- Adequate removal and / or encapsulation of dusts accumulated on structures and services to be demolished.
- Controlled demolition in accordance with procedures prepared specifically to minimise risk to workers completing the work.
- Following demolition and removal of all demolition materials and carpets, etc., wash down of horizontal surfaces throughout the building to remove accumulated dusts, i.e. roof trusses, elevated ledges, cable trays, etc. Wash down of upper walls could be optional.
- Long-term management of remaining hazardous materials in accordance with a management plan.

6.4.3 Option 3 – Essential

An essential clean-up and remediation program, would include the following:

- Adequate removal and / or encapsulation of dusts accumulated on structures and services to be demolished.
- Controlled demolition in accordance with procedures prepared specifically to minimise risk to workers completing the work.
- Following demolition and removal of demolition materials and carpets, etc., wash down of necessary horizontal surfaces that will be accessible to tradesman and building users, to remove accumulated dusts, i.e. window sills, services, cable trays.
- Long-term management of remaining hazardous materials in accordance with a management plan.

The above-listed option can be modified as required by the client. It is recommended that these decisions are undertaken in consultation with an experienced hazardous material consultant and a reputable hazardous materials remediation contractor.

Quantities for hazardous materials stated in this report and the associated register are approximate estimates only and should not be solely relied for costing of remediation works.

7. 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 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.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

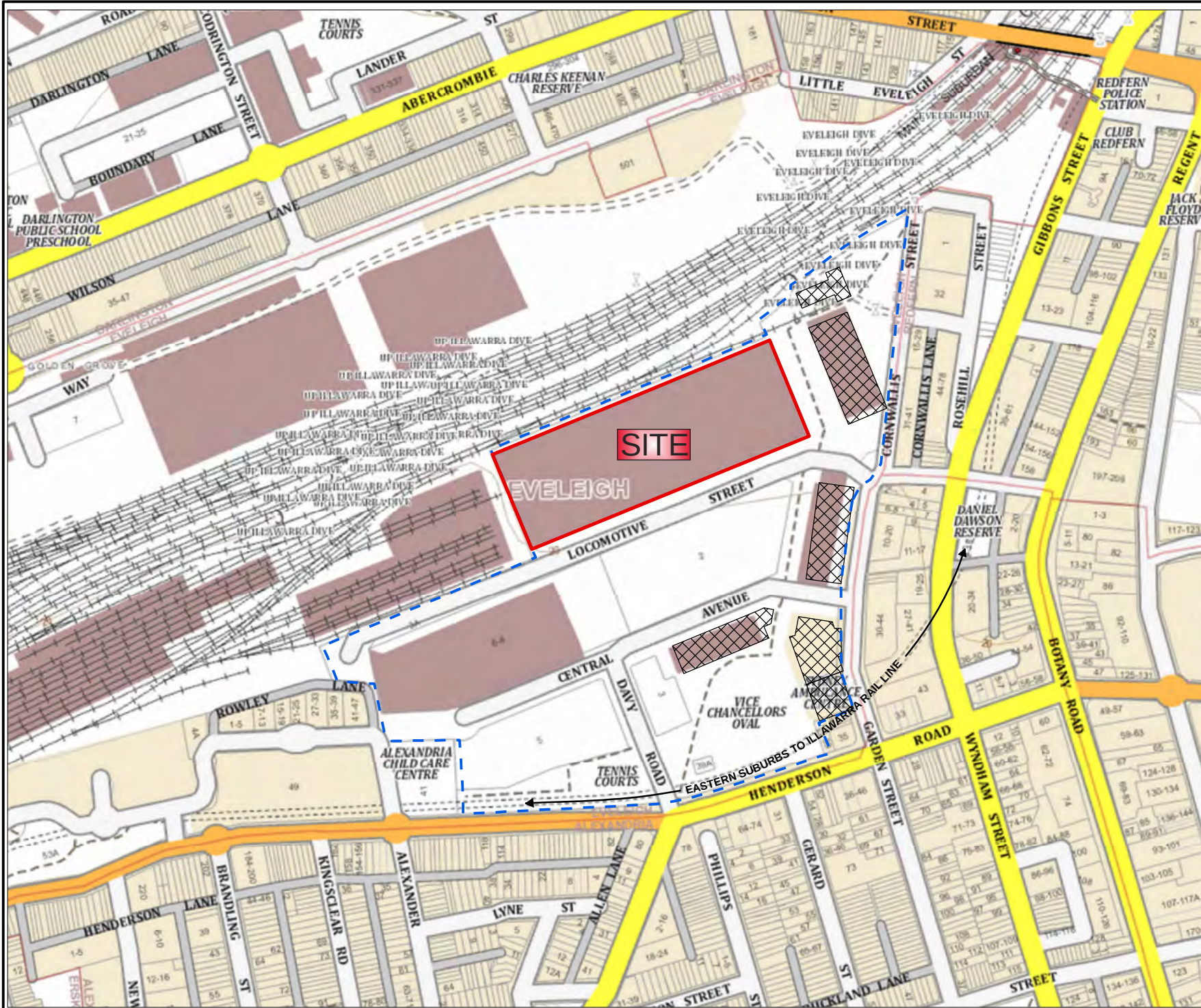
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the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

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground 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 subsurface 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.

Figures



Legend:

- └─ Approximate Boundary - ATP
- └─ Approximate Site Boundary - "The Site"
- Existing Building Footprint Excluded from "The Site"



Job No: 51142

Client: Mirvac

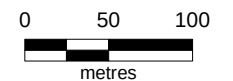
Version: R25 Rev A

Date: 07-Aug-2017

Drawn By: RF

Checked By: AS

Scale 1:4,500



Coor. Sys. GDA 1994 MGA Zone 56

**ATP Locomotive Workshop HMS
Australia Technology Park
Eveleigh, NSW**

SITE LOCATION

FIGURE 1



Legend:

- Approximate Boundary - ATP Site
- Approximate Site Boundary - "The Site"
- Cadastral Boundaries
- Existing Building Footprint Excluded from "The Site"
- UST (Inferred Historical Location)



Job No: 51142

Client: Mirvac

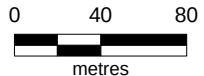
Version: R25 Rev A

Date: 07-Aug-2017

Drawn By: RF

Checked By: AS

Scale 1:3,518



Coor. Sys. GDA 1994 MGA Zone 56

ATP Locomotive Workshop HMS
Australia Technology Park
Eveleigh, NSW

SITE LAYOUT

FIGURE 2

Legend:

● Sample Location



Job No: 51142

Client: Mirvac

Version: R25 Rev A

Date: 07-Aug-2017

Drawn By: BC

Checked By: AS

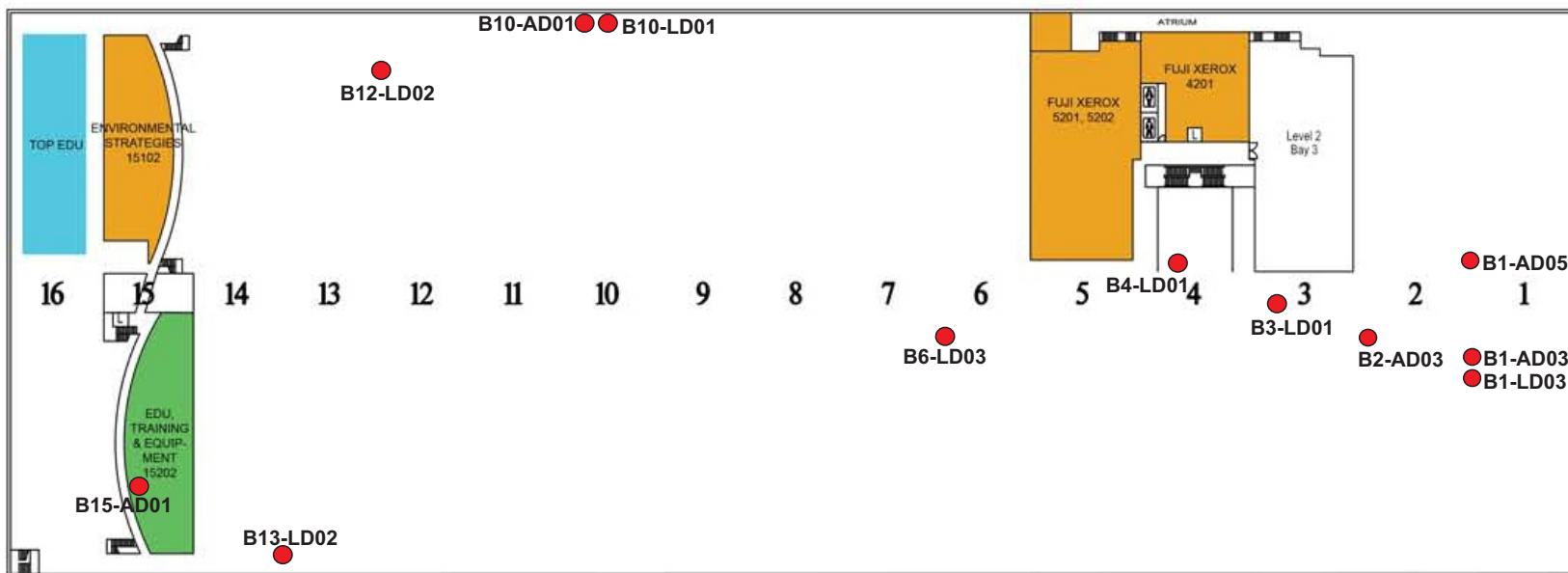
Scale: No Scale (Schematic)

**ATP Locomotive Workshop HMS
Australia Technology Park
Eveleigh, NSW**

**DUST SAMPLING LOCATIONS -
GROUND LEVEL**

FIGURE 3A





Legend:

- Sample Location



Job No: 51142

Client: Mirvac

Version: R25 Rev A

Date: 07-Aug-2017

Drawn By: BC

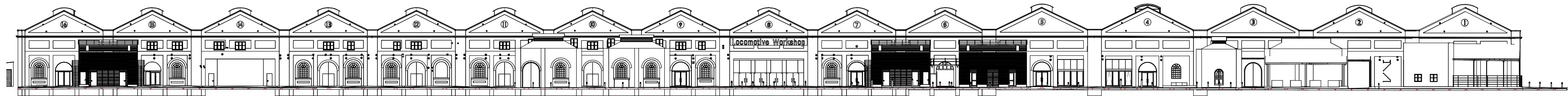
Checked By: AS

Scale: No Scale (Schematic)

**ATP Locomotive Workshop HMS
Australia Technology Park
Eveleigh, NSW**

**DUST SAMPLING LOCATIONS -
LEVEL 2**

FIGURE 3C



South Elevation



North Elevation

- NOTES :
- 1. Levels related to AHD...
 - 2. Grid: Local and arbitrary.
 - 3. Any voids shown in the model, between two components of unknown thickness are indicative.
 - 4. All model elements have been created on Existing Phase and therefore all views within the model are set to Existing Phase.



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A	Final Model	11-08-2016
REV	AMENDMENTS	DATE

SHEET 05 OF 06 - DETAIL SURVEY

CLIENT : MIRVAC

SURVEYOR :	SD
DATUM :	AHD
ORIGIN :	MGA
JOB REF. :	3317
DRAWING No.	3317-05
CHECKED :	AJ
DATE OF SURVEY:	05-16
REDUCTION RATIO :	1-500@A1

PROJECT:
Locomotive Stores, Sydney

DRAWING TITLE:
North and South Elevations

MACQUARIE PARK

PO Box 4004 MACQUARIE CENTRE NSW 2113
SUITE 404, LEVEL 4 No13-15 LYON PARK ROAD,
MACQUARIE PARK NSW 2113
PHONE : 9888 3848 FAX : 9888 3875
email: office@projectsurveyors.com.au

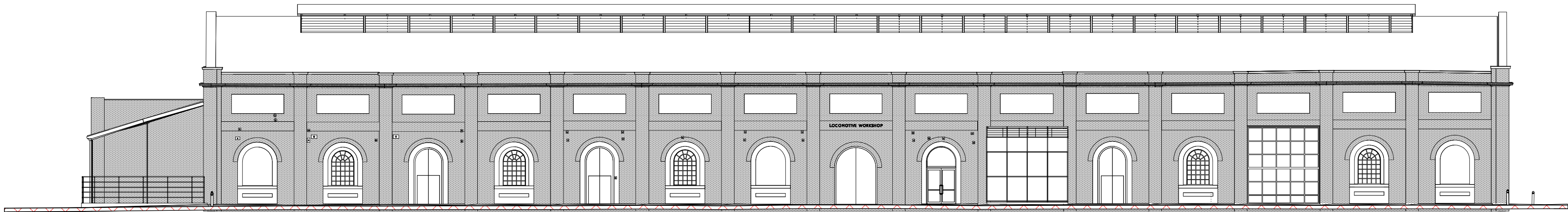
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* THE SUBJECT TITLE NOTES
1. RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)



East Elevation



West Elevation

NOTES :

1. Levels related to AHD...
2. Grid: Local and arbitrary.
3. Any voids shown in the model, between two components of unknown thickness are indicative.
4. All model elements have been created on Existing Phase and therefore all views within the model are set to Existing Phase.



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A	Final Model	11-08-2016
REV	AMENDMENTS	DATE

SHEET 06 OF 06 - DETAIL SURVEY

CLIENT : MIRVAC

SURVEYOR :	SD
DATUM :	AHD
ORIGIN :	MGA
JOB REF. :	3317
DRAWING No.	3317-06
CHECKED :	AJ
DATE OF SURVEY:	05-16
REDUCTION RATIO :	1-200@A1

PROJECT:
Locomotive Stores, Sydney

DRAWING TITLE:
East and West Elevations

MACQUARIE PARK

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Appendix A Hazardous Materials Register

Hazardous Materials Register – Locomotive Workshop

Australian Technology Park,
2 Locomotive Street, Eveleigh, NSW



JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
EXTERNAL BUILDING – SOUTHEAST ANNEX & BOILER HOUSE											
Asbestos Containing Materials (ACM)											
-	Boiler House, ground level, north wall	Black electrical backing board	5	Yes	Non-Friable	Presumed to Contain Asbestos	Good	1 m ²	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	SE Annex, ceiling level, NW corner	Gaskets	6	Yes	Non-Friable	Presumed to Contain Asbestos	Poor	2 items	Remove	20/07/2017 JBS&G AS	
-	SE Annex & Boiler House, Level 1, top of roof awning	Gaskets	7	Yes	Non-Friable	Presumed to Contain Asbestos	Good	Multiple	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Boiler House, ground level, unrestored boiler pipework and valves	Gaskets	8	Yes	Non-Friable	Presumed to Contain Asbestos	Good	Multiple	Remove prior to disturbance	20/07/2017 JBS&G AS	
No Asbestos Detected (NAD)											
Ext-A01	SE Annex, ground level, external south wall	Mastic window putty	-	Yes	-	No Asbestos Detected	-	-	No further action required		
Ext-A02	Boiler House, ground level, furnaces of boilers x 4	Calcium silicate refractory	-	Yes	-	No Asbestos Detected	-	-	No further action required		
Lead Based Paints											
Ext-LP01	SE Annex, ground level, arched double doors on north wall	Mustard paint	9	Yes	-	Lead Based Paint 2.2% w/w	Poor	10 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	SE Annex, ground level, arched heritage window on west interior wall	Off-white paint	10	Yes	-	+ Lead Paint Identified by XRF	Fair	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	SE Annex & Boiler House, ground level, fuse box, on north wall	Orange paint	5	Yes	-	+ Lead Paint Identified by XRF	Good	1 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

Australian Technology Park,
2 Locomotive Street, Eveleigh, NSW



JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
-	SE Annex & Boiler House, ground level, fuse box, on north wall	Green paint	11	Yes	-	+ Lead Paint Identified by XRF	Good	1 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Boiler House, ground level, steel boiler gantry frame	Yellow paints	12	Yes	-	+ Lead Paint Identified by XRF	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	SE Annex, Jib cranes	Yellow & silver paints	13	Yes		+ Lead Paint Identified by XRF	Good	3 items	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
	SE Annex, electric shears	Black paint	-	Yes		+ Lead Paint Identified by XRF	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
	Boiler House, boiler gen sets x 4	Orange paint	14	Yes		+ Lead Paint Identified by XRF	Good	4 items	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
	Boiler House, boiler furnaces & steam drums x 4	Black paint	-	-		- Lead Paint Identified by XRF	-	-	No further action required	-	
-	SE Annex & Boiler House, ground level, north masonry walls	White surface paint	-	-	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	SE Annex & Boiler House, ground level, north masonry walls	Older patchy undercoats concealed beneath white surface paint	6	Yes	-	Possible Lead Paint	Fair	30 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Boiler House, boiler water / steam drums	Internal insulation materials	-	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	50 m ²	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

Australian Technology Park,
2 Locomotive Street, Eveleigh, NSW



JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
EXTERNAL BUILDING – GENERAL											
Asbestos Containing Materials (ACM)											
Ext-A05	Cylindrical steel pressure vessels at SE corner of building, pipe & valve flanges	Gaskets	15	Yes	Non-Friable	Chrysotile asbestos detected	Good	Multiple	Remove prior to disturbance	20/07/2017 JBS&G AS	
No Asbestos Detected (NAD)											
Ext-A03	Exterior perimeter walls, ground level, arched heritage windows	Mastic window putty	-	Yes	-	No Asbestos Detected	-	-	No further action required		
Ext-A04	Exterior brick walls	Cementitious mortar	-	Yes	-	No Asbestos Detected	-	-	No further action required		
Ext-A06	Exterior perimeter upper walls, mustard rectangular windows, Level 1	Mastic window putty	-	Yes	-	No Asbestos Detected	-	-	No further action required		
Ext-A07	Exterior upper perimeter walls, sandstone copings, Level 2	Pointing material	-	Yes	-	No Asbestos Detected	-	-	No further action required		
Lead Based Paints											
Ext-LP01	Exterior Bay 1, arched timber double doors on south wall, ground level (within SE Annex)	Mustard paint	9	Yes	-	Lead Based Paint 2.2% w/w	Poor	10 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Ext-LP02	Exterior perimeter north, south and west upper walls, mustard rectangular windows, Level 1	Mustard paint	16	No	-	Lead Based Paint 4.9% w/w	Poor	Multiple	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Ext-LP03	Exterior perimeter walls, brick archways over entry doors, ground level	White paint	17	Yes	-	Lead Based Paint 9.1% w/w	Good	80 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

Australian Technology Park,
2 Locomotive Street, Eveleigh, NSW



JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
-	Exterior north and south walls, old bay numbers adjacent entry doors, ground level	Orange / white paints	18	Yes	-	+ Lead Paint Identified by XRF	Good	10 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Exterior upper north wall, steel 'rail track' window lintels, Levels 1 and 2	Grey paint	-	No	-	+ Lead Paint Identified by XRF	Good	Multiple	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Exterior Bay 1, main central arched timber double doors on east wall, ground level	Mustard paint	19	Yes	-	+ Lead Paint Identified by XRF	Good	10 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Exterior Bays 1, 2 & 10 (annex), arched timber double doors on south wall, ground level	Mustard paint	18	Yes	-	+ Lead Paint Identified by XRF	Good	30 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Exterior Bay 3, Pump House (annex), timber double doors on south wall, ground level	Mustard paint	20	Yes	-	+ Lead Paint Identified by XRF	Good	5 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Exterior Bay 4 rooftop, north end - painted framing timbers in 'Pigeon Coupe' structure	White paint	-	No	-	No bodily access, presumed to contain Lead Paint	Fair	10 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Exterior Bay 8 - timber window frames on north wall, ground level	Mustard paint	21	Yes	-	+ Lead Paint Identified by XRF	Good	5 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Exterior Bay 4, south wall - arched heritage window, ground level	Grey paint	22	Yes	-	+ Lead Paint Identified by XRF	Fair	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Exterior Bay 9 (annex), west wall - arched heritage window, ground level	Grey paint	-	Yes	-	+ Lead Paint Identified by XRF	Fair	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 9/10 (annex), south side - exterior urinal and window sill, ground level	Silver paint	23	Yes	-	+ Lead Paint Identified by XRF	Good	4 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 13, exterior south wall - residual paint on brickwork around window, ground level	Yellow / blue paints	24	Yes	-	+ Lead Paint Identified by XRF	Fair	5 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

Australian Technology Park,
2 Locomotive Street, Eveleigh, NSW



JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
-	Bay 14, exterior south wall - steel lintel beam over main entry, ground level	Grey paint	-	Yes	-	+ Lead Paint Identified by XRF	Good	5 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 15, exterior south wall - painted squares on bricks, ground level	Yellow paint	-	Yes	-	+ Lead Paint Identified by XRF	Good	1 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 5/6, south annex - pipework and ducting in new Boiler Room, Level 1	Internal insulation materials	-	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	10 m ²	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
BAY 1 - INTERNAL											
Asbestos Containing Materials (ACM)											
B1-A05 (JI17192)	Bay 1 north, north wall, ground level - orange heritage fuse box	Asbestos paper lining	25	Yes	Friable	Chrysotile asbestos detected	Good	1 m ²	Remove prior to disturbance	20/07/2017 JBS&G AS	
B1-A03	Bay 1 south, ground level – seal at top of HC Thornthwaite Furnace	Woven seal material	26	Yes	Friable	Chrysotile and amosite asbestos detected	Good	3 m ²	Remove prior to disturbance	20/07/2017 JBS&G AS	
B1-A05 (JI14761)	Bay 1 north, ground level – Gaskets on pipes on floor of Davy display area	Gaskets	27	Yes	Non-Friable	Chrysotile asbestos detected	Poor	10 items	Remove	20/07/2017 JBS&G AS	
B1-A06	Bay 1 north, ground level – Gaskets on valve flange of Davy Intensifier and all Davy Equipment	Gaskets	28	Yes	Non-Friable	Chrysotile asbestos detected	Good	Multiple	Remove prior to disturbance	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

Australian Technology Park,
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B1-A07	Bay 1, Level 2 - old water feed pipework into Davy Intensifier	Gaskets	29	Yes	Friable	Chrysotile asbestos detected	Good	Multiple	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 1 north, north wall, ground level - orange heritage relay box	Asbestos paper lining	30	Yes	Friable	Presumed to Contain Asbestos	Good	1 m ²	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 1, Level 2 - old steam plant pipework, upper east and west walls of bay	Gaskets	-	Yes	Non- Friable	Presumed to Contain Asbestos	Good	Multiple	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 1 south, Level 1 - central west	2 x Black electrical backing boards	31	Yes	Non- Friable	Presumed to Contain Asbestos	Good	1 m ²	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 1 south, Level 1 - central east wall	2 x Black electrical backing boards	32	Yes	Non- Friable	Presumed to Contain Asbestos	Good	1 m ²	Remove prior to disturbance	20/07/2017 JBS&G AS	
No Asbestos Detected (NAD)											
B1-A01	Bay 1 south, ground level – representative Oil Furnace	Refractory material	-	Yes	-	No Asbestos Detected	-	-	No further action required	-	
B1-A02	Bay 1 south, ground level – HC Thornthwaite Furnace	Refractory material	-	Yes	-	No Asbestos Detected	-	-	No further action required	-	
B1-A04	Bay 1 south, ground level – stored yolk adjacent oil furnace (1SSE)	Calcium silicate insulation	-	Yes	-	No Asbestos Detected	-	-	No further action required	-	
Lead Based Paints											
B1-LP01	Bay 1 south, central west, ground level - heritage structural steel column	Silver grey paint	33	Yes	-	Lead Based Paint 38% w/w	Good	Multiple	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B1-LP02	Bay 1 south, ground level – 7 CWT Jib Crane	Orange paint	34	Yes	-	Lead Based Paint 28% w/w	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

Australian Technology Park,
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JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
B1-LP03	Bay 1 south, ground level – No.6 Blower (N0.755)	Green paint	35	Yes	-	Lead Based Paint 4.3% w/w	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B1-LP04	Bay 1 south, ground level – Arched timber double doors	Beige paint	-	Yes	-	Non-Lead Based Paint 0.32% w/w	-	-	No further action required	-	
B1-LP05	Bay 1 north, ground level – Davy Press	Grey paint	-	Yes	-	Lead Based Paint 11% w/w	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	36	Yes	-	+ Lead Paint Identified by XRF	Good	Multiple	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 1 north, ground level - fuse box on north wall	Orange paint	-	Yes	-	+ Lead Paint Identified by XRF	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 1, all levels, north - east and south masonry walls	White surface paint	-	Yes	-	- Lead Paint Identified by XRF	Fair	1300 m ²	No further action required	-	
-	Bay 1, all levels – north, east and south masonry walls	Older patchy undercoats concealed beneath white surface paint	37	Yes	-	Possible Lead Paint	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 1 north, ground level - east wall, RSJ stanchion	White paint	-	Yes	-	+ Lead Paint Identified by XRF	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 1 north, ground level - Sub-foremans Office, exterior	Blue, white paints, orange undercoat	38	Yes	-	+ Lead Paint Identified by XRF	Good	20 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 1, entire bay, ground level – Majority of heritage machinery and equipment	Old paints (assorted colours)	-	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Refer to Section 4 of HMS report for specific details. Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

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Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 1, Level 2, upper north, east and south walls – Old and new steam & water pipework	Pipe insulation materials (SMF)	39	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	150 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 1, south, ground level – Ceiling cavity of Sub-foremans Office	Internal insulation materials (SMF)	-	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	20 m ²	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 1, north and south, ground level – furnace insulation materials	Ceramic fibre filament (SMF)	-	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B1-AD01	Bay 1 south, central west – Dust sample from dirt floor at base of column	Asbestos in floor dirt / dust sample	-	Yes	-	No Asbestos Detected	-	-	No further action required	-	
B1-LD01	Bay 1 south, central west – Dust sample from dirt floor at base of column	Lead in floor dirt / dust sample	-	Yes	-	46 mg/kg < 300 mg/kg (below criteria)	-	-	No further action required	-	
B1-AD02	Bay 1 north, central east – Dust sample from dirt floor at base of column	Asbestos in floor dirt / dust sample	-	Yes	-	No Asbestos Detected	-	-	No further action required	-	
B1-LD02	Bay 1 north, central east – Dust sample from dirt floor at base of column	Lead in floor dirt / dust sample	-	Yes	-	160 mg/kg < 300 mg/kg (below criteria)	-	-	No further action required	-	
B1-AD03	Bay 1 south, NW corner, Level 2 – Top of main roof beam	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	

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B1-LD03	Bay 1 south, NW corner, Level 2 – Top of main roof beam	Lead in dust sample	40	No	-	5000 mg/kg > 300 mg/kg (exceeding criteria)	Good	Minimal accumulated dust	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B1-AD04	Bay 1 south, NE, Level 1 – Top of northernmost yellow CTW jib crane	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	
B1-LD04	Bay 1 south, NE, Level 1 – Top of northernmost yellow CTW jib crane	Lead in dust sample	41	No	-	960 mg/kg > 300 mg/kg (exceeding criteria)	Fair	Moderate accumulated dust	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B1-AD05	Bay 1 north, SE corner, Level 2 – Top of crane rail	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	
B1-LD06	Bay 1 north, SE corner, Level 2 – Top of Davy Intensifier steam drum	Lead in dust sample	-	No	-	130 mg/kg < 300 mg/kg (below criteria)	-	-	No further action required	-	
BAY 2 – INTERNAL											
Asbestos Containing Materials (ACM)											
B2-A01	Bay 2 south, central west, ground level - orange heritage fuse boxes	Asbestos paper lining	42	Yes	Friable	Chrysotile asbestos detected	Good	4 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
B2-A03	Bay 2 north, SE corner, ground level - orange heritage fuse box	Asbestos paper lining	43	Yes	Friable	Chrysotile asbestos detected	Good	1 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 2, Level 2 - old steam plant pipework, upper east and west walls of bay	Gaskets	-	Yes	Non-Friable	Presumed to Contain Asbestos	Good	Multiple	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 2, ground level - orange heritage electrical / fuse boxes	Black electrical backing boards	44	Yes	Non-Friable	Presumed to Contain Asbestos	Good	5 m ²	Remove prior to disturbance	20/07/2017 JBS&G AS	

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No Asbestos Detected (NAD)											
B2-A02	Bay 2 south, south end, ground level – black membrane on roof of Sub-foremans Office	Black roof membrane	-	Yes	-	No Asbestos Detected	-	-	No further action required		
B2-A04	Bay 2 north, SE corner, ground level - orange heritage fuse box		-	Yes	-	No Asbestos Detected	-	-	No further action required		
B2-A05	Bay 2 north, central east, ground level – unnamed furnace	Furnace insulation	-	Yes	-	No Asbestos Detected	-	-	No further action required		
B2-A06	Bay 2 north, central west, ground level – unnamed furnace	Refractory	-	Yes	-	No Asbestos Detected	-	-	No further action required		
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	45	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 2, all levels, north - east and south masonry walls	White surface paint	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 2, all levels – north, west and south masonry walls	Older patchy undercoats concealed beneath white surface paint	45	Yes	-	Possible Lead Paint	Good	1200 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 2 north, ground level - arched heritage window	Off-white paint	46	Yes	-	+ Lead Paint Identified by XRF	Good	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 2 north and south, ground level – electrical and fuse boxes	Orange paint	44	Yes	-	+ Lead Paint Identified by XRF	Fair	10 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

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B2-LP01	Bay 2 south, central west, ground level – Torq brand electrical switchboard	Orange paint	42	Yes	-	Lead Based Paint 5.5% w/w	Fair	1 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B2-LP02	Bay 2 south, ground level – stanchion of One Ton CWT Jib Crane	Grey paint	45	Yes	-	Lead Based Paint 14% w/w	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B2-LP03 JI14735	Bay 2 south, NW corner, Level 2 - heritage structural steel beam	Silver grey paint	-	Yes	-	Lead Based Paint 10% w/w	Good	Multiple	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B2-LP03	Bay 2 south, ground level – stanchion of 2 SWL Jib Crane	Yellow paint	45	Yes	-	Lead Based Paint 1.9% w/w	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B2-LP04	Bay 2 north, ground level – Frazing & Grinding Wheel	Grey paint	-	Yes	-	Lead Based Paint 24% w/w	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B2-LP05	Bay 2 north, ground level – Davis & Primrose Steam Hammer No.4	Grey paint	-	Yes	-	Non-Lead Based Paint 0.07% w/w	-	-	No further action required	-	
B2-LP06	Bay 2 north, ground level – Davis & Primrose Steam Hammer No.3	Grey paint	-	Yes	-	Lead Based Paint 15% w/w	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B2-LP07	Bay 2 north, SE corner, ground level – Fuse box	Orange paint	43	Yes	-	Lead Based Paint 7.6% w/w	Fair	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 2, entire bay, ground level – Majority of heritage machinery and equipment	Old paints (assorted colours)	-	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Refer to Section 4 of HMS report for specific details. Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	

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Synthetic Mineral Fibres (SMF)											
-	Bay 2, Level 2, upper north, east, south and west walls – Old and new steam & water pipework	Pipe insulation materials (SMF)	47	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	150 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 2, south, ground level – Ceiling cavity of Sub-foremans Office	Internal insulation materials (SMF)	-	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	20 m ²	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 2, north and south, ground level – furnace insulation materials	Ceramic fibre filament (SMF)	-	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B2-AD01	Bay 2 south, central west – Dust sample from dirt floor at base of column	Asbestos in floor dirt / dust sample	-	Yes	-	No Asbestos Detected	-	-	No further action required	-	
B2-LD01	Bay 2 south, central west – Dust sample from dirt floor at base of column	Lead in floor dirt / dust sample	-	Yes	-	1300 mg/kg > 300 mg/kg (exceeding criteria)	Fair	Moderate accumulated dust	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B2-AD02	Bay 2 north, central west – Dust sample from dirt floor at base of column	Asbestos in floor dirt / dust sample	-	Yes	-	No Asbestos Detected	-	-	No further action required	-	
B2-LD02	Bay 2 north, central west – Dust sample from dirt floor at base of column	Lead in floor dirt / dust sample	-	Yes	-	1400 mg/kg > 300 mg/kg (exceeding criteria)	Fair	Moderate accumulated dust	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B2-LD02 Swab	Bay 2 north, north wall, ground level – Window sill dust beneath arched heritage window	Lead dust swab sample	-	Yes	-	1.3 mg/m ² , < 5 mg/m ² (below criteria)	-	-	No further action required	-	
B2-AD03	Bay 2 south, NW corner, Level 2 – Top of green enamel light	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	

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B2-LD04	Bay 2 south, NW corner, Level 2 – Top of main roof beam	Lead dust swab sample	-	No	-	2.8 mg/m ² , < 5 mg/m ² (below criteria)	-	-	No further action required	-	
B2-LD05	Bay 2 south, NW corner, Level 2 – Top of metal clad water pipe	Lead dust swab sample	-	No	-	4 mg/m ² , < 5 mg/m ² (below criteria)	-	-	No further action required	-	
BAY 3 - INTERNAL											
Asbestos Containing Materials (ACM)											
No Asbestos Detected (NAD)											
B3-A01	Bay 3 north, Level 2 – Vermiculite insulation in plant room	Vermiculite insulation	48	Yes	-	No Asbestos Detected	-	-	No further action required		
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	-	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 3, all levels - North and south masonry walls	White surface paint	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 3, all levels – north and south masonry walls	Older patchy undercoats concealed beneath white surface paint	-	Yes	-	Possible Lead Paint	Good	350 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B3-LP01	Bay 3 north, Level 2 – Northern wall of plant room	White paint		Yes	-	Non-Lead Based Paint 0.05% w/w	-	-	No further action required	-	
B3-LP02	Bay 3 south annex (Pump House), ground level – Fielding & Platt Pump	Green paint	49	Yes	-	Lead Based Paint 16% w/w	Fair	2 items	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

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Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 3 north, all levels – Drop-in ceiling tiles throughout offices	SMF ceiling tiles	-	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 3, north and south, all levels – Fixed & flexible duct insulation in ceiling cavity of offices & southern kitchen	Air-con duct insulation (SMF)	-	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 3, south, Level 1 – Fixed & flexible duct insulation on flat roof of Function Hall	Air-con duct insulation (SMF)	50	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 3, north, Level 1 and 2 plant rooms – Heating and chilled water pipes	Pipe insulation materials (SMF)	-	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 3, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	-	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B3-AD01	Bay 3, Level 2 – Dust sample collected from the flat roof of the southern Function Hall	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	
B3-LD01	Bay 3, Level 2 – Dust sample collected from the flat roof of the southern Function Hall	Lead in dust sample	50	No	-	2600mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (650 m ²)	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B3-LD02	Bay 3, Level 3, Central Road – Top of rafter directly below roof atrium panel	Lead dust swab sample	-	No	-	11 mg/m ² , > 5 mg/m ² (exceeding criteria)	Good	Minimal dust	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

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BAY 4 – INTERNAL											
Asbestos Containing Materials (ACM)											
-	Bay 4, north and south Level 2 – Electrical boards in operators cabins of overhead travelling crane	Black electrical backing boards	51	Yes	Non- Friable	Presumed to Contain Asbestos	Good	4 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 4, north and south Level 2 – Brake pads associated with crane winch gear	Friction materials	51	Yes	Non- Friable	Presumed to Contain Asbestos	Good	4 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
No Asbestos Detected (NAD)											
B4-A01	Bay 4 north, Level 2 – Woven electrical wire attached to roof truss	Woven wire insulation	-	Yes	-	No Asbestos Detected	-	-	No further action required		
B4-A02	Bay 4 south, Level 1 – Pointing mortar used in upper wall	Pointing mortar	-	Yes	-	No Asbestos Detected	-	-	No further action required		
Lead Based Paints											
B4-LP01	Bay 4 south, SE corner, ground level – Heritage arched window frame	Off-white paint	-	Yes	-	Lead Based Paint 19% w/w	Fair	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B4-LP02	Bay 4 north, ground level – Residual paint on northern wall	White, cream, grey & orange paints	52	Yes	-	Lead Based Paint 23% w/w	Fair	150 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B4-LP03	Bay 4 north, northern wall, ground level – Heritage arched window frame	Off-white paint	-	Yes	-	Lead Based Paint 16% w/w	Fair	1 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B4-LP04	Bay 4 south, SE corner, Level 1 - Heritage structural steel beam	Silver grey paint	53	Yes	-	Lead Based Paint 20% w/w	Good	Multiple	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

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B4-LP05	Bay 4 south, Level 2 - Arrol Overhead Travelling Crane	Orange paint	51	No	-	Lead Based Paint 21% w/w	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	53	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 4, all levels - South masonry walls	White surface paint	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 4, all levels – north and south masonry walls	Older patchy undercoats concealed beneath white surface paint	52	Yes	-	Possible Lead Paint	Good	300 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 4 south, ground level – Skirting boards	Brown varnish	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 4 north and south, throughout – Steel mezzanine gantry	Grey and cream paints	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 4 north, Level 2 - Overhead Travelling Crane	Dark brown paint	54	No	-	+ Lead Paint Identified by XRF	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 4, entire bay, ground level – Majority of heritage machinery and equipment	Grey paint	-	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Refer to Section 4 of HMS report for specific details. Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	

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Synthetic Mineral Fibres (SMF)											
-	Bay 4 north, all levels – Drop-in ceiling tiles throughout offices	SMF ceiling tiles	55	Yes	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 4, north and south, all levels – Fixed & flexible duct insulation in ceiling cavities of offices & amenities	Air-con duct insulation (SMF)	55	Yes	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 4, north, Level 2 plant room – Heating and chilled water pipes	Pipe insulation materials (SMF)	-	Yes	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 4, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	-	Yes	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B4-LD01	Bay 4, Level 2 – Dust sample collected from timber gantry of northern overhead crane	Lead in dust sample	54	No	-	1800mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (2 m²)	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
BAY 5 - INTERNAL											
Asbestos Containing Materials (ACM)											
-	Bay 5, Central Road, Level 2 – Electrical boards in operator's cabin of overhead travelling crane	Black electrical backing boards	56	No	Non- Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 5, Central Road, Level 2 – Brake pads associated with crane winch gear	Friction materials	57	No	Non- Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	

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Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	-	Yes	-	+ Lead Paint Identified by XRF	Good	Multiple	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 5, all levels - North masonry wall	White surface paint	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 5, all levels – north, west and south masonry walls	Older patchy undercoats concealed beneath white surface paint	58	Yes	-	Possible Lead Paint	Good	1200 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 5, Level 2, Central Road – Overhead Travelling Crane	Orange paint	59	No	-	+ Lead Paint Identified by XRF	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 5 south end, ground level – Johnston Spring Coiler	Grey paint	60	Yes	-	+ Lead Paint Identified by XRF	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 5 north, all levels – Drop-in ceiling tiles throughout offices	SMF ceiling tiles	58	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 5, north and south, all levels – Fixed & flexible duct insulation in ceiling cavities of offices & amenities	Air-con duct insulation (SMF)	-	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	

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-	Bay 5, south, Level 1 – Fixed & flexible duct insulation on flat roof of Theatre	Air-con duct insulation (SMF)	61	No	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 5, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	-	No	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B5-AD01	Bay 5, Level 2 – Dust sample collected from the flat roof of the southern Theatre	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	
B5-LD01	Bay 5, Level 2 – Dust sample collected from the flat roof of the southern Theatre	Lead in dust sample	61	No	-	2800mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (650 m ²)	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B5-AD02	Bay 5, Level 2, Central Road – Dust sample collected from timber gantry of Overhead Travelling Crane	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	
-	Bay 5, south, all levels – Dust in western wall cavity behind Gyprock	Lead in dust	62	No	-	Possible lead impacted dust in wall cavity	-	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
BAY 6 - INTERNAL											
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	-	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 6, south, ground level – Square timber columns within the working space and attached beams in the office ceiling spaces	White paint and undercoat	63	Yes	-	+ Lead Paint Identified by XRF	Good	30 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

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-	Bay 6, south, ground level – Steel RSJ stanchion within the working space and attached beams in the office ceiling spaces	White paint and undercoat	64	Yes	-	+ Lead Paint Identified by XRF	Good	10 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 6, all levels – East and south masonry walls	White surface paint	-	Yes	-	+ Lead Paint Identified by XRF	Good	1000 m ²	No further action required	-	
-	Bay 6, all levels – north, east and south masonry walls	Older patchy undercoats concealed beneath white surface paint	65	Yes	-	Possible Lead Paint	Good	1200 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 6 throughout, all levels – Drop-in ceiling tiles throughout offices	SMF ceiling tiles	-	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 6, throughout, ground levels – Fixed & flexible duct insulation in ceiling cavities of offices & amenities	Air-con duct insulation (SMF)	-	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 6, throughout, Level 1 – Fixed & flexible duct insulation on flat roof of office blocks	Air-con duct insulation (SMF)	-	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 6, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	-	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	

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Settled Dust Samples											
B6-AD01	Bay 6, Level 2 – Dust sample collected from the flat roof of the southern office block	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	
B6-LD01	Bay 6, Level 2 – Dust sample collected from the flat roof of the southern office block	Lead in dust sample	66	No	-	3000mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (650 m ²)	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B6-AD02	Bay 6, Level 2 – Dust sample collected from the flat roof of the northern office block	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	
B6-LD02	Bay 6, Level 2 – Dust sample collected from the flat roof of the northern office block	Lead in dust sample	-	No	-	670mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (650 m ²)	Unknown	20/07/2017 JBS&G AS	
B6-LD03	Bay 6, Level 2 – Settled dust on top of cable tray above central road	Lead dust swab sample	67	No	-	19 mg/m ² , > 5 mg/m ² (exceeding criteria)	Good	Minimal accumulated dust	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 6, south, ground level – Dust in eastern wall plenum behind Gyprock lining	Lead in dust	-	Yes	-	Lead contaminated dusts in wall cavity. Tested previously by JBS&G	Fair	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
BAY 7 - INTERNAL											
Asbestos Containing Materials (ACM)											
-	Bay 7, Central Road, Level 2 – Electrical boards in operator's cabin of overhead travelling crane	Black electrical backing boards	68	No	Non-Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 7, Central Road, Level 2 – Brake pads associated with crane winch gear	Friction materials	68	No	Non-Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	

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Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	-	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B7-LP01	Bay 7 south, ground level – South masonry wall	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.06% w/w	-	-	No further action required	-	
B7-LP02	Bay 7, south, ground level – Steel RSJ stanchion within the working space and attached beams in the office ceiling spaces	White paint and undercoat	-	Yes	-	Lead Based Paint 3.4% w/w	Good	5 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B7-LP03	Bay 7 north, Level 1 – North masonry wall	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.01% w/w	-	-	No further action required	-	
-	Bay 7 south, ground level - arched heritage window on south wall	Off-white paint	69	Yes	-	+ Lead Paint Identified by XRF	Fair	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 7, all levels – north and south masonry walls	Older patchy undercoats concealed beneath white surface paint	-	Yes	-	Possible Lead Paint	Good	300 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 7, Level 2, Central Road – 5 Ton Overhead Travelling Crane	Orange paint	68	No	-	+ Lead Paint Identified by XRF	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	

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Synthetic Mineral Fibres (SMF)											
-	Bay 7 south, all levels – Drop-in ceiling tiles throughout offices	SMF ceiling tiles	-	Yes	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 7, throughout, ground levels – Fixed & flexible duct insulation in ceiling cavities of offices & amenities	Air-con duct insulation (SMF)	-	No	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 7, throughout, Level 1 – Fixed & flexible duct insulation on flat roof of north and south office blocks	Air-con duct insulation (SMF)	-	No	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 7, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	-	No	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	-	No further action required	-
Settled Dust Samples											
B7-LD01	Bay 7 south, ground level – Swab sample from top side of ceiling tile of Suite 7001 (Mirvac kitchen)	Lead dust swab sample	-	No	-	0.01 mg/m ² , < 5 mg/m ² (below criteria)	-	-	No further action required	-	
B7-AD01	Bay 7, Level 2 – Dust sample collected from the flat roof of the southern office block	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	
B7-LD02	Bay 7, Level 2 – Dust sample collected from the flat roof of the southern office block	Lead in dust sample	70	No	-	2500mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (650 m ²)	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B7-AD02	Bay 7, Level 2 – Dust sample collected from the flat roof of the northern office block	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	
B7-LD03	Bay 7, Level 2 – Dust sample collected from the flat roof of the northern office block	Lead in dust sample	71	No	-	3800mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (650 m ²)	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

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BAY 8 - INTERNAL											
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	72	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B8-LP01	Bay 8, ground level - North masonry wall, east side	White surface paint	-	Yes	-	Non-Lead Based Paint 0.09% w/w	-	-	No further action required	-	
B8-LP02	Bay 8, ground level - North masonry wall, west side	White surface paint	-	Yes	-	Non-Lead Based Paint 0.03% w/w	-	-	No further action required	-	
B8-LP03	Bay 8, Level 1 - North masonry wall, east	White surface paint	-	Yes	-	Non-Lead Based Paint 0.04% w/w	-	-	No further action required	-	
B8-LP04	Bay 8 south, Level 1 - Steel lintel beam spanning above main glass entry doors	Off-white surface paint	73	No	-	Lead Based Paint 2.3% w/w	Poor	30 lin. mtrs	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 8, all levels – north and south masonry walls	Older patchy undercoats concealed beneath white surface paint	-	Yes	-	Possible Lead Paint	Good	350 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 8 north and south, throughout – Steel mezzanine gantry	Grey and cream paints	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 4 south, ground level – Genevoise Drilling & Boring Machine (1938)	Greyish green paint	74	Yes	-	+ Lead Paint Identified by XRF	Good	1 item	Refer to Section 4 of HMS report for specific details. Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 4 north, ground level – Genevoise Drilling & Boring Machine (1929)	Greyish green paint	-	Yes	-	+ Lead Paint Identified by XRF	Good	1 item	Refer to Section 4 of HMS report for specific details. Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

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Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 8 north, all levels – Drop-in ceiling tiles throughout offices	SMF ceiling tiles	-	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 8 north, all levels – Fixed & flexible duct insulation in ceiling cavities of offices & amenities	Air-con duct insulation (SMF)	-	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 8, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	-	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B8-LD01	Bay 8 south, Level 2 – Dust sample collected from upper wall ledge above southern glass entry door	Lead in dust sample	73	No	-	1200mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B8-LD02	Bay 8 south, Level 2 – Swab sample of dust on cable tray above southern glass door	Lead dust swab sample	75	No	-	36 mg/m ² , > 5 mg/m ² (exceeding criteria)	Fair	Minimal accumulated dust	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

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BAY 9 - INTERNAL											
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	79	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 9, all levels – north and south masonry walls	Older patchy undercoats concealed beneath white surface paint	-	Yes	-	Possible Lead Paint	Good	300 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified.									-	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 9 south, all levels – Drop-in ceiling tiles throughout offices	SMF ceiling tiles	76	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 9, throughout, ground level – Fixed & flexible duct insulation in ceiling cavities of offices & amenities	Air-con duct insulation (SMF)	77	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 9, throughout, Level 1 – Fixed & flexible duct insulation on flat roof of north and south office blocks	Air-con duct insulation (SMF)	78	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 9, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	-	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	

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Settled Dust Samples											
B9-LD01	Bay 9 south, ground level – Swab sample from top side of central ceiling tile in Suite 9003	Lead dust swab sample	-	No	-	0.01 mg/m ² , < 5 mg/m ² (below criteria)	-	-	No further action required	-	
B9-AD01	Bay 9, Level 2 – Dust sample collected from the flat roof of the southern office block	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	
B9-LD02	Bay 9, Level 2 – Dust sample collected from the flat roof of the southern office block	Lead in dust sample	78	No	-	1400mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (650 m ²)	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B9-AD02	Bay 9, Level 2 – Dust sample collected from the flat roof of the northern office block	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	-	No further action required	-	
B9-LD03	Bay 9, Level 2 – Dust sample collected from the flat roof of the northern office block	Lead in dust sample	79	No	-	2300mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (650 m ²)	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
BAY 10 - INTERNAL											
Asbestos Containing Materials (ACM)											
-	Bay 10 northern display area, ground level – Crane operator's cabin	Black electrical backing boards	80	Yes	Non-Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
B10-A02	Bay 10 north, Level 2, northern upper masonry wall	Black electrical backing board	81	No	Non-Friable	Chrysotile asbestos detected	Good	1 item	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 10 north, Level 2, northern upper masonry wall	Black electrical backing boards x 2	81	No	Non-Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 10 north, Level 2 – Electrical boards in operator's cabin of overhead travelling cranes	Black electrical backing boards	82	No	Non-Friable	Presumed to Contain Asbestos	Good	4 items	Remove prior to disturbance	20/07/2017 JBS&G AS	

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-	Bay 10 north, Level 2 – Brake pads associated with crane winch gear	Friction materials	83	No	Non- Friable	Presumed to Contain Asbestos	Good	4 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
No Asbestos Detected (NAD)											
B10-A01	Bay 10 northern display area, ground level – Craven Bros Traverser	Mastic window putty	-	Yes	-	No Asbestos Detected	-	-	No further action required		
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	84	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B10-LP01	Bay 10 south, ground level – Southern wall	Off-white paint	-	Yes	-	Non-Lead Based Paint 0.02% w/w	-	-	No further action required	-	
B10-LP02	Bay 10 north, ground level – Northern wall	Off-white topcoat & exposed green undercoat paints	-	Yes	-	Lead Based Paint 14% w/w	Good	180 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B10-LP03	Bay 10 northern display area, ground level – Crane operator's cabin	Yellow paint	86	Yes	-	Lead Based Paint 1.7% w/w	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B10-LP04	Bay 10 northern display area, ground level – Webster & Bennet 60" Vertical Borer	Cream paint	-	Yes	-	Non-Lead Based Paint 0.04% w/w	-	-	No further action required	-	
-	Bay 10, all levels – north and south masonry walls	Older patchy undercoats concealed beneath white surface paint	85	Yes	-	Possible Lead Paint	Good	350 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 10 north, Level 2 – timber cable tray fixed to upper northern wall	Off-white paint	86	No	-	+ Lead Paint Identified by XRF	fair	5 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

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-	Bay 10 north & south, Level 1 – timber rectangular windows fixed to upper walls	Mustard paint	85	No	-	+ Lead Paint Identified by XRF	Good	5 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 10 north & south, ground level – Steel lined, double arched doors	Grey paint	86	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 10 north, Level 2 – 2 x 5 Ton Overhead Travelling Cranes in north bay	Gold paint	87	No	-	+ Lead Paint Identified by XRF	Good	2 Items	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 10 south, ground level – Tongyl Wheel Lathe	Green paint	-	Yes	-	+ Lead Paint Identified by XRF	Good	1 item	Refer to Section 4 of HMS report for specific details. Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 10 north, ground level – Majority of heritage machinery and equipment	Old paints (assorted colours)	-	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Refer to Section 4 of HMS report for specific details. Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 10, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	89	No	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B10-AD01	Bay 10 north, Level 2 – Dust sample from timber cable tray fixed to upper northern wall	Asbestos in dust sample	-	Yes	-	No Asbestos Detected	-	-	No further action required	-	
B10-LD01	Bay 10 north, Level 2 – Dust sample from timber cable tray fixed to upper northern wall	Lead in dust sample	-	Yes	-	80 mg/kg < 300 mg/kg (below criteria)	-	-	No further action required	-	

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BAY 11 – INTERNAL											
Asbestos Containing Materials (ACM)											
-	Bay 11 north, Level 2 – Electrical boards in operator's cabin of overhead travelling crane	Black electrical backing boards	82	No	Non- Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 11 north, Level 2 – Brake pads associated with crane winch gear	Friction materials	83	No	Non- Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	84	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B11-LP01	Bay 11 north, ground level – Northern wall	Off-white topcoat & black undercoat paints	-	Yes	-	Lead Based Paint 13% w/w	Good	180 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 11, all levels – north and south masonry walls	Older patchy undercoats concealed beneath white surface paint	85	Yes	-	Possible Lead Paint	Good	350 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 11 north & south, Level 1 – timber rectangular windows fixed to upper walls	Mustard paint	85	No	-	+ Lead Paint Identified by XRF	Good	5 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 11, ground level – Steel lined, double arched doors	Grey paint	86	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 11, Level 2 – 5 Ton Overhead Travelling Crane in north bay	Gold paint	87	No	-	+ Lead Paint Identified by XRF	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

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Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 11, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	89	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B11-LD01	Bay 11 north, Level 2 – Debris sample from upper wall ledge of northern wall	Lead in dust sample	88	No	-	1400mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
BAY 12 – INTERNAL											
Asbestos Containing Materials (ACM)											
-	Bay 12, Level 2 – Electrical boards in operator's cabin of overhead travelling crane	Black electrical backing boards	82	No	Non-Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 12, Level 2 – Brake pads associated with crane winch gear	Friction materials	83	No	Non-Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	84	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

Australian Technology Park,
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JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
B12-LP01	Bay 12 south, ground level – Southern wall	Off-white paint	-	Yes	-	Non-Lead Based Paint 0.13% w/w	-	-	No further action required	-	
B12-LP02	Bay 12 south, ground level – Heritage arched window frame	Off-white paint	-	Yes	-	Non-Lead Based Paint 0.05% w/w	-	-	No further action required	-	
-	Bay 12, all levels – north and south masonry walls	Older patchy undercoats concealed beneath white surface paint	85	Yes	-	Possible Lead Paint	Good	350 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 12 north & south, Level 1 – timber rectangular windows fixed to upper walls	Mustard paint	85	No	-	+ Lead Paint Identified by XRF	Good	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 12, ground level – Steel lined, double arched doors	Grey paint	86	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 12, Level 2 – 5 Ton Overhead Travelling Crane in north bay	Gold paint	87	No	-	+ Lead Paint Identified by XRF	Good	2 Items	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 12, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	89	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B12-LD01	Bay 12 north, ground level – Debris sample collected from northern window sill	Lead in dust sample	-	No	-	290mg/kg < 300mg/kg (below criteria)	-	-	No further action required	-	

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JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
B12-LD02	Bay 12 north, Level 2 – Dust sample collected from crane beam	Lead in dust sample	-	No	-	6100mg/kg > 300mg/kg (exceeding criteria)	-	Minimal accumulated dust	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
BAY 13 - INTERNAL											
Asbestos Containing Materials (ACM)											
-	Bay 13, Level 2 – Electrical boards in operator's cabin of overhead travelling crane	Black electrical backing boards	82	No	Non- Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 13, Level 2 – Brake pads associated with crane winch gear	Friction materials	83	No	Non- Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	84	Yes	-	+ Lead Paint Identified by XRF	Good	Multiple	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B13-LP01	Bay 13 north, ground level – Arched heritage windows on north wall	Off-white paint	-	Yes	-	Non-Lead Based Paint 0.06% w/w	-	-	No further action required	-	
-	Bay 13, all levels – North and south walls	White surface coat	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 13, all levels – north and south masonry walls	Older patchy undercoats concealed beneath white surface paint	85	Yes	-	Possible Lead Paint	Good	350 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 13 north & south, Level 1 – timber rectangular windows fixed to upper walls	Mustard paint	85	No	-	+ Lead Paint Identified by XRF	Good	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

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JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
-	Bay 13, ground level – Steel lined, double arched doors	Grey paint	86	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 13, Level 2 – 5 Ton Overhead Travelling Crane in north bay	Orange paint	87	No	-	+ Lead Paint Identified by XRF	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 13, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	89	No	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B13-LD02	Bay 13 south, Level 2 – Dust sample collected from main cable tray above south wall	Lead in dust sample	89	No	-	1300mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
BAY 14 - INTERNAL											
Asbestos Containing Materials (ACM)											
-	Bay 14, Level 2 – Electrical boards in operator's cabin of overhead crane	Black electrical backing boards	82	No	Non- Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
B14-A01	Bay 14, Level 2 – Brake pads associated with crane winch gear	Friction materials	83	No	Non- Friable	Chrysotile asbestos detected	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

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JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	84	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B14-LP01	Bay 14 north, ground level – Arched heritage windows on north wall	Off-white paint	90	Yes	-	Lead Based Paint 1.8% w/w	Fair	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B14-LP02	Bay 14, ground level – Western masonry wall, adjacent 2 nd column from southern wall	Off-white paint	-	Yes	-	Non-Lead Based Paint 0.01% w/w	-	-	No further action required	-	
-	Bay 14, all levels – North, south and west masonry walls	Off-white surface paint	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 14, all levels – north and south masonry walls	Older patchy undercoats concealed beneath white surface paint	85	Yes	-	Possible Lead Paint	Good	1200 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 14, Level 1 – Steel lintel beams above southern and former northern entries	Off-white paint	91	No	-	+ Lead Paint Identified by XRF	Poor	10 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 14 north & south, Level 1 – timber rectangular windows fixed to upper walls	Mustard paint	85	No	-	+ Lead Paint Identified by XRF	Good	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 14, Level 2 – Vaughan & Sons Overhead Travelling Crane in south of bay	Orange paint	87	No	-	+ Lead Paint Identified by XRF	Good	2 Items	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	

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JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
Synthetic Mineral Fibres (SMF)											
-	Bay 14, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	89	No	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B14-LD01	Bay 14 north, ground level – Dust collected from window sill on northern wall	Lead dust swab sample	-	Yes	-	0.02 mg/m ² , < 5 mg/m ² (below criteria)	-	-	No further action required	-	
BAY 15 - INTERNAL											
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	92	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B15-LP01	Bay 15, ground level – South masonry wall	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.01% w/w	-	-	No further action required	-	
B15-LP02	Bay 15 south, ground level – Arched heritage window on south wall	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.07% w/w	-	-	No further action required	-	
B15-LP03	Bay 15, ground level – East masonry wall, central south	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.04% w/w	-	-	No further action required	-	
B15-LP04	Bay 15, ground level – East masonry wall, central north	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.34% w/w	-	-	No further action required	-	
B15-LP05	Bay 15, ground level – North masonry wall	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.03% w/w	-	-	No further action required	-	

Hazardous Materials Register – Locomotive Workshop

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JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
B15-LP06	Bay 15, Level 1 – East masonry wall, central south	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.03% w/w	-	-	No further action required	-	
B15-LP07	Bay 15, Level 1– East masonry wall, central north	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.04% w/w	-	-	No further action required	-	
B15-LP08	Bay 15, Level 1– North masonry wall	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.03% w/w	-	-	No further action required	-	
-	Bay 15 Central Road, ground level – Eastern wall adjacent Central doorway to Bay 14	Off-white paint and black undercoat	93	Yes	-	+ Lead Paint Identified by XRF	Good	10 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 15, all levels – north, east and south masonry walls	Older patchy undercoats concealed beneath white surface paint	94	Yes	-	Possible Lead Paint	Good	1500 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 15 north, ground level - arched heritage window on north	Off-white paint	95	Yes	-	+ Lead Paint Identified by XRF	Fair	2 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 15 north and south, throughout – Steel mezzanine gantry	Cream paint	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 15 north & south, Level 1 – timber rectangular windows fixed to upper walls	Mustard paint	96	No	-	+ Lead Paint Identified by XRF	Good	10 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 15 throughout, ground level – Majority of heritage machinery and equipment	Old paints (assorted colours)	95	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Refer to Section 4 of HMS report for specific details. Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

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JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
Synthetic Mineral Fibres (SMF)											
-	Bay 15 south, all levels – Drop-in ceiling tiles throughout offices	SMF ceiling tiles	-	Yes	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 15, throughout, ground levels – Fixed & flexible duct insulation in ceiling cavities of offices & amenities	Air-con duct insulation (SMF)	-	No	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 15 north, Level 1 – Fixed & flexible duct insulation on flat roof of north office block	Air-con duct insulation (SMF)	-	No	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 15, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	-	No	Non- Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B15-AD01	Bay 15, south Level 2 – Dust sample collected from sloping roof of the southern office block (Env. Strategies)	Asbestos in dust sample	-	No	-	No Asbestos Detected	-	650 m ²	No further action required	-	
B15-LD01	Bay 15 north Level 1 – Dust sample collected from top of the northern office / amenities area	Lead in dust sample	97	No	-	23000mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (650 m ²)	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
BAY 16 - INTERNAL											
Asbestos Containing Materials (ACM)											
-	Bay 16, Level 2 – Electrical boards in operator's cabin of overhead crane	Black electrical backing boards	98	No	Non- Friable	Presumed to Contain Asbestos	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	
-	Bay 16, Level 2 – Brake pads associated with crane winch gear	Friction materials	98	No	Non- Friable	Chrysotile asbestos detected	Good	2 items	Remove prior to disturbance	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

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JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
Lead Based Paints											
-	Throughout bay, all levels - heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses	Silver grey & black paints	99	Yes	-	+ Lead Paint Identified by XRF	Good	Unknown	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B16-LP01	Bay 16, north, ground level – North masonry wall	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.31% w/w	-	-	No further action required	-	
B16-LP02	Bay 16, north, Central Road, Level 1 – Central west wall	Off-white surface paint	-	Yes	-	Non-Lead Based Paint 0.16% w/w	-	-	No further action required	-	
-	Bay 16 south, ground level – Eastern wall in central east classroom	Off-white paint / undercoat	-	Yes	-	+ Lead Paint Identified by XRF	Good	30 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 16, all levels – north, east, south and west masonry walls	Older patchy undercoats concealed beneath white surface paint	-	Yes	-	Possible Lead Paint	Good	1500 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 16 south, ground level – RSJ stanchions in central hallway of Bay 16 south	White paint	100	Yes	-	+ Lead Paint Identified by XRF	Good	6 Items	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 16, Level 1 – Timber rectangular windows fixed to upper north and south walls	Mustard paint	101	No	-	+ Lead Paint Identified by XRF	Good	5 m ²	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
-	Bay 16, Central Road – Steel mezzanine gantry	Cream paints	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 16, north and south, ground level – Heritage arched window frames	Off-white paint	-	Yes	-	- Lead Paint Identified by XRF	-	-	No further action required	-	
-	Bay 16, Level 2 – Overhead Travelling Crane in Central Road	Orange paint	98	No	-	+ Lead Paint Identified by XRF	Good	1 item	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

Hazardous Materials Register – Locomotive Workshop

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Polychlorinated Biphenyls (PCBs)											
No older style fluorescent light fittings housing potential PCB containing components were identified. Heritage machinery may house PCB containing oils (not tested).									Test machinery oils if leaking or to be disturbed	20/07/2017 JBS&G AS	
Synthetic Mineral Fibres (SMF)											
-	Bay 16, all levels – Drop-in ceiling tiles in northern and southern office blocks	SMF ceiling tiles	99	Yes	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 16, throughout, ground levels – Fixed & flexible duct insulation in ceiling cavities of offices & amenities	Air-con duct insulation (SMF)	-	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 16 throughout, Level 1 – Fixed & flexible duct insulation on flat roof of north and south office blocks	Air-con duct insulation (SMF)	102	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	Unknown	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
-	Bay 16, Level 2, upper north and south walls – Water pipework insulation	Pipe insulation materials (SMF)	-	No	Non-Friable	Presumed to contain Synthetic Mineral Fibre	Good	30 lin. mtrs	Manage / handle in accordance with NOHSC:2006 (1990)	20/07/2017 JBS&G AS	
Settled Dust Samples											
B16-LD01	Bay 16, Level 2 – Dust sample collected from the flat roof of the southern office block	Lead in dust sample	102	No	-	6200mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (650 m ²)	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	
B16-LD02	Bay 16, Level 2 – Dust sample collected from the flat roof of the northern office block	Lead in dust sample	102	No	-	2400mg/kg > 300mg/kg (exceeding criteria)	Fair	Moderate accumulated dust (650 m ²)	Manage in accordance with AS4361.2 (1998)	20/07/2017 JBS&G AS	

Appendix B Photographs



Photo 1: Locomotive Workshop – 2 Locomotive St, Eveleigh

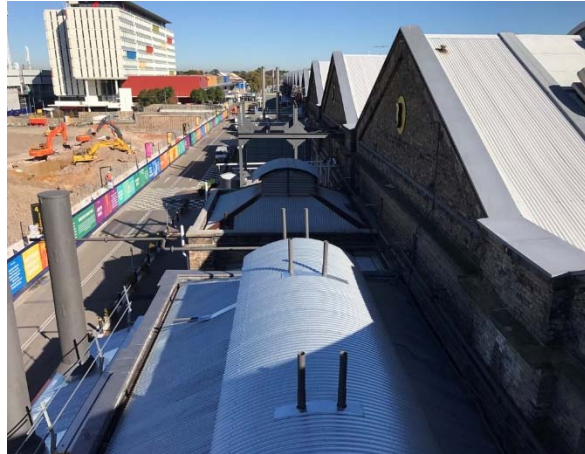


Photo 2: Locomotive Workshop – South aspect, looking west



Photo 3: Locomotive Workshop – North aspect, looking east



Photo 4: Exterior – Boiler House

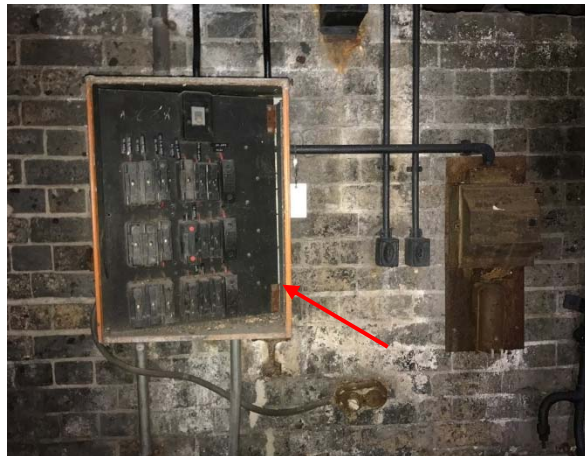


Photo 5: Exterior – Boiler House, suspected asbestos containing electrical backing board and lead based orange paint to fuse box, north wall



Photo 6: Exterior – SE Annex, suspected asbestos containing gaskets and potential lead based paint

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Source:			
0	Original Issue -	AS	01/08/2017
Rev	Description	Drn.	Date

	Appendix B: Photographs
Client: Mirvac Projects Pty Ltd	
Project: Locomotive Workshop, ATP, Eveleigh - HMS	
Job No: 51142	File Name: R25 App B Photo Log



Photo 7: Exterior, SE Annex - Non-rubberised gaskets associated with the water pipe traversing the awning are assumed to contain asbestos.



Photo 8: Exterior – Boiler House, old, unrestored boiler pipework assumed to contain asbestos gaskets



Photo 9: Exterior – SE Annex, mustard coloured timber double arched door at south of Bay 1 contain lead based paint. Flaking paint should be removed and managed.



Photo 10: Exterior – SE Annex, arched heritage window frame on west wall contains lead based paint. Flaking paint should be removed and managed.



Photo 11: Exterior – SE Annex & Boiler House, XRF screening of old electrical boxes identified lead based paint. Potential ACM may be present in boxes that could not be opened at the time of inspection.

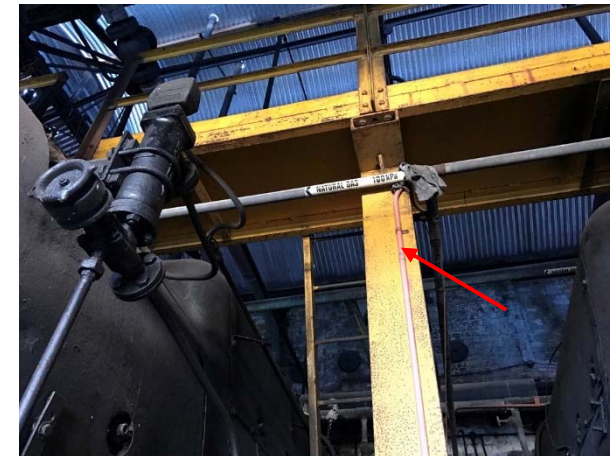


Photo 12: Exterior – Boiler house, XRF screening of the yellow steel boiler gantry identified lead based paint

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Source:			
0	Original Issue -	AS	01/08/2017
Rev	Description	Drn.	Date



Appendix B: Photographs

Client: Mirvac Projects Pty Ltd

Project: Locomotive Workshop, ATP, Eveleigh - HMS

Job No: 51142

File Name: R25 App B Photo Log



Photo 13: Exterior – SE Annex, XRF screening of the grey and yellow jib cranes identified lead based paint



Photo 14: Exterior – Boiler House, XRF screening of the orange boiler gaskets identified lead based paint



Photo 15: Exterior - Non-rubberised gaskets associated with the pressure vessels at the SE corner of the building contain asbestos



Photo 16: Exterior – XRF screening of the mustard coloured timber rectangular windows in the upper north, south and west walls identified lead based paint



Photo 17: Exterior – North & south walls, XRF screening of residual white paint around brick archways and old orange and white bay number signs identified lead based paint



Photo 18: Exterior – XRF screening of 'original' mustard coloured timber double arched doors identified lead based paint. Newer western red cedar replacement doors do not contain lead based paint.

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Source:			
0	Original Issue -	AS	01/08/2017
Rev	Description	Drn.	Date



Appendix B: Photographs

Client: Mirvac Projects Pty Ltd

Project: Locomotive Workshop, ATP, Eveleigh - HMS

Job No: 51142

File Name: R25 App B Photo Log



Photo 19: Exterior – East wall, XRF screening of the mustard coloured central door identified lead based paint



Photo 20: Exterior – Bay 3 south wall, XRF screening of the mustard coloured timber arched doors identified lead based paint



Photo 21: Exterior – Bay 8 north, XRF screening of the older mustard coloured timber window frames identified lead based paint. XRF screening of newer timber panelling did not identify lead based paint



Photo 22: Exterior – Bay 4 south, XRF screening of the heritage arched window identified lead based paint



Photo 23: Exterior – Bay 9 south, XRF screening of the silver external urinal and overlying window sill identified lead based paint

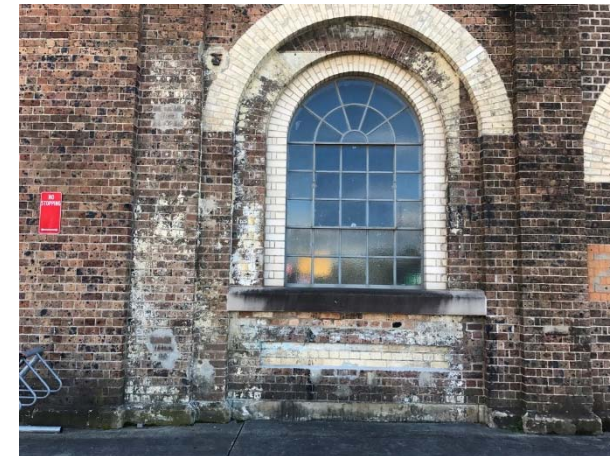


Photo 24: Exterior – Bay 13 south, XRF screening of the residual paint on the brickwork around the window identified lead based paint

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0	Original Issue -	AS	01/08/2017
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Appendix B: Photographs

Client: Mirvac Projects Pty Ltd

Project: Locomotive Workshop, ATP, Eveleigh - HMS

Job No: 51142

File Name: R25 App B Photo Log



Photo 25: Bay 1 north - Fuse box compartments on north wall contain asbestos paper linings (friable)



Photo 26: Bay 1 south - The top seal on the HC Thornthwaite Furnace is woven asbestos (friable)



Photo 27: Bay 1 north - Residual gaskets on old pipes on the floor of the Davy display contain asbestos. Several of these gaskets are in poor condition and should be removed.



Photo 28: Bay 1 - Non-rubberised gaskets associated with the old steam plant throughout Bays 1 and 2 are suspected to contain asbestos



Photo 29: Bay 1 - Non-rubberised gaskets associated with the Davy water feed pipe contain asbestos based gaskets



Photo 30: Bay 1 north - Control relay box compartments on north wall contain asbestos paper linings (friable)

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Appendix B: Photographs

Client: Mirvac Projects Pty Ltd

Project: Locomotive Workshop, ATP, Eveleigh - HMS

Job No: 51142

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Photo 31: Bay 1 south - Two old black electrical board in the central west of Bay 1 south are presumed to contain asbestos

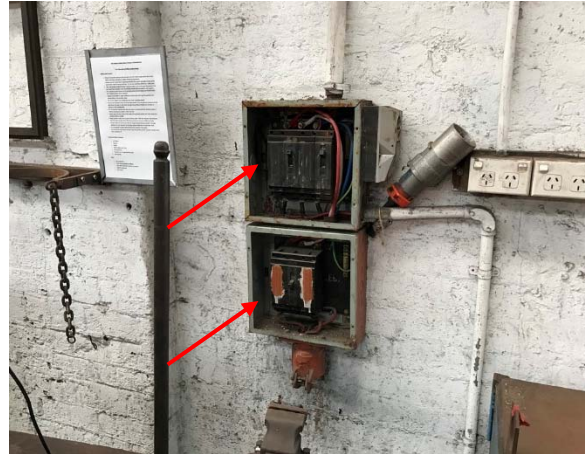


Photo 32: Bay 1 south - Two old black electrical board in the central east of Bay 1 south are presumed to contain asbestos

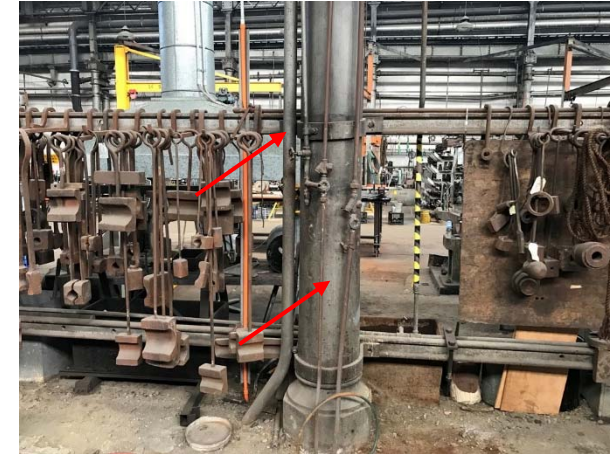


Photo 33: Bay 1 - Silver heritage columns throughout the bay contain lead based paint



Photo 34: Bay 1 south - The orange 7 CWT Jib Crane contains lead based paint



Photo 35: Bay 1 south - The green Blower No.6 contains lead based paint



Photo 36: Bay 1 - XRF screening of heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses throughout the bay identified lead based paint

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Photo 37: Bays 1 & 2 – All walls, older patchy undercoats concealed beneath the white surface coat may contain lead based paint



Photo 38: Bay 1 north - XRF screening of the blue Sub Foreman's Office identified lead based paint.



Photo 39: Bay 1 – Old pipework associated with the former steam plant may contain asbestos gaskets. Old and new pipework traversing the upper walls of the bay is insulated with SMF

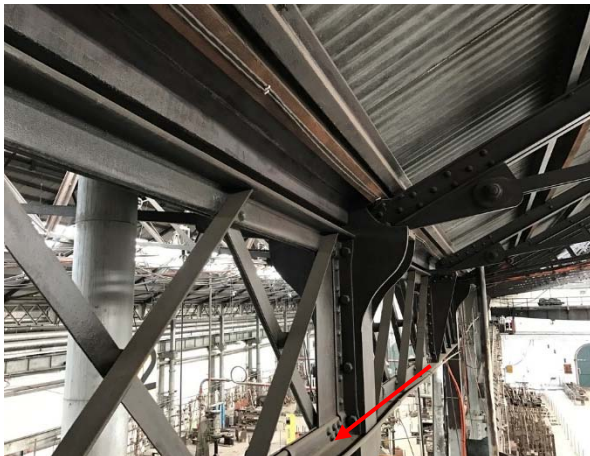


Photo 40: Bay 1 south – A lead dust sample collected from the top of a roof beam in the NW corner of Bay 1 south identified lead contaminated dusts. It is noted that minimal settled dust was present in this sampling location.

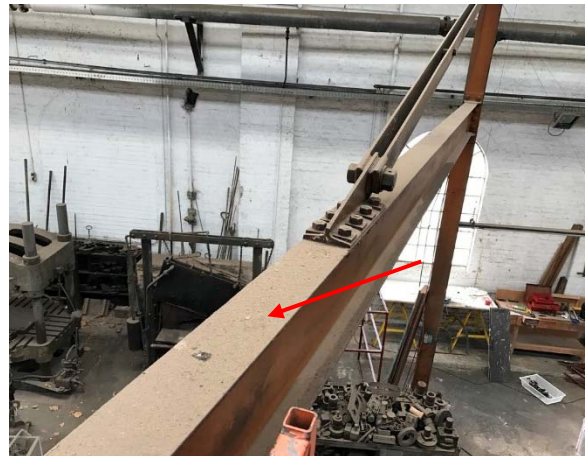


Photo 41: Bay 1 south – A lead dust sample collected from the top of the northernmost Jib Crane identified lead contaminated dust.

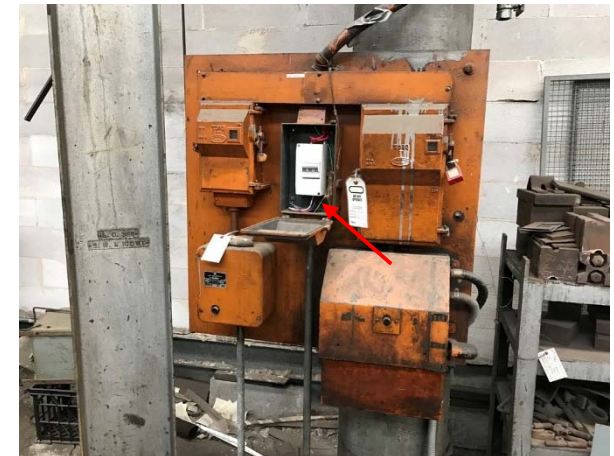


Photo 42: Bay 2 south - Electrical box compartments on west wall contain asbestos paper linings (friable)

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Project: Locomotive Workshop, ATP, Eveleigh - HMS

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Photo 43: Bay 2 north - Fuse box compartments in the SE of Bay 2 south contain asbestos paper linings (friable)



Photo 44: Bay 2 - Several electrical boxes in Bay 2 contain backing boards assumed to contain asbestos. Some of the boxes could not be opened at the time of inspection



Photo 45: Bay 2 - XRF screening of the jib cranes and electrical boxes identified lead based paint. Lead based undercoat paints may be present beneath the white perimeter walls of Bay 2.



Photo 46: Bay 2 north - XRF screening of the heritage arched window frame on the northern wall identified lead based paint



Photo 47: Bay 2 - Old pipework associated with the former steam plant may contain asbestos gaskets. Old and new pipework traversing the upper walls of the bay is insulated with SMF



Photo 48: Bay 3 north - The vermiculite fire-rating insulation in the northern Level 2 plant room does not contain asbestos

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		Appendix B: Photographs	
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Photo 49: Bay 3 south, Pump House – The green Fielding & Platt steam and electric pumps in the southern Pump House annex, contain lead based paint



Photo 50: Bay 3 south – A lead dust sample collected from the top of the southern function centre identified lead contaminated dusts. Fixed and flexible air-conditioning ductwork is insulated with SMF.



Photo 51: Bay 4 south - XRF screening of both overhead travelling cranes in the bay identified lead based paints. Electrical boards in the operators cabins and brake pads associated with the crane winch gear are presumed to contain asbestos.



Photo 52: Bay 4 north – Residual paints on the northern wall of the bay are lead based paint. Lead based undercoat paints may be present beneath the white perimeter walls in other areas.



Photo 53: Bay 4 – Structural steel columns, beams and trusses throughout the bay contain lead based paint

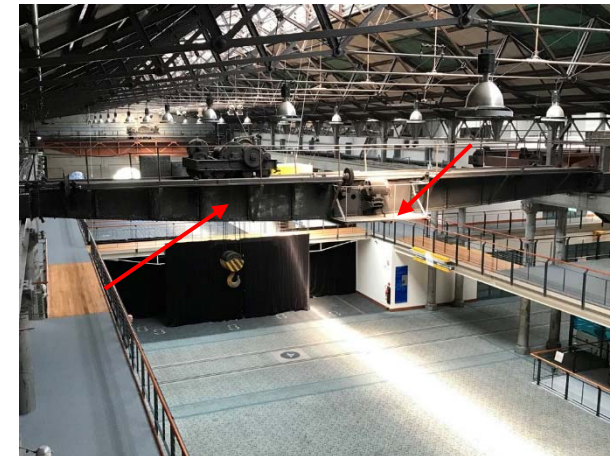


Photo 54: Bay 4 north – A lead dust sample collected from the timber platform of the northern travelling crane identified lead contaminated dusts. As per description for Photo 51, lead based paints and asbestos materials are associated with the northern crane.

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Project: Locomotive Workshop, ATP, Eveleigh - HMS

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Photo 55: Bay 4 north – Fixed and flexible air-conditioning ductwork within office ceiling cavities is insulated with SMF. Lead impacted settled dusts may be present on the ductwork and ceiling tiles in Level 2 ceiling locations that are directly below exposed roof trusses.



Photo 56: Bay 5 - Electrical boards in the operators cabin overhead crane are presumed to contain asbestos.

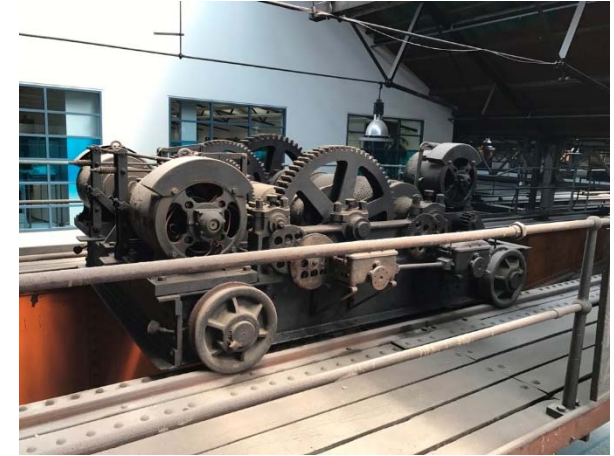


Photo 57: Bay 5 - Brake pads associated with the crane winch gear are presumed to contain asbestos.



Photo 58: Bay 5 – All walls, older patchy undercoats concealed beneath the white surface coat may contain lead based paint. Ceiling tiles contain SMF.

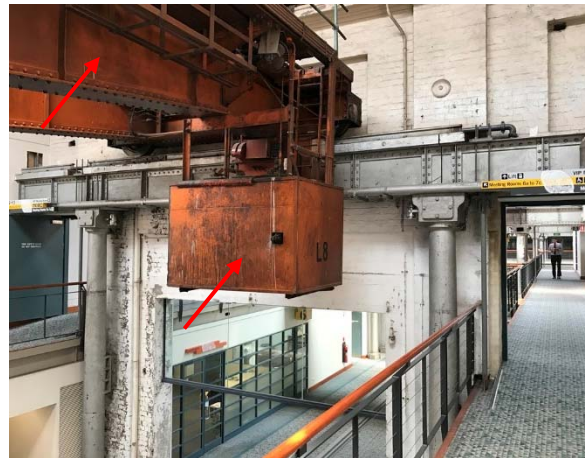


Photo 59: Bay 5 - XRF screening of the orange overhead travelling crane identified lead based paint



Photo 60: Bay 5 - XRF screening of the silver Johnston Spring Coiler identified lead based paint

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Photo 61: Bay 5 south – A lead dust sample collected from the top of the southern theatre identified lead contaminated dusts. Fixed and flexible air-conditioning ductwork is insulated with SMF.



Photo 62: Bay 5 south – Dusts concealed in wall cavities / plenums of Bay 5 and Bay 6 south may be lead impacted. These areas should be assessed prior to demolition.



Photo 63: Bay 6 south - XRF screening of the square timber columns and beams in the working space and ceiling cavity identified lead based paint

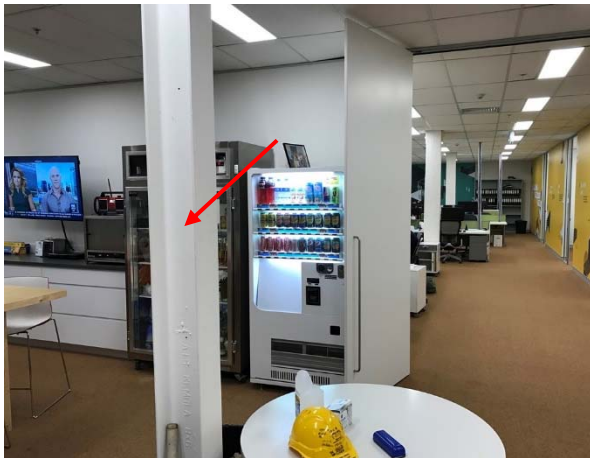


Photo 64: Bay 6 south - XRF screening of the white RSJ columns and beams in the working space and ceiling cavity identified lead based paint

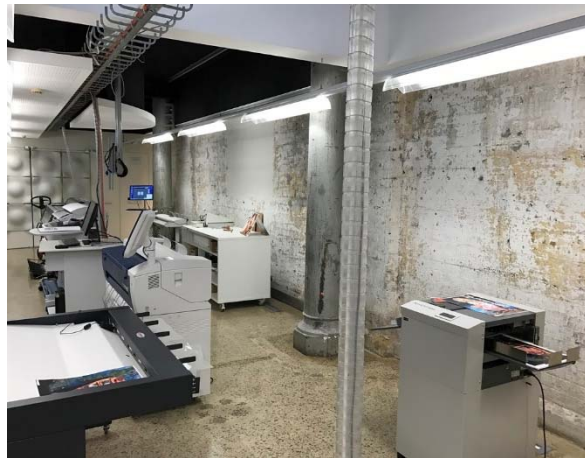


Photo 65: Bay 6 – All walls, older patchy undercoats concealed beneath the white surface coat may contain lead based paint.



Photo 66: Bay 6 – Lead dust samples collected from the top of the roof of the southern an northern office blocks identified lead contaminated dusts.

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Project: Locomotive Workshop, ATP, Eveleigh - HMS

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Photo 67: Bay 6 – A lead dust swab sample collected from the top of the cable tray above Central Road identified lead contaminated dusts.



Photo 68: Bay 7 - XRF screening of the overhead travelling crane identified lead based paints. Electrical boards in the operators cabin and brake pads associated with the crane winch gear are presumed to contain asbestos.



Photo 69: Bay 7 – XRF screening of the off-white heritage arched window on the southern wall identified lead based paint



Photo 70: Bay 7 – Lead dust samples collected from the top of the roof of the southern office block identified lead contaminated dusts.



Photo 71: Bay 7 – Lead dust samples collected from the top of the roof of the northern office block identified lead contaminated dusts.



Photo 72: Bay 8 - XRF screening of heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses throughout the bay identified lead based paint

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Project: Locomotive Workshop, ATP, Eveleigh - HMS

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Photo 73: Bay 8 – Lead dust samples collected from the top of the lintel beam above the southern entry doors identified lead contaminated dusts. The off-white paint on the lintel beam is lead based paint.



Photo 74: Bay 8 - XRF screening of the green Genevoise Drilling and Boring machines (1925 & 1938) identified lead based paints



Photo 75: Bay 8 – Lead dust samples collected from the top of the cable tray above the southern entry doors identified lead contaminated dusts. Pipework traversing the upper north and south walls are insulated with SMF.

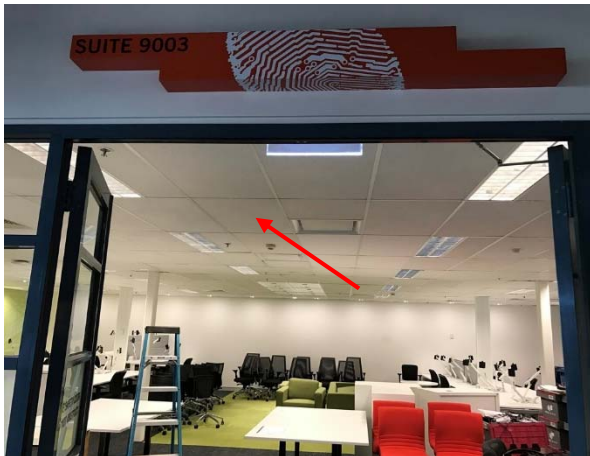


Photo 76: Bay 9 – Ceiling tiles in offices and amenities throughout the bay contain SMF



Photo 77: Bay 9 – Fixed and flexible air-conditioning ductwork within office ceiling cavities is insulated with SMF.



Photo 78: Bay 9 – Lead dust samples collected from the top of the roof of the southern office block identified lead contaminated dusts. Fixed and flexible air-conditioning ductwork on the Level 1 office roof is insulated with SMF.

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Photo 79: Bay 9 – Lead dust samples collected from the top of the roof of the northern office block identified lead contaminated dusts. XRF screening of heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses throughout the bay identified lead based paints.

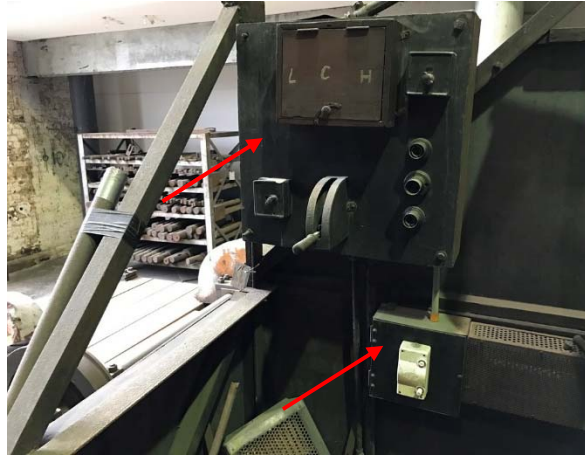


Photo 80: Bay 10 north - Two black electrical boards crane operators cabin in the northern display area are presumed to contain asbestos



Photo 81: Bay 10 north - Three black electrical boards on the upper north wall of Bay 10 are presumed to contain asbestos



Photo 82: Bays 10 - 14 - Black electrical boards in the operators cabins of the overhead travelling cranes are presumed to contain asbestos

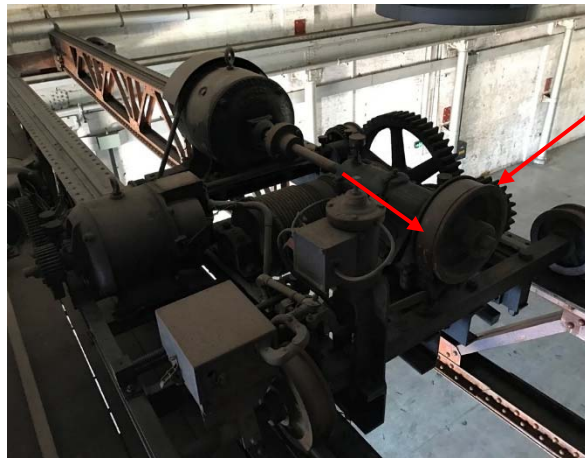


Photo 83: Bays 10 - 14 – Brake pads associated with winch gear for the overhead travelling cranes are presumed to contain asbestos



Photo 84: Bays 10 - 14 – XRF screening of heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses throughout the bay identified lead based paints

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Photo 85: Bays 10 - 14 – All walls, older patchy undercoats concealed beneath the white surface coat may contain lead based paint. XRF screening of the mustard rectangular timber windows located on the upper north and south walls of the bays identified lead based paints.



Photo 86: Bays 10 - 14 – XRF screening of the grey metal arched double door located in the bays identified lead based paints. XRF screening of the yellow crane operators cabin in the display area of Bay 10 identified lead based paints.



Photo 87: Bays 10 - 14 – XRF screening of overhead travelling cranes located in the bays identified lead based paints



Photo 88: Bay 11 – A lead dust sample collected from the upper northern wall ledge of Bay 11 identified lead contaminated dusts. Accumulated dust and debris is typical on upper wall ledged throughout Bays 10 - 14.



Photo 89: Bay 13 – A lead dust sample collected from the main cable tray above the upper southern wall of Bay 13 identified lead contaminated dusts. This cable tray traverses Bays 10 - 14.

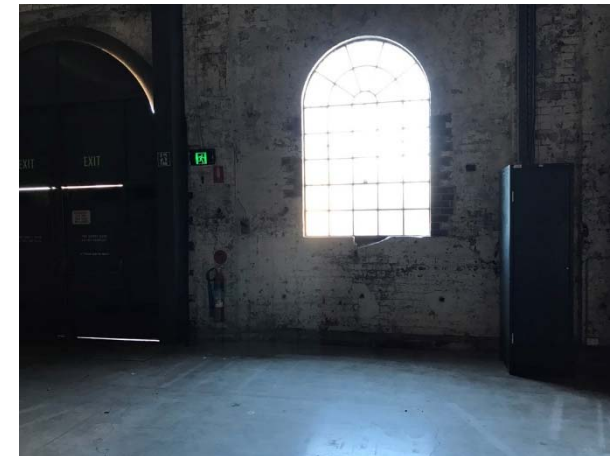


Photo 90: Bay 14 – Analysis and XRF screening of the off-white arched heritage window frame on the northern wall of Bay 14 identified lead based paints

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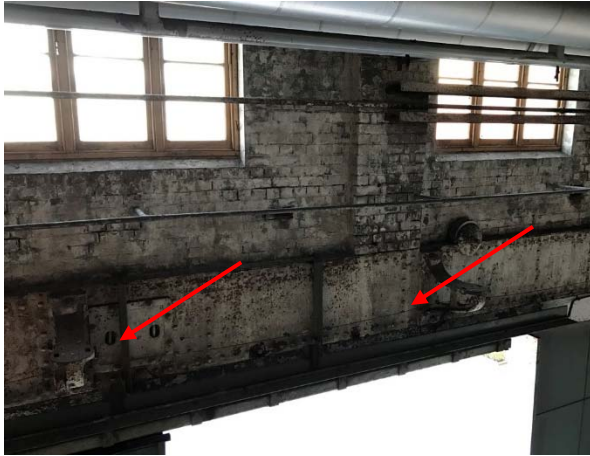


Photo 91: Bay 14 –XRF screening of the off-white paint on the steel lintel beam spanning the southern entry to Bay 14 identified lead based paints. This beam is also present on the northern wall and is deteriorated and flaking.

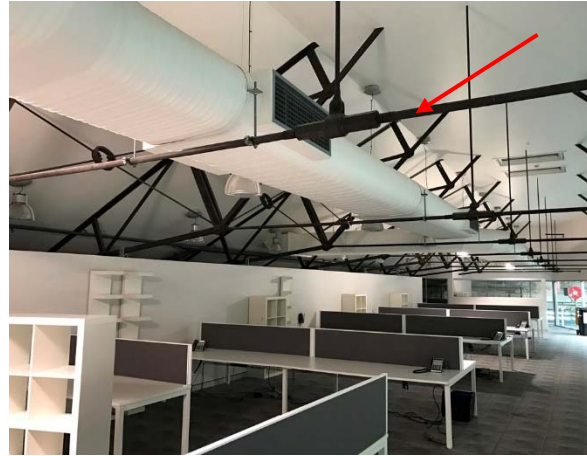


Photo 92: Bay 15 – XRF screening of heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses throughout the bay identified lead based paints. Columns, beams, crane rails and trusses penetrate the office spaces on this level.



Photo 93: Bay 15 – XRF screening of off-white paint on the eastern wall adjacent the Central Road access door identified lead based paints. A black undercoat was observed in this location.

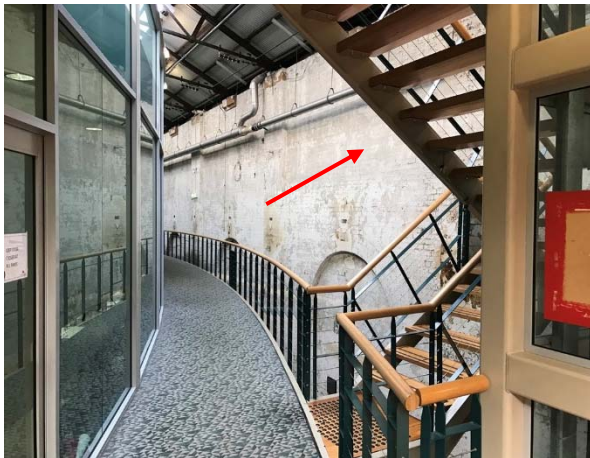


Photo 94: Bay 15 – All walls, older patchy undercoats concealed beneath the white surface coat may contain lead based paint.



Photo 95: Bay 15 – Analysis and XRF screening of off-white arched heritage window frame on the northern wall and the majority of heritage machinery on display throughout the bay identified lead based paints

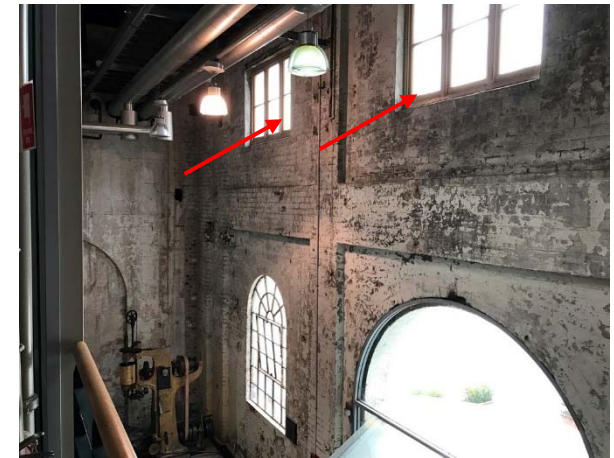


Photo 96: Bay 15 – XRF screening of the mustard rectangular timber windows located on the upper north and south walls of the building have identified lead based paints.

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Photo 97: Bay 15 – A lead dust sample collected from the flat roof of the northern office amenities area identified lead contaminated dusts.



Photo 98: Bay 16 – XRF screening of the overhead travelling crane identified lead based paints. Electrical boards and brake pads associated with the crane are presumed to contain asbestos.

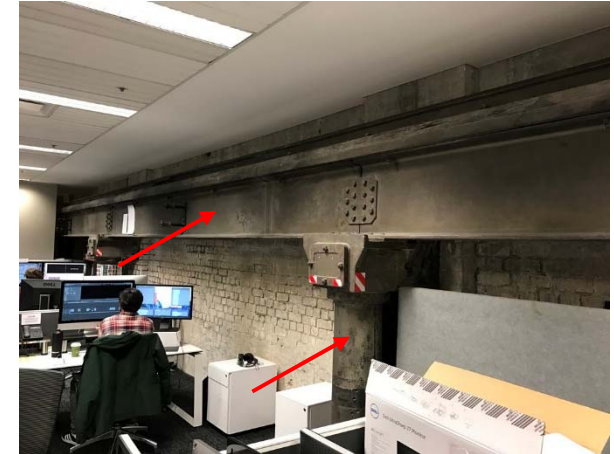


Photo 99: Bay 16 – XRF screening of the heritage structural steel columns, capitals, beams, downpipes, purlins, crane rails and roof trusses throughout the bay identified lead based paints



Photo 100: Bay 16 – XRF screening of the white RSJ stanchions in the ground level central hallway of Bay 16 south identified lead based paint



Photo 101: Bay 16 – XRF screening of the mustard coloured rectangular timber windows on Level 1 identified lead based paint



Photo 102: Bay 16 – Lead dust samples collected from the flat roofs of the northern and southern office blocks identified lead contaminated dusts. Fixed and flexible air-conditioning ductwork on the Level 1 office roof is insulated with SMF.

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Appendix B: Photographs

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Appendix C Laboratory Analysis Reports and Chain of Custody Documentation

Certificate of Analysis



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025—Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention: Aaron Smith
Report 554058-AID
Project Name LOCO HAZMAT
Project ID 51142
Received Date Jul 12, 2017
Date Reported Jul 19, 2017

Methodology:

Asbestos Fibre
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples 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.

Unknown Mineral
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-
 containing material
 (ACM)

The material is first examined and any fibres 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 4964 - 2004.

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

The performance limitation of the AS4964 method is around 0.1 g/kg (0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis where required, this is considered to be at the nominal reporting limit of 0.01 % (w / w). The examination of large sample sizes (500 mL is recommended) may improve the likelihood of identifying ACM in the > 2mm fraction. The NEPM screening level of 0.001 % (w / w) asbestos in soil for FA (friable asbestos) and AF (asbestos fines) then applies where they are able to be quantified by gravimetric procedures. This quantitative screening is not generally applicable to FF (free fibres) and results of Trace Analysis are referred.

NOTE: NATA News March 2014, p.7, states in relation to AS4964: "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". Accordingly, NATA Accreditation does not cover the performance of this service (indicated with an asterisk). This report is consistent with the analytical procedures and reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended) and the Western Australia Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, 2009, including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil, June 2011.

Project Name LOCO HAZMAT
Project ID 51142
Date Sampled Jul 10, 2017 to Jul 12, 2017
Report 554058-AID

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
B4-A01	17-JI14719	Jul 11, 2017	Approximate Sample <1g / 20x10x<1mm Sample consisted of: Red soft mastic and brown fibrous material	No asbestos detected. Organic fibre detected.
B10-A01	17-JI14732	Jul 12, 2017	Approximate Sample 1g / 30x10x5mm Sample consisted of: Grey mastic and white coating-like material	No asbestos detected.
B2-A01	17-JI14740	Jul 10, 2017	Approximate Sample <1g / 20x10x<1mm Sample consisted of: Grey insulation-like material	Chrysotile asbestos detected.
B2-A02	17-JI14741	Jul 10, 2017	Approximate Sample <1g / 45x15x1mm Sample consisted of: Black bituminous material	No asbestos detected. Organic fibre detected.
B2-A03	17-JI14742	Jul 10, 2017	Approximate Sample <1g / 15x10x<1mm Sample consisted of: Grey insulation-like material	Chrysotile asbestos detected.
B2-A04	17-JI14743	Jul 10, 2017	Approximate Sample <1g / 5x<1x<1mm Sample consisted of: Black bituminous material	No asbestos detected. Organic fibre detected.
B2-A05	17-JI14744	Jul 10, 2017	Approximate Sample 5g / 95x20x10mm Sample consisted of: Grey brick-like material	No asbestos detected. Synthetic mineral fibre detected.
B2-A06	17-JI14745	Jul 10, 2017	Approximate Sample 25g / 60x35x15mm Sample consisted of: Grey brick-like material	No asbestos detected.
B2-AD01	17-JI14746	Jul 10, 2017	Approximate Sample 10g Sample consisted of: Dark grey fine grained dust, plaster and debris	No asbestos detected. Organic fibre detected. No respirable fibres detected.

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
B2-AD02	17-JI14748	Jul 10, 2017	Approximate Sample 3g Sample consisted of: Dark brown fine grained dust and debris	No asbestos detected. Synthetic mineral fibre detected. Organic fibre detected. No respirable fibres detected.
B1-A01	17-JI14755	Jul 10, 2017	Approximate Sample 4g / 60x25x15mm Sample consisted of: Red-grey brick-like material	No asbestos detected.
B1-A02	17-JI14756	Jul 10, 2017	Approximate Sample 2g / 30x25x10mm Sample consisted of: Grey brick-like material	No asbestos detected.
B1-A03	17-JI14757	Jul 10, 2017	Approximate Sample <1g / 5x5x<1mm Sample consisted of: Grey insulation-like material	Chrysotile and amosite asbestos detected.
B1-A04	17-JI14758	Jul 10, 2017	Approximate Sample <1g / 30x15x<1mm Sample consisted of: Grey plaster-like material	No asbestos detected. Organic fibre detected.
B1-A05	17-JI14759	Jul 10, 2017	Approximate Sample <1g / 30x15x<1mm Sample consisted of: Brown insulation-like material	Chrysotile asbestos detected.
B1-A06	17-JI14760	Jul 10, 2017	Approximate Sample <1g / 15x5x<1mm Sample consisted of: Brown insulation-like material	Chrysotile asbestos detected.
B1-AD01	17-JI14761	Jul 10, 2017	Approximate Sample 28g Sample consisted of: Brown fine grain dust, rocks and debris	No asbestos detected. Synthetic mineral fibre detected. Organic fibre detected. No respirable fibres detected.
B1-AD02	17-JI14763	Jul 10, 2017	Approximate Sample 21g Sample consisted of: Brown fine grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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	Jul 13, 2017	Indefinite

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554058
Phone: 02 8245 0300
Fax:

Received: Jul 12, 2017 5:22 PM
Due: Jul 19, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	B4-LP01	Jul 11, 2017		Paint	S17-JI14714			X
2	B4-LP02	Jul 11, 2017		Paint	S17-JI14715			X
3	B4-LP03	Jul 11, 2017		Paint	S17-JI14716			X
4	B4-LP04	Jul 11, 2017		Paint	S17-JI14717			X
5	B4-LP05	Jul 11, 2017		Paint	S17-JI14718			X
6	B4-A01	Jul 11, 2017		Building Materials	S17-JI14719	X		
7	B8-LP01	Jul 11, 2017		Paint	S17-JI14720			X
8	B8-LP02	Jul 11, 2017		Paint	S17-JI14721			X
9	B8-LP03	Jul 11, 2017		Paint	S17-JI14722			X

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554058
Phone: 02 8245 0300
Fax:

Received: Jul 12, 2017 5:22 PM
Due: Jul 19, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
10	B15-LP01	Jul 11, 2017		Paint	S17-JI14723			X
11	B15-LP02	Jul 12, 2017		Paint	S17-JI14724			X
12	B15-LP03	Jul 12, 2017		Paint	S17-JI14725			X
13	B15-LP04	Jul 12, 2017		Paint	S17-JI14726			X
14	B15-LP05	Jul 12, 2017		Paint	S17-JI14727			X
15	B15-LP06	Jul 12, 2017		Paint	S17-JI14728			X
16	B15-LP07	Jul 12, 2017		Paint	S17-JI14729			X
17	B15-LP08	Jul 12, 2017		Paint	S17-JI14730			X
18	B16-LP01	Jul 12, 2017		Paint	S17-JI14731			X
19	B10-A01	Jul 12, 2017		Building Materials	S17-JI14732	X		
20	B2-LP01	Jul 10, 2017		Paint	S17-JI14733			X

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Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
21	B2-LP02	Jul 10, 2017		Paint	S17-JI14734			X
22	B2-LP03	Jul 10, 2017		Paint	S17-JI14735			X
23	B2-LP04	Jul 10, 2017		Paint	S17-JI14736			X
24	B2-LP05	Jul 10, 2017		Paint	S17-JI14737			X
25	B2-LP06	Jul 10, 2017		Paint	S17-JI14738			X
26	B2-LP07	Jul 10, 2017		Paint	S17-JI14739			X
27	B2-A01	Jul 10, 2017		Building Materials	S17-JI14740	X		
28	B2-A02	Jul 10, 2017		Building Materials	S17-JI14741	X		
29	B2-A03	Jul 10, 2017		Building Materials	S17-JI14742	X		
30	B2-A04	Jul 10, 2017		Building	S17-JI14743	X		

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Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
				Materials				
31	B2-A05	Jul 10, 2017		Building Materials	S17-JI14744	X		
32	B2-A06	Jul 10, 2017		Building Materials	S17-JI14745	X		
33	B2-AD01	Jul 10, 2017		Dust	S17-JI14746	X		
34	B2-LD01	Jul 10, 2017		Dust	S17-JI14747		X	
35	B2-AD02	Jul 10, 2017		Dust	S17-JI14748	X		
36	B2-LD02	Jul 10, 2017		Dust	S17-JI14749		X	
37	B1-LP01	Jul 10, 2017		Paint	S17-JI14750			X
38	B1-LP02	Jul 10, 2017		Paint	S17-JI14751			X
39	B1-LP03	Jul 10, 2017		Paint	S17-JI14752			X
40	B1-LP04	Jul 10, 2017		Paint	S17-JI14753			X

Company Name: JBS & G Australia (NSW) P/L
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Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
41	B1-LP05	Jul 10, 2017		Paint	S17-JI14754			X
42	B1-A01	Jul 10, 2017		Building Materials	S17-JI14755	X		
43	B1-A02	Jul 10, 2017		Building Materials	S17-JI14756	X		
44	B1-A03	Jul 10, 2017		Building Materials	S17-JI14757	X		
45	B1-A04	Jul 10, 2017		Building Materials	S17-JI14758	X		
46	B1-A05	Jul 10, 2017		Building Materials	S17-JI14759	X		
47	B1-A06	Jul 10, 2017		Building Materials	S17-JI14760	X		
48	B1-AD01	Jul 10, 2017		Dust	S17-JI14761	X		

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Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
49	B1-LD01	Jul 10, 2017		Dust	S17-Jl14762		X	
50	B1-AD02	Jul 10, 2017		Dust	S17-Jl14763	X		
51	B1-LD02	Jul 10, 2017		Dust	S17-Jl14764		X	
Test Counts						18	4	29

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. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos-containing material means any material containing more than 1% asbestos and comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed-on fireproofing, troweled-on acoustical plaster, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).
PACM	Presumed Asbestos-Containing Material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines (AF) are defined as free fibres, or fibre bundles, smaller than 7mm. It is the free fibres which present the greatest risk to human health, although very small fibres (< 5 microns in length) are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. (Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substantial degree of damage which increases the potential for fibre release.)
AC	Asbestos cement means a mixture of cement and asbestos fibres (typically 90:10 ratios).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Authorised by:

Nibha Vaidya

Senior Analyst-Asbestos (NSW)



Glenn Jackson

National Operations Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

Eurofins | mgt 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 | mgt 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.

Certificate of Analysis

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: **Aaron Smith**

Report **554058-S**
Project name LOCO HAZMAT
Project ID 51142
Received Date Jul 12, 2017

Client Sample ID			B4-LP01	B4-LP02	B4-LP03	B4-LP04
Sample Matrix			Paint	Paint	Paint	Paint
Eurofins mgt Sample No.			S17-JI14714	S17-JI14715	S17-JI14716	S17-JI14717
Date Sampled			Jul 11, 2017	Jul 11, 2017	Jul 11, 2017	Jul 11, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	100	mg/kg	190000	230000	160000	200000

Client Sample ID			B4-LP05	B8-LP01	B8-LP02	B8-LP03
Sample Matrix			Paint	Paint	Paint	Paint
Eurofins mgt Sample No.			S17-JI14718	S17-JI14720	S17-JI14721	S17-JI14722
Date Sampled			Jul 11, 2017	Jul 11, 2017	Jul 11, 2017	Jul 11, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	100	mg/kg	210000	900	300	400

Client Sample ID			B15-LP01	B15-LP02	B15-LP03	B15-LP04
Sample Matrix			Paint	Paint	Paint	Paint
Eurofins mgt Sample No.			S17-JI14723	S17-JI14724	S17-JI14725	S17-JI14726
Date Sampled			Jul 11, 2017	Jul 12, 2017	Jul 12, 2017	Jul 12, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	100	mg/kg	< 100	700	400	3400

Client Sample ID			B15-LP05	B15-LP06	B15-LP07	B15-LP08
Sample Matrix			Paint	Paint	Paint	Paint
Eurofins mgt Sample No.			S17-JI14727	S17-JI14728	S17-JI14729	S17-JI14730
Date Sampled			Jul 12, 2017	Jul 12, 2017	Jul 12, 2017	Jul 12, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	100	mg/kg	300	300	400	300

Client Sample ID			B16-LP01	B2-LP01	B2-LP02	B2-LP03
Sample Matrix			Paint	Paint	Paint	Paint
Eurofins mgt Sample No.			S17-JI14731	S17-JI14733	S17-JI14734	S17-JI14735
Date Sampled			Jul 12, 2017	Jul 10, 2017	Jul 10, 2017	Jul 10, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	100	mg/kg	3100	55000	140000	100000

Client Sample ID			B2-LP04	B2-LP05	B2-LP06	B2-LP07
Sample Matrix			Paint	Paint	Paint	Paint
Eurofins mgt Sample No.			S17-JI14736	S17-JI14737	S17-JI14738	S17-JI14739
Date Sampled			Jul 10, 2017	Jul 10, 2017	Jul 10, 2017	Jul 10, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	100	mg/kg	240000	700	150000	76000

Client Sample ID			B2-LD01	B2-LD02	B1-LP01	B1-LP02
Sample Matrix			Dust	Dust	Paint	Paint
Eurofins mgt Sample No.			S17-JI14747	S17-JI14749	S17-JI14750	S17-JI14751
Date Sampled			Jul 10, 2017	Jul 10, 2017	Jul 10, 2017	Jul 10, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	100	mg/kg	-	-	380000	280000
Heavy Metals						
Lead	5	mg/kg	1300	1400	-	-

Client Sample ID			B1-LP03	B1-LP04	B1-LP05	B1-LD01
Sample Matrix			Paint	Paint	Paint	Dust
Eurofins mgt Sample No.			S17-JI14752	S17-JI14753	S17-JI14754	S17-JI14762
Date Sampled			Jul 10, 2017	Jul 10, 2017	Jul 10, 2017	Jul 10, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	100	mg/kg	43000	3200	110000	-
Heavy Metals						
Lead	5	mg/kg	-	-	-	46

Client Sample ID			B1-LD02
Sample Matrix			Dust
Eurofins mgt Sample No.			S17-JI14764
Date Sampled			Jul 10, 2017
Test/Reference	LOR	Unit	
Heavy Metals			
Lead	5	mg/kg	160

Sample History

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

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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
Lead (% w/w)	Sydney	Jul 13, 2017	6 Month
- Method: E022.5 - ACID EXTRACTABLE METALS IN PAINT IN LIQUID AND POWDERED FORM BY ICP-MS ANALYSIS			
Heavy Metals	Sydney	Jul 18, 2017	180 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			

Company Name: JBS & G Australia (NSW) P/L
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NSW 2000
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Project ID: 51142

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Received: Jul 12, 2017 5:22 PM
Due: Jul 19, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	B4-LP01	Jul 11, 2017		Paint	S17-JI14714			X
2	B4-LP02	Jul 11, 2017		Paint	S17-JI14715			X
3	B4-LP03	Jul 11, 2017		Paint	S17-JI14716			X
4	B4-LP04	Jul 11, 2017		Paint	S17-JI14717			X
5	B4-LP05	Jul 11, 2017		Paint	S17-JI14718			X
6	B4-A01	Jul 11, 2017		Building Materials	S17-JI14719	X		
7	B8-LP01	Jul 11, 2017		Paint	S17-JI14720			X
8	B8-LP02	Jul 11, 2017		Paint	S17-JI14721			X
9	B8-LP03	Jul 11, 2017		Paint	S17-JI14722			X

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Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
10	B15-LP01	Jul 11, 2017		Paint	S17-JI14723			X
11	B15-LP02	Jul 12, 2017		Paint	S17-JI14724			X
12	B15-LP03	Jul 12, 2017		Paint	S17-JI14725			X
13	B15-LP04	Jul 12, 2017		Paint	S17-JI14726			X
14	B15-LP05	Jul 12, 2017		Paint	S17-JI14727			X
15	B15-LP06	Jul 12, 2017		Paint	S17-JI14728			X
16	B15-LP07	Jul 12, 2017		Paint	S17-JI14729			X
17	B15-LP08	Jul 12, 2017		Paint	S17-JI14730			X
18	B16-LP01	Jul 12, 2017		Paint	S17-JI14731			X
19	B10-A01	Jul 12, 2017		Building Materials	S17-JI14732	X		
20	B2-LP01	Jul 10, 2017		Paint	S17-JI14733			X

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Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
21	B2-LP02	Jul 10, 2017		Paint	S17-JI14734			X
22	B2-LP03	Jul 10, 2017		Paint	S17-JI14735			X
23	B2-LP04	Jul 10, 2017		Paint	S17-JI14736			X
24	B2-LP05	Jul 10, 2017		Paint	S17-JI14737			X
25	B2-LP06	Jul 10, 2017		Paint	S17-JI14738			X
26	B2-LP07	Jul 10, 2017		Paint	S17-JI14739			X
27	B2-A01	Jul 10, 2017		Building Materials	S17-JI14740	X		
28	B2-A02	Jul 10, 2017		Building Materials	S17-JI14741	X		
29	B2-A03	Jul 10, 2017		Building Materials	S17-JI14742	X		
30	B2-A04	Jul 10, 2017		Building	S17-JI14743	X		

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Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
				Materials				
31	B2-A05	Jul 10, 2017		Building Materials	S17-JI14744	X		
32	B2-A06	Jul 10, 2017		Building Materials	S17-JI14745	X		
33	B2-AD01	Jul 10, 2017		Dust	S17-JI14746	X		
34	B2-LD01	Jul 10, 2017		Dust	S17-JI14747		X	
35	B2-AD02	Jul 10, 2017		Dust	S17-JI14748	X		
36	B2-LD02	Jul 10, 2017		Dust	S17-JI14749		X	
37	B1-LP01	Jul 10, 2017		Paint	S17-JI14750			X
38	B1-LP02	Jul 10, 2017		Paint	S17-JI14751			X
39	B1-LP03	Jul 10, 2017		Paint	S17-JI14752			X
40	B1-LP04	Jul 10, 2017		Paint	S17-JI14753			X

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Melbourne Laboratory - NATA Site # 1254 & 14271								
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Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
41	B1-LP05	Jul 10, 2017		Paint	S17-JI14754			X
42	B1-A01	Jul 10, 2017		Building Materials	S17-JI14755	X		
43	B1-A02	Jul 10, 2017		Building Materials	S17-JI14756	X		
44	B1-A03	Jul 10, 2017		Building Materials	S17-JI14757	X		
45	B1-A04	Jul 10, 2017		Building Materials	S17-JI14758	X		
46	B1-A05	Jul 10, 2017		Building Materials	S17-JI14759	X		
47	B1-A06	Jul 10, 2017		Building Materials	S17-JI14760	X		
48	B1-AD01	Jul 10, 2017		Dust	S17-JI14761	X		

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Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
49	B1-LD01	Jul 10, 2017		Dust	S17-Jl14762		X	
50	B1-AD02	Jul 10, 2017		Dust	S17-Jl14763	X		
51	B1-LD02	Jul 10, 2017		Dust	S17-Jl14764		X	
Test Counts						18	4	29

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

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

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre
ug/L: micrograms per litre	ppm: Parts per million
ppb: Parts per billion	%: Percentage
org/100mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres	

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank										
Heavy Metals										
Lead				mg/kg	< 5			5	Pass	
LCS - % Recovery										
Heavy Metals										
Lead				%	107			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1				Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery										
Heavy Metals										
Lead					Result 1					
Lead				%	97			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1				Acceptance Limits	Pass Limits	Qualifying Code
Duplicate										
Heavy Metals										
Lead					Result 1	Result 2	RPD			
Lead				mg/kg	< 5	< 5	<1	30%	Pass	

Comments

Sample Integrity

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

Authorised By

Nibha Vaidya Analytical Services Manager
Nibha Vaidya Senior Analyst-Asbestos (NSW)



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

Eurofins | mgt 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 | mgt 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.

IMSO FormsO13 - Chain of Custody - Generic

012518

CHAIN OF CUSTODY



PROJECT NO.: 51142						LABORATORY BATCH NO.:													
PROJECT NAME: Loco Workshop Hazmat						SAMPLERS: AS													
DATE NEEDED BY: Std TAT						QC LEVEL: NEPM (2013)													
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688																			
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) a.smith@jbsg.com.au; (3) h.casson@jbsg.com.au																			
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:						Lead in Paint Lead in Dust													
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH														
B2-LP01	Paint	10/7/17				X													
B2-LP02	"	"				X													
B2-LP03	"	"				X													
B2-LP04	"	"				X													
B2-LP05	"	"				X													
B2-LP06	"	"				X													
B2-LP07	"	"				X													
B2-A01	Material	"															X		
B2-A02	"	"															X		
B2-A03	"	"															X		
B2-A04	"	"															X		
B2-A05	"	"															X		
B2-A06	"	"															X		
B2-AD01	Dust	"															X		
B2-LD01	"	"				X													
B2-AD02	"	"															X		
B2-LD02	"	"				X													
RELINQUISHED BY:						METHOD OF SHIPMENT:						RECEIVED BY:				FOR RECEIVING LAB USE ONLY:			
NAME: Aaron		DATE: 12/7/17				CONSIGNMENT NOTE NO.						NAME: AD				COOLER SEAL - Yes..... No Intact Broken			
OF: JBS&G						TRANSPORT CO.						DATE: 13/7 5:23pm				COOLER TEMP deg C 21°C no chill			
NAME:		DATE:				CONSIGNMENT NOTE NO.						NAME:				COOLER SEAL - Yes..... No Intact Broken			
OF:						TRANSPORT CO.						DATE:				COOLER TEMP deg C			

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

012517

CHAIN OF CUSTODY



PROJECT NO.: 51142					LABORATORY BATCH NO.:																																																																																																																																																																																																																								
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Certificate of Analysis



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025—Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention: Aaron Smith
Report 554359-AID
Project Name LOCO HAZMAT
Project ID 51142
Received Date Jul 14, 2017
Date Reported Jul 21, 2017

Methodology:

Asbestos Fibre
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples 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.

Unknown Mineral
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-
 containing material
 (ACM)

The material is first examined and any fibres 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 4964 - 2004.

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

The performance limitation of the AS4964 method is around 0.1 g/kg (0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis where required, this is considered to be at the nominal reporting limit of 0.01 % (w / w). The examination of large sample sizes (500 mL is recommended) may improve the likelihood of identifying ACM in the > 2mm fraction. The NEPM screening level of 0.001 % (w / w) asbestos in soil for FA (friable asbestos) and AF (asbestos fines) then applies where they are able to be quantified by gravimetric procedures. This quantitative screening is not generally applicable to FF (free fibres) and results of Trace Analysis are referred.

NOTE: NATA News March 2014, p.7, states in relation to AS4964: "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". Accordingly, NATA Accreditation does not cover the performance of this service (indicated with an asterisk). This report is consistent with the analytical procedures and reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended) and the Western Australia Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, 2009, including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil, June 2011.

Project Name LOCO HAZMAT
Project ID 51142
Date Sampled
Report 554359-AID

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
B1_A05	17-JI17192	not provided	Approximate Sample < 1g / 20x10x3mm Sample consisted of: (a) Brown soft fibrous sheet (b) Grey paint material	Chrysotile asbestos detected (a). Organic fibre detected.
B3_A01	17-JI17195	not provided	Approximate Sample 2g / 20x20x10mm Sample consisted of: (a) Grey fibrous spray-like material (b) Pink-silver perlite material	No asbestos detected. Organic fibre detected.
EXT_A01	17-JI17200	not provided	Approximate Sample 1g / 20x10x10xmm Sample consisted of: Brown dry hard sealent material	No asbestos detected.
EXT_A02	17-JI17201	not provided	Approximate Sample 1g / 15x10x5mm Sample consisted of: (a) White plater-like cement material (b) Grey paint material	No asbestos detected.
EXT_A03	17-JI17202	not provided	Approximate Sample 1g / 10x10x2mm Sample consisted of: (a) White plater-like cement material (b) Grey paint material	No asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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	Jul 14, 2017	Indefinite

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554359
Phone: 02 8245 0300
Fax:

Received: Jul 14, 2017 5:29 PM
Due: Jul 21, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	B1_A05	Not Provided		Building Materials	S17-JI17192	X		
2	B2_LD02	Not Provided		Swab	S17-JI17193		X	
3	B3_LP01	Not Provided		Paint	S17-JI17194			X
4	B3_A01	Not Provided		Building Materials	S17-JI17195	X		
5	B7_LD01	Not Provided		Swab	S17-JI17196		X	
6	B7_LP01	Not Provided		Paint	S17-JI17197			X
7	B7_LP02	Not Provided		Paint	S17-JI17198			X
8	B9_LD01	Not Provided		Swab	S17-JI17199		X	

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
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Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
9	EXT_A01	Not Provided		Building Materials	S17-JI17200	X		
10	EXT_A02	Not Provided		Building Materials	S17-JI17201	X		
11	EXT_A03	Not Provided		Building Materials	S17-JI17202	X		
12	EXT_LD01	Not Provided		Swab	S17-JI17203		X	
13	EXT_LP01	Not Provided		Paint	S17-JI17204			X
14	EXT_LP02	Not Provided		Paint	S17-JI17205			X
Test Counts						5	4	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. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos-containing material means any material containing more than 1% asbestos and comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed-on fireproofing, troweled-on acoustical plaster, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).
PACM	Presumed Asbestos-Containing Material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines (AF) are defined as free fibres, or fibre bundles, smaller than 7mm. It is the free fibres which present the greatest risk to human health, although very small fibres (< 5 microns in length) are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. (Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substantial degree of damage which increases the potential for fibre release.)
AC	Asbestos cement means a mixture of cement and asbestos fibres (typically 90:10 ratios).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Authorised by:

Nibha Vaidya

Senior Analyst-Asbestos (NSW)



Glenn Jackson

National Operations Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

Eurofins | mgt 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 | mgt 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.

Certificate of Analysis

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: **Aaron Smith**

Report **554359-A**
Project name LOCO HAZMAT
Project ID 51142
Received Date Jul 14, 2017

Client Sample ID			B2_LD02	B7_LD01	B9_LD01	EXT_LD01
Sample Matrix			Swab	Swab	Swab	Swab
Eurofins mgt Sample No.			S17-JI17193	S17-JI17196	S17-JI17199	S17-JI17203
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	1	Total ug	120	< 1	< 1	43

Sample History

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

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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

Heavy Metals

Testing Site

Sydney

Extracted

Jul 14, 2017

Holding Time

180 Day

- Method: E022.4 Acid Extractable Metals in Filters and Wipes

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554359
Phone: 02 8245 0300
Fax:

Received: Jul 14, 2017 5:29 PM
Due: Jul 21, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	B1_A05	Not Provided		Building Materials	S17-JI17192	X		
2	B2_LD02	Not Provided		Swab	S17-JI17193		X	
3	B3_LP01	Not Provided		Paint	S17-JI17194			X
4	B3_A01	Not Provided		Building Materials	S17-JI17195	X		
5	B7_LD01	Not Provided		Swab	S17-JI17196		X	
6	B7_LP01	Not Provided		Paint	S17-JI17197			X
7	B7_LP02	Not Provided		Paint	S17-JI17198			X
8	B9_LD01	Not Provided		Swab	S17-JI17199		X	

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
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Received: Jul 14, 2017 5:29 PM
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Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
9	EXT_A01	Not Provided		Building Materials	S17-JI17200	X		
10	EXT_A02	Not Provided		Building Materials	S17-JI17201	X		
11	EXT_A03	Not Provided		Building Materials	S17-JI17202	X		
12	EXT_LD01	Not Provided		Swab	S17-JI17203		X	
13	EXT_LP01	Not Provided		Paint	S17-JI17204			X
14	EXT_LP02	Not Provided		Paint	S17-JI17205			X
Test Counts						5	4	5

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

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

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre
ug/L: micrograms per litre	ppm: Parts per million
ppb: Parts per billion	%: Percentage
org/100mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres	

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Comments

Sample Integrity

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

Authorised By

Nibha Vaidya

Analytical Services Manager



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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012520

CHAIN OF CUSTODY



PROJECT NO.: S1142					LABORATORY BATCH NO.:				
PROJECT NAME: Loco Hazmat					SAMPLERS: AS				
DATE NEEDED BY: STD TAT					QC LEVEL: NEPM (2013)				
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688									
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) aj.smith@jbsg.com.au; (3) h.casson@jbsg.com.au									
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL									
TYPE OF ASBESTOS ANALYSIS									
IDENTIFICATION NEPM/WA									
NOTES: 554359									
SAMPLE ID MATRIX DATE TIME TYPE & PRESERVATIVE pH									
B1-A05 mat									
B2-L002 swab									
B3-LP01 paint									
B3-A01 mat									
B7-LD01 swab									
B7-LP01 paint									
B7-LP02 paint									
B9-LD01 swab									
Ext-A01 mat									
Ext-A02 "									
Ext-A03 "									
Ext-LP01 swab									
Ext-LP01 paint									
Ext-LP02 "									
RELINQUISHED BY: NAME: Aaron DATE: 14/7/17									
METHOD OF SHIPMENT: CONSIGNMENT NOTE NO. TRANSPORT CO. CONSIGNMENT NOTE NO. TRANSPORT CO.									
RECEIVED BY: NAME: Ryan DATE: 17/29 OF: 14/07									
FOR RECEIVING LAB USE ONLY: COOLER SEAL - Yes..... No Intact Broken COOLER TEMP deg C COOLER SEAL - Yes..... No Intact Broken COOLER TEMP deg C									
Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other									

Certificate of Analysis

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: **Aaron Smith**

Report **554360-A**
 Project name LOCO HAZMAT
 Project ID 51142
 Received Date Jul 14, 2017

Client Sample ID			B14_LD01
Sample Matrix			Swab
Eurofins mgt Sample No.			S17-JI17215
Date Sampled			Not Provided
Test/Reference	LOR	Unit	
Heavy Metals			
Lead	1	Total ug	2.2

Sample History

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

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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

Heavy Metals

Testing Site

Sydney

Extracted

Jul 14, 2017

Holding Time

180 Day

- Method: E022.4 Acid Extractable Metals in Filters and Wipes

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554360
Phone: 02 8245 0300
Fax:

Received: Jul 14, 2017 5:29 PM
Due: Jul 21, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 18217							
External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	B10_LP01	Not Provided		Paint	S17-JI17206		X
2	B10_LP02	Not Provided		Paint	S17-JI17207		X
3	B10_LP03	Not Provided		Paint	S17-JI17208		X
4	B11_LP01	Not Provided		Paint	S17-JI17209		X
5	B12_LP01	Not Provided		Paint	S17-JI17210		X
6	B12_LD01	Not Provided		Dust	S17-JI17211	X	
7	B13_LP01	Not Provided		Paint	S17-JI17212		X
8	B14_LP01	Not Provided		Paint	S17-JI17213		X
9	B14_LP02	Not Provided		Paint	S17-JI17214		X

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554360
Phone: 02 8245 0300
Fax:

Received: Jul 14, 2017 5:29 PM
Due: Jul 21, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 18217							
10	B14_LD01	Not Provided		Swab	S17-Jl17215	X	
11	B16_LP02	Not Provided		Paint	S17-Jl17216		X
Test Counts						2	9

Internal Quality Control Review and Glossary

General

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3. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
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****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

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mg/L: milligrams per litre

ug/L: micrograms per litre

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ppb: Parts per billion

%: Percentage

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NTU: Nephelometric Turbidity Units

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

Terms

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Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
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APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
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SRA	Sample Receipt Advice
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CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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Results <10 times the LOR : No Limit

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

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

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PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Comments

Sample Integrity

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

Authorised By

Nibha Vaidya

Analytical Services Manager



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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Certificate of Analysis

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: **Aaron Smith**

Report **554360-S**
Project name LOCO HAZMAT
Project ID 51142
Received Date Jul 14, 2017

Client Sample ID			B10_LP01	B10_LP02	B10_LP03	B11_LP01
Sample Matrix			Paint	Paint	Paint	Paint
Eurofins mgt Sample No.			S17-JI17206	S17-JI17207	S17-JI17208	S17-JI17209
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Lead (% w/w)	0.01	%	0.02	14	1.7	13

Client Sample ID			B12_LP01	B12_LD01	B13_LP01	B14_LP01
Sample Matrix			Paint	Dust	Paint	Paint
Eurofins mgt Sample No.			S17-JI17210	S17-JI17211	S17-JI17212	S17-JI17213
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Lead (% w/w)	0.01	%	0.13	-	0.06	1.8
Heavy Metals						
Lead	5	mg/kg	-	290	-	-

Client Sample ID			B14_LP02	B16_LP02
Sample Matrix			Paint	Paint
Eurofins mgt Sample No.			S17-JI17214	S17-JI17216
Date Sampled			Not Provided	Not Provided
Test/Reference	LOR	Unit		
Lead (% w/w)	0.01	%	< 0.01	0.16

Sample History

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

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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
Lead (% w/w)	Sydney	Jul 14, 2017	6 Month
- Method: E022.5 - ACID EXTRACTABLE METALS IN PAINT IN LIQUID AND POWDERED FORM BY ICP-MS ANALYSIS			
Heavy Metals	Sydney	Jul 20, 2017	180 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554360
Phone: 02 8245 0300
Fax:

Received: Jul 14, 2017 5:29 PM
Due: Jul 21, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 18217							
External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	B10_LP01	Not Provided		Paint	S17-JI17206		X
2	B10_LP02	Not Provided		Paint	S17-JI17207		X
3	B10_LP03	Not Provided		Paint	S17-JI17208		X
4	B11_LP01	Not Provided		Paint	S17-JI17209		X
5	B12_LP01	Not Provided		Paint	S17-JI17210		X
6	B12_LD01	Not Provided		Dust	S17-JI17211	X	
7	B13_LP01	Not Provided		Paint	S17-JI17212		X
8	B14_LP01	Not Provided		Paint	S17-JI17213		X
9	B14_LP02	Not Provided		Paint	S17-JI17214		X

Company Name: JBS & G Australia (NSW) P/L
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Sample Detail						Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 18217							
10	B14_LD01	Not Provided		Swab	S17-Jl17215	X	
11	B16_LP02	Not Provided		Paint	S17-Jl17216		X
Test Counts						2	9

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

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

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre
ug/L: micrograms per litre	ppm: Parts per million
ppb: Parts per billion	%: Percentage
org/100mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres	

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank										
Heavy Metals										
Lead				mg/kg	< 5			5	Pass	
LCS - % Recovery										
Heavy Metals										
Lead				%	90			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1				Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery										
Heavy Metals										
Lead					Result 1					
Lead				S17-JI23697	NCP	%	95		70-130	Pass
Test	Lab Sample ID	QA Source	Units	Result 1				Acceptance Limits	Pass Limits	Qualifying Code
Duplicate										
Heavy Metals										
Lead					Result 1	Result 2	RPD			
Lead				S17-JI23724	NCP	mg/kg	91	89	3.0	30% Pass

Comments

Sample Integrity

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

Authorised By

Nibha Vaidya

Analytical Services Manager



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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012522

CHAIN OF CUSTODY



PROJECT NO.: 51142					LABORATORY BATCH NO.:				
PROJECT NAME: Local Hazard					SAMPLERS: Aaron				
DATE NEEDED BY: Std TAT					QC LEVEL: NEPM (2013)				
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688									
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2)@jbsg.com.au; (3)@jbsg.com.au									
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:									
TYPE OF ASBESTOS ANALYSIS									
IDENTIFICATION									
NEPM/WA									
554360									
NOTES:									
SAMPLE ID									
MATRIX									
DATE									
TIME									
TYPE & PRESERVATIVE									
pH									
Lead Paint									
Lead Putty									
Total Lead									
B10-LP01									
B10-LP02									
B10-LP03									
B11-LP01									
B12-LP01									
B12-LD01									
B13-LP01									
B14-LP01									
B14-LP02									
B14-LD01									
B16-LP02									
08/01/2017 #1									
RELINQUISHED BY:									
NAME: Aaron									
DATE: 14/7/17									
OF: JBS&G									
METHOD OF SHIPMENT:									
CONSIGNMENT NOTE NO.									
TRANSPORT CO.									
CONSIGNMENT NOTE NO.									
TRANSPORT CO.									
RECEIVED BY:									
NAME: Aaron									
DATE: 17/7/17									
OF: JBS&G									
FOR RECEIVING LAB USE ONLY:									
COOLER SEAL - Yes..... No..... Intact..... Broken.....									
COOLER TEMP deg C									
COOLER SEAL - Yes..... No..... Intact..... Broken.....									
COOLER TEMP deg C									
Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsrd.; C = Sodium Hydroxide Prsrd.; VC = Hydrochloric Acid Prsrd Vial; VS = Sulfuric Acid Prsrd Vial; S = Sulfuric Acid Prsrd; Z = Zinc Prsrd; E = EDTA Prsrd; ST = Sterile Bottle; O = Other									

Certificate of Analysis



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025—Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention: Aaron Smith
Report 554788-AID
Project Name LOCO HAZMAT
Project ID 51142
Received Date Jul 18, 2017
Date Reported Jul 25, 2017

Methodology:

Asbestos Fibre
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples 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.

Unknown Mineral
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-
 containing material
 (ACM)

The material is first examined and any fibres 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 4964 - 2004.

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

The performance limitation of the AS4964 method is around 0.1 g/kg (0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis where required, this is considered to be at the nominal reporting limit of 0.01 % (w / w). The examination of large sample sizes (500 mL is recommended) may improve the likelihood of identifying ACM in the > 2mm fraction. The NEPM screening level of 0.001 % (w / w) asbestos in soil for FA (friable asbestos) and AF (asbestos fines) then applies where they are able to be quantified by gravimetric procedures. This quantitative screening is not generally applicable to FF (free fibres) and results of Trace Analysis are referred.

NOTE: NATA News March 2014, p.7, states in relation to AS4964: "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". Accordingly, NATA Accreditation does not cover the performance of this service (indicated with an asterisk). This report is consistent with the analytical procedures and reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended) and the Western Australia Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, 2009, including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil, June 2011.

Project Name LOCO HAZMAT
Project ID 51142
Date Sampled Jul 17, 2017
Report 554788-AID

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
B1-A07	17-JI21026	Jul 17, 2017	Approximate Sample < 1g / 15x10x1mm Sample consisted of: Brown soft fibrous material	Chrysotile asbestos detected.
B1-AD03	17-JI21029	Jul 17, 2017	Approximate Sample < 1g / 10x5x1mm Sample consisted of: Brown dust material	No asbestos detected. Organic fibre detected.
B1-AD04	17-JI21030	Jul 17, 2017	Approximate Sample 1g / 20x15x2mm Sample consisted of: Brown dust material	No asbestos detected. Organic fibre detected.
B1-AD05	17-JI21031	Jul 17, 2017	Approximate Sample < 1g / 10x5x1mm Sample consisted of: Brown dust material	No asbestos detected. Organic fibre detected.
B3-AD01	17-JI21036	Jul 17, 2017	Approximate Sample < 1g / 20x15x2mm Sample consisted of: (a) Brown dust material (b) Brown soft-loose fibrous material	No asbestos detected. Organic fibre detected.
B2-AD03	17-JI21038	Jul 17, 2017	Approximate Sample < 1g / 15x10x1mm Sample consisted of: (a) Brown dust material (b) Brown soft-loose fibrous material	No asbestos detected. Organic fibre detected.
B4-A02	17-JI21041	Jul 17, 2017	Approximate Sample 2g / 30x20x2mm Sample consisted of: Grey crushed cement-like material	No asbestos detected. Organic fibre detected.
B5-AD01	17-JI21042	Jul 17, 2017	Approximate Sample < 1g / 20x10x1mm Sample consisted of: (a) Brown dust material (b) Brown soft-loose fibrous material (c) Brown dry adhesive attached with fibrous cement material	No asbestos detected. Organic fibre detected.
B5-AD02	17-JI21043	Jul 17, 2017	Approximate Sample 1g / 20x20x1mm Sample consisted of: (a) Brown dust material (b) Brown soft loose fibrous material	No asbestos detected. Organic fibre detected.
B6-AD01	17-JI21045	Jul 17, 2017	Approximate Sample 1g / 20x20x2mm Sample consisted of: (a) Brown dust material (b) Brown soft loose fibrous material	No asbestos detected. Organic fibre detected.

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
B6-AD02	17-JI21046	Jul 17, 2017	Approximate Sample 1g / 20x20x1mm Sample consisted of: (a) Brown dust material (b) Brown soft loose fibrous material	No asbestos detected. Organic fibre detected.
B7-AD01	17-JI21050	Jul 17, 2017	Approximate Sample < 1g / 20x20x2mm Sample consisted of: (a) Brown dust material (b) Brown soft loose fibrous material	No asbestos detected. Organic fibre detected.
B7-AD02	17-JI21051	Jul 17, 2017	Approximate Sample < 1g / 20x20x1mm Sample consisted of: (a) Brown dust material (b) Brown soft loose fibrous material	No asbestos detected. Organic fibre detected.
B9-AD01	17-JI21059	Jul 17, 2017	Approximate Sample < 1g / 10x10x1mm Sample consisted of: (a) Brown dust material (b) Brown soft loose fibrous material	No asbestos detected. Organic fibre detected.
B9-AD02	17-JI21060	Jul 17, 2017	Approximate Sample < 1g / 20x10x1mm Sample consisted of: Brown dust material	No asbestos detected. Organic fibre detected.
B10-AD01	17-JI21063	Jul 17, 2017	Approximate Sample 15g / 100x25x3mm Sample consisted of: Grey crushed cement-like material	No asbestos detected. Organic fibre detected.
B10-A02	17-JI21064	Jul 17, 2017	Approximate Sample < 1g / 5x5x2mm Sample consisted of: (a) Black compressed cement-like material (b) Black bitumin layer	Chrysotile asbestos detected (a).
B14-A01	17-JI21069	Jul 17, 2017	Approximate Sample < 1g / 5x5x2mm Sample consisted of: Brown compressed fibre cement material	Chrysotile asbestos detected.
EXT-A04	17-JI21072	Jul 17, 2017	Approximate Sample 5g / 20x10x5mm Sample consisted of: Grey concrete cement material	No asbestos detected. Organic fibre detected.
EXT-A05	17-JI21073	Jul 17, 2017	Approximate Sample < 1g / 10x5x2mm Sample consisted of: Brown compressed fibre cement material	Chrysotile asbestos detected.
EXT-A06	17-JI21074	Jul 17, 2017	Approximate Sample 3g / 30x15x3mm Sample consisted of: Grey hardened mastic-like material	No asbestos detected. Organic fibre detected.
EXT-A07	17-JI21075	Jul 17, 2017	Approximate Sample 3g / 20x15x3mm Sample consisted of: Grey concrete cement material	No asbestos detected. Organic fibre detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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	Jul 19, 2017	Indefinite

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

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Report #: 554788
Phone: 02 8245 0300
Fax:

Received: Jul 18, 2017 5:00 PM
Due: Jul 25, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	B1-A07	Jul 17, 2017		Building Materials	S17-JI21026	X		
2	B1-LD03	Jul 17, 2017		Dust	S17-JI21027		X	
3	B1-LD04	Jul 17, 2017		Dust	S17-JI21028		X	
4	B1-AD03	Jul 17, 2017		Dust	S17-JI21029	X		
5	B1-AD04	Jul 17, 2017		Dust	S17-JI21030	X		
6	B1-AD05	Jul 17, 2017		Dust	S17-JI21031	X		
7	B1-LD06	Jul 17, 2017		Dust	S17-JI21032		X	
8	B2-LP03	Jul 17, 2017		Paint	S17-JI21033			X
9	B2-LD04	Jul 17, 2017		Swab	S17-JI21034		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
10	B2-LD05	Jul 17, 2017		Swab	S17-JI21035		X	
11	B3-AD01	Jul 17, 2017		Dust	S17-JI21036	X		
12	B3-LD01	Jul 17, 2017		Dust	S17-JI21037		X	
13	B2-AD03	Jul 17, 2017		Dust	S17-JI21038	X		
14	B3-LD02	Jul 17, 2017		Swab	S17-JI21039		X	
15	B4-LD01	Jul 17, 2017		Dust	S17-JI21040		X	
16	B4-A02	Jul 17, 2017		Dust	S17-JI21041	X		
17	B5-AD01	Jul 17, 2017		Dust	S17-JI21042	X		
18	B5-AD02	Jul 17, 2017		Dust	S17-JI21043	X		
19	B5-LD01	Jul 17, 2017		Dust	S17-JI21044		X	
20	B6-AD01	Jul 17, 2017		Dust	S17-JI21045	X		
21	B6-AD02	Jul 17, 2017		Dust	S17-JI21046	X		

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Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
22	B6-LD01	Jul 17, 2017		Dust	S17-JI21047		X	
23	B6-LD02	Jul 17, 2017		Dust	S17-JI21048		X	
24	B6-LD03	Jul 17, 2017		Swab	S17-JI21049		X	
25	B7-AD01	Jul 17, 2017		Dust	S17-JI21050	X		
26	B7-AD02	Jul 17, 2017		Dust	S17-JI21051	X		
27	B7-LD02	Jul 17, 2017		Dust	S17-JI21052		X	
28	B7-LD03	Jul 17, 2017		Dust	S17-JI21053		X	
29	B8-LD01	Jul 17, 2017		Dust	S17-JI21054		X	
30	B8-LD02	Jul 17, 2017		Swab	S17-JI21055		X	
31	B8-LP04	Jul 17, 2017		Paint	S17-JI21056			X
32	B9-LD02	Jul 17, 2017		Dust	S17-JI21057		X	
33	B9-LD03	Jul 17, 2017		Dust	S17-JI21058		X	

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Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
34	B9-AD01	Jul 17, 2017		Dust	S17-JI21059	X		
35	B9-AD02	Jul 17, 2017		Dust	S17-JI21060	X		
36	B10-LP04	Jul 17, 2017		Paint	S17-JI21061			X
37	B10-LD01	Jul 17, 2017		Dust	S17-JI21062		X	
38	B10-AD01	Jul 17, 2017		Dust	S17-JI21063	X		
39	B10-A02	Jul 17, 2017		Building Materials	S17-JI21064	X		
40	B11-LD01	Jul 17, 2017		Dust	S17-JI21065		X	
41	B12-LP02	Jul 17, 2017		Paint	S17-JI21066			X
42	B12-LD02	Jul 17, 2017		Dust	S17-JI21067		X	
43	B13-LD02	Jul 17, 2017		Dust	S17-JI21068		X	
44	B14-A01	Jul 17, 2017		Building Materials	S17-JI21069	X		

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Phone: 02 8245 0300
Fax:

Received: Jul 18, 2017 5:00 PM
Due: Jul 25, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
45	EXT-LP02	Jul 17, 2017		Paint	S17-JI21070			X
46	EXT-LP03	Jul 17, 2017		Paint	S17-JI21071			X
47	EXT-A04	Jul 17, 2017		Building Materials	S17-JI21072	X		
48	EXT-A05	Jul 17, 2017		Building Materials	S17-JI21073	X		
49	EXT-A06	Jul 17, 2017		Building Materials	S17-JI21074	X		
50	EXT-A07	Jul 17, 2017		Building Materials	S17-JI21075	X		
Test Counts						22	22	6

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. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos-containing material means any material containing more than 1% asbestos and comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed-on fireproofing, troweled-on acoustical plaster, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).
PACM	Presumed Asbestos-Containing Material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines (AF) are defined as free fibres, or fibre bundles, smaller than 7mm. It is the free fibres which present the greatest risk to human health, although very small fibres (< 5 microns in length) are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. (Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substantial degree of damage which increases the potential for fibre release.)
AC	Asbestos cement means a mixture of cement and asbestos fibres (typically 90:10 ratios).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Authorised by:

Nibha Vaidya

Senior Analyst-Asbestos (NSW)



Glenn Jackson

National Operations Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

Eurofins | mgt 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 | mgt 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.

Certificate of Analysis

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: **Aaron Smith**

Report **554788-A**
 Project name LOCO HAZMAT
 Project ID 51142
 Received Date Jul 18, 2017

Client Sample ID			B2-LD04	B2-LD05	B3-LD02	B6-LD03
Sample Matrix			Swab	Swab	Swab	Swab
Eurofins mgt Sample No.			S17-JI21034	S17-JI21035	S17-JI21039	S17-JI21049
Date Sampled			Jul 17, 2017	Jul 17, 2017	Jul 17, 2017	Jul 17, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	1	Total ug	250	360	1000	1700

Client Sample ID			B8-LD02
Sample Matrix			Swab
Eurofins mgt Sample No.			S17-JI21055
Date Sampled			Jul 17, 2017
Test/Reference	LOR	Unit	
Heavy Metals			
Lead	1	Total ug	3200

Sample History

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

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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

Heavy Metals

Testing Site

Sydney

Extracted

Jul 19, 2017

Holding Time

180 Day

- Method: E022.4 Acid Extractable Metals in Filters and Wipes

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554788
Phone: 02 8245 0300
Fax:

Received: Jul 18, 2017 5:00 PM
Due: Jul 25, 2017
Priority: 5 Day
Contact Name: *S/RECEIPT DONT PUT S&G

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	B1-A07	Jul 17, 2017		Building Materials	S17-JI21026	X		
2	B1-LD03	Jul 17, 2017		Dust	S17-JI21027		X	
3	B1-LD04	Jul 17, 2017		Dust	S17-JI21028		X	
4	B1-AD03	Jul 17, 2017		Dust	S17-JI21029	X		
5	B1-AD04	Jul 17, 2017		Dust	S17-JI21030	X		
6	B1-AD05	Jul 17, 2017		Dust	S17-JI21031	X		
7	B1-LD06	Jul 17, 2017		Dust	S17-JI21032		X	
8	B2-LP03	Jul 17, 2017		Paint	S17-JI21033			X
9	B2-LD04	Jul 17, 2017		Swab	S17-JI21034		X	

Company Name: JBS & G Australia (NSW) P/L
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Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
10	B2-LD05	Jul 17, 2017		Swab	S17-JI21035		X	
11	B3-AD01	Jul 17, 2017		Dust	S17-JI21036	X		
12	B3-LD01	Jul 17, 2017		Dust	S17-JI21037		X	
13	B2-AD03	Jul 17, 2017		Dust	S17-JI21038	X		
14	B3-LD02	Jul 17, 2017		Swab	S17-JI21039		X	
15	B4-LD01	Jul 17, 2017		Dust	S17-JI21040		X	
16	B4-A02	Jul 17, 2017		Dust	S17-JI21041	X		
17	B5-AD01	Jul 17, 2017		Dust	S17-JI21042	X		
18	B5-AD02	Jul 17, 2017		Dust	S17-JI21043	X		
19	B5-LD01	Jul 17, 2017		Dust	S17-JI21044		X	
20	B6-AD01	Jul 17, 2017		Dust	S17-JI21045	X		
21	B6-AD02	Jul 17, 2017		Dust	S17-JI21046	X		

Company Name: JBS & G Australia (NSW) P/L
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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
22	B6-LD01	Jul 17, 2017		Dust	S17-JI21047		X	
23	B6-LD02	Jul 17, 2017		Dust	S17-JI21048		X	
24	B6-LD03	Jul 17, 2017		Swab	S17-JI21049		X	
25	B7-AD01	Jul 17, 2017		Dust	S17-JI21050	X		
26	B7-AD02	Jul 17, 2017		Dust	S17-JI21051	X		
27	B7-LD02	Jul 17, 2017		Dust	S17-JI21052		X	
28	B7-LD03	Jul 17, 2017		Dust	S17-JI21053		X	
29	B8-LD01	Jul 17, 2017		Dust	S17-JI21054		X	
30	B8-LD02	Jul 17, 2017		Swab	S17-JI21055		X	
31	B8-LP04	Jul 17, 2017		Paint	S17-JI21056			X
32	B9-LD02	Jul 17, 2017		Dust	S17-JI21057		X	
33	B9-LD03	Jul 17, 2017		Dust	S17-JI21058		X	

Company Name: JBS & G Australia (NSW) P/L
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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
34	B9-AD01	Jul 17, 2017		Dust	S17-JI21059	X		
35	B9-AD02	Jul 17, 2017		Dust	S17-JI21060	X		
36	B10-LP04	Jul 17, 2017		Paint	S17-JI21061			X
37	B10-LD01	Jul 17, 2017		Dust	S17-JI21062		X	
38	B10-AD01	Jul 17, 2017		Dust	S17-JI21063	X		
39	B10-A02	Jul 17, 2017		Building Materials	S17-JI21064	X		
40	B11-LD01	Jul 17, 2017		Dust	S17-JI21065		X	
41	B12-LP02	Jul 17, 2017		Paint	S17-JI21066			X
42	B12-LD02	Jul 17, 2017		Dust	S17-JI21067		X	
43	B13-LD02	Jul 17, 2017		Dust	S17-JI21068		X	
44	B14-A01	Jul 17, 2017		Building Materials	S17-JI21069	X		

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
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NSW 2000
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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
45	EXT-LP02	Jul 17, 2017		Paint	S17-JI21070			X
46	EXT-LP03	Jul 17, 2017		Paint	S17-JI21071			X
47	EXT-A04	Jul 17, 2017		Building Materials	S17-JI21072	X		
48	EXT-A05	Jul 17, 2017		Building Materials	S17-JI21073	X		
49	EXT-A06	Jul 17, 2017		Building Materials	S17-JI21074	X		
50	EXT-A07	Jul 17, 2017		Building Materials	S17-JI21075	X		
Test Counts						22	22	6

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Comments

Sample Integrity

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

Authorised By

Nibha Vaidya

Analytical Services Manager



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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Certificate of Analysis

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: **Aaron Smith**

Report **554788-S**
Project name LOCO HAZMAT
Project ID 51142
Received Date Jul 18, 2017

Client Sample ID			B1-LD03	B1-LD04	B1-LD06	B2-LP03
Sample Matrix			Dust	Dust	Dust	Paint
Eurofins mgt Sample No.			S17-JI21027	S17-JI21028	S17-JI21032	S17-JI21033
Date Sampled			Jul 17, 2017	Jul 17, 2017	Jul 17, 2017	Jul 17, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	0.01	%	-	-	-	1.9
Heavy Metals						
Lead	5	mg/kg	5000	960	130	-

Client Sample ID			B3-LD01	B4-LD01	B5-LD01	B6-LD01
Sample Matrix			Dust	Dust	Dust	Dust
Eurofins mgt Sample No.			S17-JI21037	S17-JI21040	S17-JI21044	S17-JI21047
Date Sampled			Jul 17, 2017	Jul 17, 2017	Jul 17, 2017	Jul 17, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	2600	1800	2800	3000

Client Sample ID			B6-LD02	B7-LD02	B7-LD03	B8-LD01
Sample Matrix			Dust	Dust	Dust	Dust
Eurofins mgt Sample No.			S17-JI21048	S17-JI21052	S17-JI21053	S17-JI21054
Date Sampled			Jul 17, 2017	Jul 17, 2017	Jul 17, 2017	Jul 17, 2017
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	670	2500	3800	1200

Client Sample ID			B8-LP04	B9-LD02	B9-LD03	B10-LP04
Sample Matrix			Paint	Dust	Dust	Paint
Eurofins mgt Sample No.			S17-JI21056	S17-JI21057	S17-JI21058	S17-JI21061
Date Sampled			Jul 17, 2017	Jul 17, 2017	Jul 17, 2017	Jul 17, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	0.01	%	2.3	-	-	0.04
Heavy Metals						
Lead	5	mg/kg	-	1400	2300	-

Client Sample ID			B10-LD01	B11-LD01	B12-LP02	B12-LD02
Sample Matrix			Dust	Dust	Paint	Dust
Eurofins mgt Sample No.			S17-JI21062	S17-JI21065	S17-JI21066	S17-JI21067
Date Sampled			Jul 17, 2017	Jul 17, 2017	Jul 17, 2017	Jul 17, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	0.01	%	-	-	0.05	-
Heavy Metals						
Lead	5	mg/kg	80	1400	-	6100

Client Sample ID			B13-LD02	EXT-LP02	EXT-LP03
Sample Matrix			Dust	Paint	Paint
Eurofins mgt Sample No.			S17-JI21068	S17-JI21070	S17-JI21071
Date Sampled			Jul 17, 2017	Jul 17, 2017	Jul 17, 2017
Test/Reference	LOR	Unit			
Lead (% w/w)	0.01	%	-	1.7	9.1
Heavy Metals					
Lead	5	mg/kg	1300	-	-

Sample History

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

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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
Lead (% w/w)	Sydney	Jul 19, 2017	6 Month
- Method: E022.5 - ACID EXTRACTABLE METALS IN PAINT IN LIQUID AND POWDERED FORM BY ICP-MS ANALYSIS			
Heavy Metals	Sydney	Jul 20, 2017	180 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554788
Phone: 02 8245 0300
Fax:

Received: Jul 18, 2017 5:00 PM
Due: Jul 25, 2017
Priority: 5 Day
Contact Name: *S/RECEIPT DONT PUT S&G

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	B1-A07	Jul 17, 2017		Building Materials	S17-JI21026	X		
2	B1-LD03	Jul 17, 2017		Dust	S17-JI21027		X	
3	B1-LD04	Jul 17, 2017		Dust	S17-JI21028		X	
4	B1-AD03	Jul 17, 2017		Dust	S17-JI21029	X		
5	B1-AD04	Jul 17, 2017		Dust	S17-JI21030	X		
6	B1-AD05	Jul 17, 2017		Dust	S17-JI21031	X		
7	B1-LD06	Jul 17, 2017		Dust	S17-JI21032		X	
8	B2-LP03	Jul 17, 2017		Paint	S17-JI21033			X
9	B2-LD04	Jul 17, 2017		Swab	S17-JI21034		X	

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554788
Phone: 02 8245 0300
Fax:

Received: Jul 18, 2017 5:00 PM
Due: Jul 25, 2017
Priority: 5 Day
Contact Name: *S/RECEIPT DONT PUT S&G

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
10	B2-LD05	Jul 17, 2017		Swab	S17-JI21035		X	
11	B3-AD01	Jul 17, 2017		Dust	S17-JI21036	X		
12	B3-LD01	Jul 17, 2017		Dust	S17-JI21037		X	
13	B2-AD03	Jul 17, 2017		Dust	S17-JI21038	X		
14	B3-LD02	Jul 17, 2017		Swab	S17-JI21039		X	
15	B4-LD01	Jul 17, 2017		Dust	S17-JI21040		X	
16	B4-A02	Jul 17, 2017		Dust	S17-JI21041	X		
17	B5-AD01	Jul 17, 2017		Dust	S17-JI21042	X		
18	B5-AD02	Jul 17, 2017		Dust	S17-JI21043	X		
19	B5-LD01	Jul 17, 2017		Dust	S17-JI21044		X	
20	B6-AD01	Jul 17, 2017		Dust	S17-JI21045	X		
21	B6-AD02	Jul 17, 2017		Dust	S17-JI21046	X		

Company Name: JBS & G Australia (NSW) P/L
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Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
22	B6-LD01	Jul 17, 2017		Dust	S17-JI21047		X	
23	B6-LD02	Jul 17, 2017		Dust	S17-JI21048		X	
24	B6-LD03	Jul 17, 2017		Swab	S17-JI21049		X	
25	B7-AD01	Jul 17, 2017		Dust	S17-JI21050	X		
26	B7-AD02	Jul 17, 2017		Dust	S17-JI21051	X		
27	B7-LD02	Jul 17, 2017		Dust	S17-JI21052		X	
28	B7-LD03	Jul 17, 2017		Dust	S17-JI21053		X	
29	B8-LD01	Jul 17, 2017		Dust	S17-JI21054		X	
30	B8-LD02	Jul 17, 2017		Swab	S17-JI21055		X	
31	B8-LP04	Jul 17, 2017		Paint	S17-JI21056			X
32	B9-LD02	Jul 17, 2017		Dust	S17-JI21057		X	
33	B9-LD03	Jul 17, 2017		Dust	S17-JI21058		X	

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
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Phone: 02 8245 0300
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Received: Jul 18, 2017 5:00 PM
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Contact Name: *S/RECEIPT DONT PUT S&G

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
34	B9-AD01	Jul 17, 2017		Dust	S17-JI21059	X		
35	B9-AD02	Jul 17, 2017		Dust	S17-JI21060	X		
36	B10-LP04	Jul 17, 2017		Paint	S17-JI21061			X
37	B10-LD01	Jul 17, 2017		Dust	S17-JI21062		X	
38	B10-AD01	Jul 17, 2017		Dust	S17-JI21063	X		
39	B10-A02	Jul 17, 2017		Building Materials	S17-JI21064	X		
40	B11-LD01	Jul 17, 2017		Dust	S17-JI21065		X	
41	B12-LP02	Jul 17, 2017		Paint	S17-JI21066			X
42	B12-LD02	Jul 17, 2017		Dust	S17-JI21067		X	
43	B13-LD02	Jul 17, 2017		Dust	S17-JI21068		X	
44	B14-A01	Jul 17, 2017		Building Materials	S17-JI21069	X		

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

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Phone: 02 8245 0300
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Received: Jul 18, 2017 5:00 PM
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Priority: 5 Day
Contact Name: *S/RECEIPT DONT PUT S&G

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
45	EXT-LP02	Jul 17, 2017		Paint	S17-JI21070			X
46	EXT-LP03	Jul 17, 2017		Paint	S17-JI21071			X
47	EXT-A04	Jul 17, 2017		Building Materials	S17-JI21072	X		
48	EXT-A05	Jul 17, 2017		Building Materials	S17-JI21073	X		
49	EXT-A06	Jul 17, 2017		Building Materials	S17-JI21074	X		
50	EXT-A07	Jul 17, 2017		Building Materials	S17-JI21075	X		
Test Counts						22	22	6

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

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

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre
ug/L: micrograms per litre	ppm: Parts per million
ppb: Parts per billion	%: Percentage
org/100mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres	

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank										
Heavy Metals										
Lead				mg/kg	< 5			5	Pass	
LCS - % Recovery										
Heavy Metals										
Lead				%	88			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1				Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery										
Heavy Metals										
Lead					Result 1					
Lead				%	123			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1				Acceptance Limits	Pass Limits	Qualifying Code
Duplicate										
Heavy Metals										
Lead					Result 1	Result 2	RPD			
Lead				mg/kg	11	13	20	30%	Pass	

Comments

Sample Integrity

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

Authorised By

Nibha Vaidya	Analytical Services Manager
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

Eurofins | mgt 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 | mgt 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.

012523

CHAIN OF CUSTODY



PROJECT NO.: 51142						LABORATORY BATCH NO.:																	
PROJECT NAME: Loco Nazmat						SAMPLERS: Aaron																	
DATE NEEDED BY: 17/7/17						QC LEVEL: NEPM (2013)																	
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688																							
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) aaron.k@jbsg.com.au; (3) nelson@jbsg.com.au																							
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:						Lead Part Lead mg/kg Total Lead TYPE OF ASBESTOS ANALYSIS IDENTIFICATION NEPM/WA 554788																	
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH																		
B1-A07	mat	17/7/17																					
B1-L003	dust																						
B1-L004	"																						
B1-AD03	"																						
B1-AD04	"																						
B1-AD05	"																						
B1-L006	"																						
B2-LP03	Paint																						
B2-L004	Swab																						
B2-L005	Swab																						
B3-AD01	dust																						
B3-L001	dust																						
B2-AD03	"																						
B3-L002	Swab																						
B4-L001	dust																						
B4-A02	"																						
B5-AD01	"																						
B5-AD02	"																						
B5-L001	"																						
RELINQUISHED BY:						METHOD OF SHIPMENT:						RECEIVED BY:						FOR RECEIVING LAB USE ONLY:					
NAME: Aaron		DATE: 18/7/17				CONSIGNMENT NOTE NO.						NAME: Bryan						DATE: 17/00					
OF: JBS&G						TRANSPORT CO.						OF:						COOLER SEAL - Yes..... No Intact Broken					
NAME:		DATE:				CONSIGNMENT NOTE NO.						NAME:						DATE:					
OF:						TRANSPORT CO.						OF:						COOLER SEAL - Yes..... No Intact Broken					
																		COOLER TEMP deg C					

012524

CHAIN OF CUSTODY



PROJECT NO.: 51142						LABORATORY BATCH NO.:																						
PROJECT NAME: Loco Marmat						SAMPLERS: Aaron																						
DATE NEEDED BY: 5th TAT						QC LEVEL: NEPM (2013)																						
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688																												
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) gjsmith@jbsg.com.au; (3) hclsson@jbsg.com.au																												
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:						lead ng/kg	lead point	total lead												TYPE OF ASBESTOS ANALYSIS		554788						
																				IDENTIFICATION	NEPM/WA							
SAMPLE ID						MATRIX		DATE		TIME		TYPE & PRESERVATIVE		pH													NOTES:	
B6-AD01						dust		17/7/17																				
B6-AD02						"		"																				
B6-LD01						"		"																				
B6-LD02						"		"																				
B6-LD03						swab		"																				
B7-AD01						dust		"																			+	
B7-AD02						"		"																			+	
B7-LD02						"		"																				
B7-LD03						"		"																				
B8-LD01						"		"																				
B8-LD02						swab		"																				
B8-LP04						point		"																				
B9-LP02						dust		"																				
B9-LD03						"		"																				
B9-AD01						"		"																			+	
B9-AD02						"		"																			+	
B10-LP04						point		"																				
B10-LD01						dust		"																				
B10-AD01						"		"																			+	
RELINQUISHED BY:						METHOD OF SHIPMENT:						RECEIVED BY:						FOR RECEIVING LAB USE ONLY:										
NAME: DATE:						CONSIGNMENT NOTE NO.						NAME: 17/10						COOLER SEAL - Yes..... No Intact Broken										
OF: JBS&G						TRANSPORT CO.						DATE: 17/10						COOLER TEMP deg C										
NAME: DATE:						CONSIGNMENT NOTE NO.						NAME: 18/07						COOLER SEAL - Yes..... No Intact Broken										
OF:						TRANSPORT CO.						DATE:						COOLER TEMP deg C										

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

IMSO Forms013 - Chain of Custody - Generic

CHAIN OF CUSTODY

[illegible]

Certificate of Analysis



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025—Testing
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention: Aaron Smith
Report 554962-AID
Project Name LOCO HAZMAT
Project ID 51142
Received Date Jul 19, 2017
Date Reported Jul 26, 2017

Methodology:

Asbestos Fibre
Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples 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.

Unknown Mineral
Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil
Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-
containing material
(ACM)

The material is first examined and any fibres 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 4964 - 2004.

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

The performance limitation of the AS4964 method is around 0.1 g/kg (0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis where required, this is considered to be at the nominal reporting limit of 0.01 % (w / w). The examination of large sample sizes (500 mL is recommended) may improve the likelihood of identifying ACM in the > 2mm fraction. The NEPM screening level of 0.001 % (w / w) asbestos in soil for FA (friable asbestos) and AF (asbestos fines) then applies where they are able to be quantified by gravimetric procedures. This quantitative screening is not generally applicable to FF (free fibres) and results of Trace Analysis are referred.

NOTE: NATA News March 2014, p.7, states in relation to AS4964: "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". Accordingly, NATA Accreditation does not cover the performance of this service (indicated with an asterisk). This report is consistent with the analytical procedures and reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended) and the Western Australia Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, 2009, including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil, June 2011.

Project Name LOCO HAZMAT
Project ID 51142
Date Sampled Jul 19, 2017
Report 554962-AID

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
B15_AD01	17-JI22469	Jul 19, 2017	Approximate Sample < 1g / 40x30x< 1mm Sample consisted of: White soft loose fibrous material	No asbestos detected. Organic fibre detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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	Jul 19, 2017	Indefinite

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554962
Phone: 02 8245 0300
Fax:

Received: Jul 19, 2017 5:00 PM
Due: Jul 26, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	B3_LP02	Jul 19, 2017		Paint	S17-JI22467			X
2	B7_LP03	Jul 19, 2017		Paint	S17-JI22468			X
3	B15_AD01	Jul 19, 2017		Dust	S17-JI22469	X		
4	B15_LD01	Jul 19, 2017		Dust	S17-JI22470		X	
5	B16_LD01	Jul 19, 2017		Dust	S17-JI22471		X	
6	B16_LD02	Jul 19, 2017		Dust	S17-JI22472		X	
Test Counts						1	3	2

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. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos-containing material means any material containing more than 1% asbestos and comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed-on fireproofing, troweled-on acoustical plaster, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).
PACM	Presumed Asbestos-Containing Material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines (AF) are defined as free fibres, or fibre bundles, smaller than 7mm. It is the free fibres which present the greatest risk to human health, although very small fibres (< 5 microns in length) are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. (Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substantial degree of damage which increases the potential for fibre release.)
AC	Asbestos cement means a mixture of cement and asbestos fibres (typically 90:10 ratios).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Authorised by:

Nibha Vaidya

Senior Analyst-Asbestos (NSW)



Glenn Jackson

National Operations Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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Certificate of Analysis

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: **Aaron Smith**

Report **554962-S**
 Project name **LOCO HAZMAT**
 Project ID **51142**
 Received Date **Jul 19, 2017**

Client Sample ID			B3_LP02	B7_LP03	B15_LD01	B16_LD01
Sample Matrix			Paint	Paint	Dust	Dust
Eurofins mgt Sample No.			S17-JI22467	S17-JI22468	S17-JI22470	S17-JI22471
Date Sampled			Jul 19, 2017	Jul 19, 2017	Jul 19, 2017	Jul 19, 2017
Test/Reference	LOR	Unit				
Lead (% w/w)	0.01	%	16	0.01	-	-
Heavy Metals						
Lead	5	mg/kg	-	-	23000	6200

Client Sample ID			B16_LD02
Sample Matrix			Dust
Eurofins mgt Sample No.			S17-JI22472
Date Sampled			Jul 19, 2017
Test/Reference	LOR	Unit	
Heavy Metals			
Lead	5	mg/kg	2400

Sample History

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

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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
Lead (% w/w)	Sydney	Jul 19, 2017	6 Month
- Method: E022.5 - ACID EXTRACTABLE METALS IN PAINT IN LIQUID AND POWDERED FORM BY ICP-MS ANALYSIS			
Heavy Metals	Sydney	Jul 21, 2017	180 Day
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: LOCO HAZMAT
Project ID: 51142

Order No.:
Report #: 554962
Phone: 02 8245 0300
Fax:

Received: Jul 19, 2017 5:00 PM
Due: Jul 26, 2017
Priority: 5 Day
Contact Name: Aaron Smith

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos Absence / Presence	Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 18217								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	B3_LP02	Jul 19, 2017		Paint	S17-JI22467			X
2	B7_LP03	Jul 19, 2017		Paint	S17-JI22468			X
3	B15_AD01	Jul 19, 2017		Dust	S17-JI22469	X		
4	B15_LD01	Jul 19, 2017		Dust	S17-JI22470		X	
5	B16_LD01	Jul 19, 2017		Dust	S17-JI22471		X	
6	B16_LD02	Jul 19, 2017		Dust	S17-JI22472		X	
Test Counts						1	3	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank										
Heavy Metals										
Lead				mg/kg	< 5			5	Pass	
LCS - % Recovery										
Heavy Metals										
Lead				%	105			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1				Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery										
Heavy Metals										
Lead					Result 1					
Lead				S17-JI25963	NCP	%	123		70-130	Pass
Test	Lab Sample ID	QA Source	Units	Result 1				Acceptance Limits	Pass Limits	Qualifying Code
Duplicate										
Heavy Metals										
Lead					Result 1	Result 2	RPD			
Lead				S17-JI03536	NCP	mg/kg	34	36	6.0	30% Pass

Comments

Sample Integrity

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

Authorised By

Nibha Vaidya Analytical Services Manager
Nibha Vaidya Senior Analyst-Asbestos (NSW)



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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012526

CHAIN OF CUSTODY

[illegible]

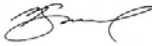
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		Name	Name	Signature	Date
A	Aaron Smith	Michael Samuel	Michael Samuel		09/06/2017

