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ASBESTOS CONTAINING BUILDING MATERIALS SURVEY REPORT

Rapid Creek Business Village

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1 SCOPE

SLR Consulting Australia Pty Ltd (SLR) was requested by Costa Miaoudis of Rapid Creek Business Village to undertake asbestos building materials surveys of the shops and offices located at the Rapid Creek Business Village (the Site) to assess the location, extent, type and condition of Asbestos Containing Materials (ACMs). Upon completion of the on-site assessments, this report presents the results of the inspections.

2 INSPECTION DETAILS

2.1 Site Description

The Site is an operational business village and shopping centre and is located on Trower Road in Rapid Creek. An aerial photograph showing the location of the Site is shown in **Figure 1**.



Figure 1 Aerial photograph showing location of the Site.

A floor plan of the Site is provided as **Appendix A**. For the purpose of this report, Trower Road is taken to run in an east west direction, directly adjacent to the site.

The majority of the survey was undertaken by Paul Turyn on 12 December 2014 with the remaining inspections completed by Liam Munro on 09 January 2015.

The following information is known about the Sites:

- The Site is primarily of either block or masonry construction with a steel roof and walkway coverings. The Site is predominantly used for commercial purposes and contains various retails and commercial outlets.

Relevant photographs taken during the inspection are provided in **Appendix C**.

3 LIMITATIONS

Surveys are conducted in a conscientious and professional manner. The nature of the task and the likely disproportion between any damage or loss which might arise from the work or reports prepared, and the cost of our services, is such that SLR cannot guarantee that all asbestos building materials have been identified and/or addressed.

Due to the possibility of renovations and additions to the building(s) over time, ACMs may have been concealed (for example behind new walls, flooring, ceilings, within boxing, etc), such areas were inaccessible during the inspection. It is recommended that prior to any refurbishment/demolition works at the site that a full destructive asbestos building materials refurbishment/demolition survey is undertaken by a suitably qualified and experienced consultancy, such as SLR. If any materials reasonably suspected of containing asbestos are found on site, which are not identified within this report, the client's independent consultant, SLR, should be contacted to complete additional confirmatory sampling and analysis as required.

A change in building use/nature of activities could affect the control actions recommended within this report and a re-survey may be required.

Thus, while we carry out the work to the best of our ability, we totally exclude any loss or damages which may arise from services we have provided to Carpentaria Disability Services and/or associated parties.

Where potentially ACMs are identified these are normally reported on to the best of the consultant's ability. Analysis is not normally included and there is no guarantee that all such materials have been identified and/or addressed.

All work conducted and reports produced by SLR are prepared for a particular Client's objective and are based on a specific scope, conditions and limitations, as agreed upon between SLR and the Client. Information and/or report(s) prepared by SLR may therefore not be suitable for any use other than the intended objective. No parties other than the Client should use any information and/or report(s) without first conferring with SLR.

Before passing on to a third party any information and/or report(s) prepared by SLR, the Client is to inform fully the third party of the objective and scope, and all limitations and conditions, including any other relevant information which applies to the information and/or report(s) prepared by SLR.

It is the responsibility of third parties to investigate fully to their satisfaction if any information and/or report(s) prepared by SLR are suitable for a specific objective.

The report(s) and/or information produced by SLR should not be reproduced and/or presented/reviewed except in full.

4 SURVEY STRATEGY

The purpose of this survey is to locate, as far as reasonably practicable, the presence, type and extent of any suspect ACMs in the building(s), to assess their condition, provide a suitable risk assessment/rating and recommended control actions based on the condition of the materials at the time of the survey.

The survey consisted of a visual inspection with limited sampling/analysis of materials undertaken by a trained and experienced surveyor. Materials are assumed to contain asbestos where:

- Laboratory analysis has confirmed the presence of asbestos in a visually similar material; or
- Materials visually appear to be asbestos containing but no sample was collected, for example due to access restraints or similarity to previously sampled material.

Samples are typically collected using a hand tool or core borer. Hand drills and other tools are used where required. Power tools were not used during the survey.

4.1 Sample Analysis

Samples obtained from materials suspected to contain asbestos are analysed by our 'In House' NATA accredited laboratory using a combination of stereo microscopy, polarised light microscopy and dispersion staining techniques. Due to the limited extent of asbestos fibres within certain manufactured or installed materials, including but not limited to, vinyl floor tiles and decorative sprayed coatings (such as vermiculite); and where the aforementioned analytical methods determine that asbestos was not detected, it may be advisable that additional analysis be considered using Scanning Electron Microscopy (SEM) or X-ray diffraction.

4.2 Exclusions

Unless specifically noted, the survey did not cover

- Wall/ceiling panelling behind laminations/coverings.
- Concealed floor coverings beneath carpet or superficial floor coverings.
- Fuses within 'live' electrical panelling. Fuses of a certain age may contain asbestos containing flashguards.
- Hidden and/or inaccessible locations such as in or under concrete slabs, in or under vinyl/linoleum/carpet, wall cavities, hidden storage areas and the like. If the vinyl or linoleum is tested, this does not necessarily mean that the resin/glue is included in the analysis.
- Lift wells and inaccessible/unidentified shafts, cavities and the like.
- Air conditioning, heating, mechanical, electrical or other equipment.
- General exterior ground surfaces and subsurface areas e.g. asbestos in fill/soil.
- Materials dumped, hidden, or otherwise placed in locations which one could not reasonably anticipate.
- Materials other than normal building fabric, materials in laboratories or special purpose facilities and building materials that cannot be reasonably and safely assessed without assistance.

Materials other than asbestos are generally outside the scope as identification can require specialised analysis/inspection techniques.

Settled dust is generally not sampled or commented on. Settled dust may contain asbestos, particularly if it is in the vicinity of ACMs or areas where ACMs have been removed.

4.3 Risk Assessment, Control Actions & Asbestos Classification

4.3.1 Material Assessment

In order to assess the potential for fibre release from an ACM a Material Assessment is undertaken for each identified (sampled or assumed) material noted during the survey inspection.

The four principle parameters determining the amount of fibre released from an ACM when subject to disturbance are:

- Product type;
- Extent of damage or deterioration;
- Surface treatment; and
- Asbestos type.

Each of these variables are given a score of between 0 and 3 which can then be added together to obtain a Material Assessment Rating of between 2 and 12. A low Material Assessment Rating indicates a low potential for fibre release and a high Material Assessment Rating indicates a high potential for fibre release. Please note that all assumed ACMs are scored as crocidolite (i.e. Asbestos Type score = 3) unless there is strong evidence to show otherwise to indicate a worst case scenario. Non-asbestos containing materials are not scored.

The Material Assessment Algorithm used during the survey is provided in **Table 1**.

4.3.2 Risk Assessment Rating

The purpose of a Risk Assessment Rating is to allow informed decisions to be made about ACMs, including control measures or required remedial actions, induction and training, air monitoring, health surveillance requirements, etc. It also assists in the prioritisation of the implementation of management actions.

Further to the positive or assumptive identification of an ACM and the completion of the Material Assessment (**Section 4.3.1**), a Risk Assessment Rating is compiled for each item. The Risk Assessment Rating categories as detailed in **Table 1** have been compiled in order for appropriate ACM management procedures to be implemented.

The Risk Assessment Rating categories are described as 'High', 'Medium', 'Low', or 'Very low' and have been assigned to each positive or assumptive identification of ACMs during the survey. A 'High' Risk Assessment Rating indicates a material that will more readily release airborne fibers if disturbed.

Table 1: Asbestos Risk Assessment (Material Assessment) Algorithm

Sample variable		Score	Examples of scores
A	Product type (or debris from product)	1	Asbestos-reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, BEBB, asbestos cement etc).
		2	AIB, millboards, other low-density insulation boards (LDB), asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt.
		3	Thermal insulation (eg pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing.
B	Extent of damage/deterioration	0	Good condition: no visible damage.
		1	Low damage: a few scratches or surface marks, broken edges on boards, tiles etc.
		2	Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibres.
		3	High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris.
C	Surface treatment	0	Composite materials that are sealed by nature (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, BEBB), or Encapsulated FCS, AC
		1	Unsealed FCS, AC, or Encapsulated AIB, millboard, other LDB (with exposed face painted/encapsulated), asbestos textiles, gaskets, ropes and woven textiles, asbestos paper, card. Enclosed Insulation (lagging, sprays, loose asbestos, mattresses, packing).
		2	Unsealed AIB, millboard, other LDB, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and card, or Encapsulated Insulation (lagging, sprays, loose asbestos, mattresses, packing.
		3	Unsealed Insulation (lagging, sprays, loose asbestos, mattresses, packing).
D	Asbestos type	1	Chrysotile.
		2	Amphibole asbestos excluding crocidolite.
		3	Crocidolite.
Total			

Table 2: Risk Assessment Rating Based Upon Materials Assessment Algorithm

Score	Potential to release asbestos fibres
10 or more	High
7-9	Medium
5-6	Low
4 or less	Very Low

4.3.3 Control Actions

Based upon a combination of our surveyors judgment on site and the Risk Assessment Rating for each identified/assumed ACM noted on site, recommended Control Measures as detailed in **Table 3** have been applied to each occurrence in the Asbestos Containing Materials Register in **Section 5**.

4.3.4 ACM Classification

ACMs are classified as friable or non-friable in accordance with the *Work Health and Safety Regulations 2011*. SLR consulting has classified all identified/assumed ACMs noted on site as friable or non-friable in accordance with the criteria set out in the Regulations (as noted in the Asbestos Containing Materials Register in **Section 5**). This will assist the Client with the on-going management of ACMs and any necessary abatement works.

Generally, asbestos abatement works require a license issued by a regulator. The requirement for an asbestos licence to undertake asbestos abatement works are as follows:

Class A (or friable) licence is required for works involving:

- Friable asbestos;
- Asbestos contaminated dust associated with the removal of friable asbestos.

Class B license (or bonded) (or Class A (or friable)) licence is required for works involving:

- More than 10m² of non-friable asbestos;
- Asbestos contaminated dust associated with the removal of more than 10m² of non-friable asbestos.

No license is required for works involving:

- Up to 10m² of non-friable asbestos;
- Asbestos contaminated dust:
 - That is associated with the removal of up to 10m² of non-friable asbestos.
 - That is not associated with the removal of friable/non-friable asbestos and is only a 'minor contamination'.

Table 3: Recommended Control Measures

Control Number	Action
C1	Manage <i>in-situ</i>
C2	Incorporate into a current / develop an Asbestos Management Plan
C3	Label as asbestos containing in accordance with Australian Standard 1319-1994 <i>Safety Signs for the Occupational Environment</i>
C4	Re-inspect conditions every 5 years or sooner if deemed necessary in accordance with the <i>Work Health and Safety Regulations 2011</i> & <i>Code of Practice 'How to Manage and Control Asbestos in the Workplace' [Safe Work Australia (2011)]</i>
C5	Consider further sampling/analysis to establish whether asbestos is present within the material
C6	Seal damaged edges with an appropriate sealant such as Emerclad paint. Ensure that loose sheets are fixed in place (utilise correct PPE and cleaning equipment). Alternatively remove damaged sheets.
C7	Encapsulate/enclose in accordance with the <i>Work Health and Safety Regulations 2011</i> & <i>Code of Practice 'How to Safely Removal Asbestos' [Safe Work Australia (2011)]</i>
C8	Undertake a suitable and sufficient Risk Assessment prior to access, which may include the use of appropriate PPE & RPE

5 ASBESTOS CONTAINING MATERIALS REGISTER

The following table is a register of all identified ACMs on site, confirmed through analysis or assumed materials deemed to be homogenous or consistent in appearance and manufacture to similar samples collected. This Summary of Asbestos Materials should be read in conjunction with all sections of this report.

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
Shop 1 – Happy Food land											
Internal/FCS/AC ceiling tiles throughout	Assumed	1	~200m ²	Non-Friable	1	1	0	3	5 - Low	C1, C2, C3, C4, C8	
Internal/VFT/Winyl floor tiles throughout	Assumed	2	~100m ²	Non-Friable	1	1	0	1	3 –Very Low	C1, C2, C3, C4, C6, C8	Various tiles and colour throughout. Appears some may have been replaced with non – asbestos vinyl floor tiles. Assumed half of the tenancy area is still asbestos containing VFT
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 1 during the investigation											
Shop 2 – Rapid Japanese Cafe											
Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible internal and external areas of Shop 2 during the investigation											

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
Shop 3 – Ken Vowles MLA											
Internal / FCS / AC sheeting to riser in kitchen	680.10137.00000/9	3	~2m ²	Non-Friable	1	0	0	2	3 – Very Low	C1, C2, C3, C4, C8	
Internal / FCS / AC sheeting to riser in boardroom	Assumed based on similarity to sample no: 680.10137.00000/9	4	~2m ²	Non-Friable	1	0	0	2	3 – Very Low	C1, C2, C3, C4, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 3 during the investigation											
Shop 4 – Renee's Pizzeria											
Internal / FCS / AC ceiling tiles throughout	Assumed	5	~100m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	Ceiling tiles reported to be in-situ beneath gyprock ceiling lining to centre of shop
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 4 during the investigation											
Shop 5 - Vacant											
Internal / FCS / AC ceiling tiles throughout	Assumed	6	~100m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 5 during the investigation											
Shop 6 – Everest Groceries											
Internal / FCS / AC ceiling tiles throughout	Assumed	7,8	~110m ²	Non-Friable	1	1	0	3	5 – Low	C1, C2, C3, C4, C6, C8	Some damage/holes to some sheets – refer photos

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 6 during the investigation											
Shop 7 – H&R Block											
Internal / FCS / AC ceiling tiles to front office area	Assumed	9	~60m ²	Non-Friable	1	0	0	3	4 - Very Low	C1, C2, C3, C4, C8	
Internal / FCS / AC ceiling tiles to rear office area	Assumed	10	~40m ²	Non-Friable	1	0	0	3	4 - Very Low	C1, C2, C3, C4, C8	Note – AC tiles assumed to be in situ beneath newly refurbished office area to the south of the tenancy
Internal/FCS/Wall linings to toilet	Assumed	11	~10m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
Internal/FCS/Wall linings to northern and western walls of kitchen	Assumed	12	~15m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	Eastern wall appear to be gyprock
Internal/FCS/Backing boards to electrical boxes	Assumed	13	~2m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 7 during the investigation											
Shop 8 – Noc Massage											
Internal / FCS / AC ceiling tiles throughout	Assumed	14	~90m ²	Non-Friable	1	1	0	3	5 - Low	C1, C2, C3, C4, C6, C8	Some paint peeling and minor damage to some tiles

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
Internal/FCS/Wall linings to lower walls in Laundry – northern and eastern elevations	680.10137.00000/7	15	~15m ²	Non-Friable	1	2	0	2	5 – Low	C1, C2, C3, C4, C5, C8	Some damage to wall lining behind taps on eastern wall. This area should be repaired
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 8 during the investigation											
Shop 9 – Camp Quality											
Internal - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 9 during the investigation											
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 9 during the investigation											
Shop 10 – Jean Kute											
Internal / FCS / AC ceiling tiles throughout	Assumed	16	~100m ²	Non-Friable	1	1	0	3	5 - Low	C1, C2, C3, C4, C6, C8	Some paint peeling and minor damage to some tiles
Internal / FCS / AC sheeting to riser at left hand side of front entrance	Assumed	17	~3m ²	Non-Friable	1	1	0	3	5 – Low	C1, C2, C3, C4, C5, C6, C8	Refer photo of damage to material
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 10 during the investigation											
Shop 11 – Life Without Barriers											
Internal / FCS / AC ceiling tiles throughout	Assumed	18	~190m ²	Non-Friable	1	1	0	3	5 - Low	C1, C2, C3, C4, C6, C8	Water damage to some tiles
Internal / FCS / AC sheeting to riser in kitchen	Assumed	19	~3m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C6, C8	

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 11 during the investigation											
Shops 12, 13 and 14 - Greenies Real Food											
Internal / FCS / AC ceiling tiles throughout	Assumed	20	~170m ²	Non-Friable	1	1	0	3	5 - Low	C1, C2, C3, C4, C6, C8	Some paint peeling and minor damage to some tiles
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shops 12, 13 and 14 during the investigation											
Shop 15 - Down Syndrome											
Internal / FCS / AC ceiling tiles throughout	Assumed	21	~45m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal/FCS/Wall linings to toilet	Assumed	21	~15m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 15 during the investigation											
Shop 16 - Down Syndrome Association of the NT											
Internal / FCS / AC ceiling tiles throughout	Assumed	22	~75m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal/FCS/Backing board to electrical box	Assumed	23	~2m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 16 during the investigation											
Shop 17 - Parents Choice											
Internal / FCS / AC ceiling tiles throughout	Assumed	24	~50m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal/FCS/Backing board to electrical box	Assumed	25	~2m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 17 during the investigation											

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
Shop 18 - Arthritis and Osteoporosis NT											
Internal / FCS / AC ceiling tiles throughout	Assumed	26	~50m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal/FCS/Backing board to electrical box	Assumed	27	~2m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 18 during the investigation											
Shop 19 - Sids & Kids NT											
Internal / FCS / AC ceiling tiles throughout	Assumed	28	~40m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal/FCS/Backing board to electrical box	Assumed	N/A	~2m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
Internal/FCS/Bulk head to air conditioning ducting	Assumed	28	~10m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 19 during the investigation											
Shop 20 - Sids & Kids NT											
Internal / FCS / AC ceiling tiles throughout	Assumed	29	~60m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal/FCS/Backing board to electrical box	Assumed	30	~2m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
Internal/FCS/Bulk head to air conditioning ducting	Assumed	N/A	~10m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 20 during the investigation											
Shop 21 - Vacant											
Internal / FCS / AC ceiling tiles throughout	Assumed	31	~90m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal/FCS/Backing board to electrical box	Assumed	32	~2m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
Internal/FCS/Wall linings to toilet	Assumed	33	~15m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 21 during the investigation											
Shop 22 - Darwin Fish Market											
Internal / FCS / AC ceiling tiles throughout	Assumed	34	~55m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal/FCS/Backing board to electrical box	Assumed	34	~2m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 22 during the investigation											
Shop 23 - Panuku											
Internal / FCS / AC ceiling tiles throughout	Assumed	35	~55m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal/FCS/Textured AC sheeting to upper walls in rear office area	Assumed – based on consistency of material with 680.10137.00000/11	36	~30m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
Internal/FCS/Textured AC sheeting to upper walls in kitchen (west and north walls)	Assumed – based on consistency of material with 680.10137.00000/11	37	~40m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
Internal/FCS/Textured AC sheeting to office area (west wall)	Assumed – based on consistency of material with 680.10137.00000/11	38	~30m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 23 during the investigation											

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
Shops 24 and 25 - Asian Sari-Sari											
Internal / FCS / AC ceiling tiles throughout	Assumed	39	~110m ²	Non-Friable	1	1	0	3	5 - Low	C1, C2, C3, C4, C5, C6, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shops 24 and 25 during the investigation											
Shop 26 - Vacant											
Internal / FCS / AC ceiling tiles throughout	Assumed	40	~50 m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal/FCS/Textured AC sheeting to northern wall and approximately half the length of the eastern wall	Assumed – based on consistency of material with 680.10137.00000/11	41,42	~30m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 26 during the investigation											
Shop 27 - Reference African Supermarket											
Internal / FCS / AC ceiling tiles throughout	Assumed	N/A	~50 m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 27 during the investigation											
Shop 27A - Vacant											
Internal / FCS / AC ceiling tiles throughout	Assumed	43	~20 m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal/FCS/AC lining to riser in service cupboard	Assumed	44	~5m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
Internal/FCS/Backing board to electrical box	Assumed	45	~1m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 27A during the investigation											
Shop 28 - 3D fitness studios											
Internal / FCS / AC ceiling tiles throughout	Assumed	46	~150m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
Internal/FCS/Backing board to electrical box	Assumed	47	~15m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 28 during the investigation											
Shop 28A - Centre Management											
Internal / FCS / AC ceiling tiles stored behind AC ducting (north eastern corner of upper plant room)	Assumed	48	~8m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 28A during the investigation											
Shop 29 - Vacant											
Internal / FCS / AC ceiling tiles throughout	Assumed	49	~110m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 29 during the investigation											
Shop 29B - Team Health – Day to Day Living											
Internal / FCS / AC ceiling tiles throughout	Assumed	50	~150m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	All assumed to be ACM as there are no records as to which have been replaced
Internal/FCS/Backing board to electrical box	Assumed	51	~15m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C5, C8	
External/FCS/AC sheeting to fascia of awning x 2	680.10137.00000/3	52	~6m ²	Non-Friable	1	2	0	2	5 –Low	C1, C2, C3, C4, C6, C8	
Shop 32 - Vacant											
Internal / FCS / AC ceiling tiles throughout	Assumed	53	~105m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 32 during the investigation											

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
Shop 33 - Vacant											
Internal / FCS / AC ceiling tiles throughout	Assumed	54	~150m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
Internal / FCS / AC sheeting to upper walls	Assumed	55, 56	~100m ²	Non-Friable	1	0	0	3	4 – Very Low	C1, C2, C3, C4, C8	
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 32 during the investigation											
Shop 34 - Vacant											
Internal / FCS / AC ceiling tiles throughout	Assumed	57, 58	~520m ²	Non-Friable	1	2	0	3	6 –Low	C1, C2, C3, C4, C5, C6, C8	All assumed to be ACM as there are no records as to which have been replaced
External - Within the scope and limitations of this survey, no asbestos containing materials were identified to the accessible external areas of Shop 34 during the investigation											
Walkway between Shop 34 and 35 -											
External / FCS / AC ceiling tiles throughout	Assumed	59	~30 m ²	Non-Friable	1	2	0	3	6 –Low	C1, C2, C3, C4, C5, C6, C8	All assumed to be ACM as there are no records as to which have been replaced

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
Shop 35 – H&R Block											
Internal / FCS / AC ceiling tiles throughout	Assumed	60	~80m ²	Non-Friable	1	2	0	3	6 –Low	C1, C2, C3, C4, C5, C6, C8	All assumed to be ACM as there are no records as to which have been replaced
Public Toilets											
Internal / FCS / AC sheet ceiling lining to Male toilets	680.10137.00000/6	61	~10m ²	Non-Friable	1	0	0	2	3 – Very Low	C1, C2, C3, C4, C5, C8	
Internal / FCS / AC sheet ceiling lining to Cleaners room	Assumed – based on consistency of material with 680.10137.00000/6	N/A	~5m ²	Non-Friable	1	0	0	2	3 – Very Low	C1, C2, C3, C4, C5, C8	Not accessed, visually assessed through window
Internal / FCS / AC sheet ceiling lining to Female toilets	Assumed – based on consistency of material with 680.10137.00000/6	62	~10m ²	Non-Friable	1	0	0	2	3 – Very Low	C1, C2, C3, C4, C5, C8	
Tenant Toilets											
Internal / FCS / AC sheet ceiling lining and bulk head to Male toilets	Assumed – based on consistency of material with 680.10137.00000/6	63	~10m ²	Non-Friable	1	0	0	2	3 – Very Low	C1, C2, C3, C4, C5, C8	

Item Location & Material Type	Sample No./ Assumed	Photo No.	Approx. Extent	Non-Friable/ Friable	Product Type (A)	Extent of Damage /Deterioration (B)	Surface Treatment (C)	Asbestos Type (D)	Risk Assessment (Material Assessment) Score & Rating (A+B+C+D)	Recommended Control Actions	Comments
Internal / FCS / AC sheet ceiling lining to Power Room 2	Assumed – based on consistency of material with 680.10137.00000/6	64, 65	~1m ²	Non-Friable	1	2	2	2	7 – Medium	C1, C2, C3, C5, C8	Ceiling reportedly damaged by fire. Broken edges of AC sheeting material remain in situ. This needs to be remediated
Internal / FCS / AC sheet debris to Power Room 2 floor	Assumed – based on consistency of material with 680.10137.00000/6	66	~1m ²	Non-Friable	1	2	2	2	7 – Medium	C1, C2, C3, C5, C8	AC sheeting debris present to ground. Area is to be remediated
Internal / FCS / AC sheet ceiling lining to Female toilets	Assumed – based on consistency of material with 680.10137.00000/6	67	~10m ²	Non-Friable	1	0	0	2	3 – Very Low	C1, C2, C3, C4, C5, C8	

Notes:

- There appears to be a number of risers throughout the complex which appear to be cement sheet material. Sampling proved inconsistent with one sample (Sample 9) returning positive asbestos results and the second sample (Sample 10) returning negative asbestos results. SLR recommend that all risers be assumed to be asbestos containing material until proven otherwise.
- FCS = Fibre Cement Sheeting;
- The Asbestos Containing Materials Register should be read in conjunction with all sections of this report.
- Sample analysis/test results are detailed in **Section 6** of this report.
- All other similar occurrences of the ACMs identified in the summary table above should be assumed to contain asbestos, and treated accordingly, unless sampling and analysis confirms otherwise.
- The areas and approximate extents given above are approximates only and should not be used for the purpose of removal.
- Any actions taken to control asbestos materials subsequent to this report are to be recorded in the Asbestos Materials Control Log attached in **Appendix B**.
- Refer to the General Information attached in **Appendix D**.

6 SAMPLE ANALYSIS/TEST RESULTS

Table 4: Asbestos Sample Analysis Results

Asbestos Sample Number	Sample Type	Sample Location	Analysis Result
680.10137.00000/1	VFT	Shop 28 – VFT to bathroom access hallway	No Asbestos Detected (Organic Fibres Detected)
680.10137.00000/2	VFT	Shop 28 – VFT to Switch room 1	No Asbestos Detected (Organic Fibres Detected)
680.10137.00000/3	FCS	Shop 29B - Cement sheet to fascia panels of awning	Chrysotile Asbestos Detected, Amosite Asbestos Detected
680.10137.00000/4	Settled dust	Shop 34 – Dust/debris to top of airconditioning duct	Trace Asbestos not detected (Organic Fibres Detected)
680.10137.00000/5	VFT (incl glue)	Shop 16 – VFT beneath Vinyl flooring to toilet	No asbestos detected
680.10137.00000/6	FCS	Public toilets - Cement ceiling lining to male toilets	Chrysotile Asbestos Detected (Organic Fibres Detected)
680.10137.00000/7	FCS	Shop 8 – Cement sheet to lower wall linings of laundry	Chrysotile Asbestos Detected, Amosite Asbestos Detected (Organic Fibres Detected)
680.10137.00000/8	FCS	Power room 2 – Compressed AC sheeting to shelf	No Asbestos Detected (Organic Fibres Detected)
680.10137.00000/9	FCS	Shop 3 - Cement sheeting to riser	Chrysotile Asbestos Detected (Organic Fibres Detected)
680.10137.00000/10	FCS	Shop 10 – Cement sheeting to riser	No Asbestos Detected (Organic Fibres Detected)
680.10137.00000/11	FCS	Shop 27 - Textured Cement sheet wall lining	Chrysotile Asbestos Detected (Organic Fibres Detected)

Notes:

FCS = Fibre Cement Sheeting; VFT= Vinyl Floor Tiles

7 RECOMMENDATIONS

As previously detailed in the Scope (**Section 1**), SLR was appointed to complete surveys and assessments of various residences throughout the Rapid Creek Business Centre with regards to the identification of ACMs. The extent of the inspection and samples collected for subsequent analysis was completed in order to confirm, as far as reasonably practicable, the location, condition and risk presented by ACMs remaining *in-situ* (and was based on the level of access available).

Further to the completion of the on-site investigation and collection/analysis of samples, there are detailed site/work-specific requirements and precautions that must be taken in the management, control and removal of ACMs. In addition to those listed on the Asbestos Containing Materials Register (**Section 5**), the following are some general recommendations and precautions that should be considered. Detailed documents, which may include Management Plans, Scope of Works, Safe Work Method Statements and Risk Assessments, should be prepared to appropriately address health and safety issues associated with specific work and site conditions.

- Materials which have been marked as damaged should be repaired as soon as possible.
- The ACM identified to be present within Power Room 2 requires immediate attention. These materials should be remediated as soon as possible.
- This document should be held as an Asbestos Register of the areas inspected and updated every 5 years or earlier where ACMs have been disturbed or a risk assessment indicates the need for re-assessment. All occupiers of the workplace are to be provided with a copy of this register and all updates to it.
- If any material that may contain asbestos is found on site the material should be sent for identification and expert advice sought. The material should be assumed to contain asbestos in the interim.
- As a precautionary measure, all materials, which may contain asbestos, should be assumed to contain asbestos and treated appropriately until sampling and analysis confirms otherwise.
- In order to comply with the *Work Health and Safety Regulations 2011*, any action taken to control asbestos and ACM in the place of work, or in plant at the place of work, is to be recorded in this register. These details are to be recorded in the Asbestos Control Log attached in **Appendix B**.
- All non-friable ACMs in an in-tact condition may remain *in-situ* provided they are not drilled, ground or otherwise disturbed. If generated, broken pieces are to be removed as soon as practicable. As part of good ongoing management we recommend regular inspections of ACMs left *in-situ* to check the condition of these materials.
- As a precautionary measure, any minor damaged, exposed/damaged edges of ACMs remaining *in-situ* may be sealed with an appropriate sealant, such as Emerclad paint, to minimise the risk of generating airborne asbestos fibres if/when these materials are disturbed.
- Any areas of the workplace that contain ACM including plant, equipment and components should be signposted with appropriate warning signs to ensure that asbestos is not unknowingly disturbed without the correct precautions being taken. These signs should be placed at all the main entrances to the work areas where asbestos is present and should conform with Australian Standard 1319-1994 *Safety Signs for the Occupational Environment*.
- If asbestos materials become significantly damaged, weathered and/or produce visible dust or significant debris, then health and safety management works are likely to be required. A suitably qualified and experienced consultant, such as SLR Consulting, can advise and assist in carrying out such works.
- Prior to renovation or demolition works a refurbishment/demolition asbestos building materials survey should be undertaken by a suitable qualified and experience consultancy, such as SLR Consulting.
- All asbestos-containing materials are to be removed prior to refurbishment or demolition.

- Prior to asbestos abatement works, a Technical Scope of Works (Work Plan) for asbestos removal should be prepared by a suitably qualified and experienced consultant, such as SLR Consulting, detailing the procedures and precautions for asbestos works/removal.
- Generally, all asbestos removal/decontamination should be undertaken by a licensed, experienced Asbestos Removal Contractor working in accordance with the above-mentioned Scope of Works.
- Safe Work Australia requires an Asbestos Licence for the removal of friable asbestos and more than 10m² of non-friable asbestos. All licensable asbestos works require WorkSafe NT notification.
- Each licensed asbestos removal contractor must have an approved “Safe Work Method Statements” and “Risk Assessments” prior to the commencement of work.
- According to the *Code of Practice How to Safely Remove Asbestos 2011*, air monitoring should be performed whenever ACMs are being removed to ensure that the control measures are effective. It is mandatory to undertake air monitoring when removing friable asbestos. Once removal is complete the area should be inspected by a suitably qualified and experienced consultant, such as SLR Consulting, and a clearance certificate issued. Obtaining a clearance certificate following friable asbestos removal is mandatory.
- The consultant conducting the air monitoring and clearance inspection should report directly to the client/principal contractor and be independent of the Asbestos Removal Contractor.
- Refer to the General Information attached in **Appendix D** of this report.

8 CONCLUSIONS

- Asbestos has been identified and/or assumed at a number of the sites.
- Materials which have been marked as damaged should be repaired as soon as possible.
- The ACM identified to be present within Power Room 2 requires immediate attention. These materials should be remediated as soon as possible.
- This document should be held as an Asbestos Materials Register of the areas inspected and updated every 5 years or earlier where ACMs have been disturbed or a risk assessment indicates the need for re-assessment. All occupiers of the workplace are to be provided with a copy of this register and all updates to it.
- If any material that may be asbestos containing is found on site the material should be sent for identification and expert advice sought. The material should be assumed to be asbestos containing in the interim.
- In order to comply with the *Work Health and Safety Regulations 2011*, any action taken to control ACMs in the place of work, or in plant at the place of work, is to be recorded in this register. These details are to be recorded in the Asbestos Materials Control Log attached in **Appendix B**.
- All non-friable ACMs in an in-tact condition may remain *in-situ* provided they are not drilled, ground or otherwise disturbed. If generated, broken pieces are to be removed as soon as practicable. As a part of good ongoing management we recommend regular inspections of asbestos materials left *in-situ* to check the condition of these materials.

9 LEGISLATION, GUIDELINES AND REGULATIONS

- Work Health and Safety Act 2011
- Work Health and Safety Regulations 2011
- Code of Practice for How to Safely Remove Asbestos [Safe Work Australia (2011)]
- Code of Practice for How to Manage and Control Asbestos in the Workplace [Safe Work Australia (2011)]
- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition [National Occupational Health and Safety Commission: 3003 (2005)]
- AS/NZS 1716-2003 - Respiratory Protective Devices
- AS/NZS 1715-1994 - Selection, Use and Maintenance of Respiratory Protective Devices
- AS 2601-2001 - The Demolition of Structures
- AS 1319-1994 Safety Signs for the Occupational Environment

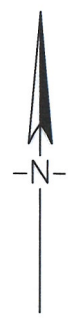
10 CLOSURE

This report has been prepared by SLR with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Rapid Creek Business Village. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

APPENDIX A – SITE FLOOR PLAN



TENANCY AREAS	
TENANCY	AREAS
1	198.7m ²
2	99.4m ²
3	126.7m ²
4	95.1m ²
5	94.7m ²
6	106.9m ²
7	97.4m ²
8	88.6m ²
9	126.7m ²
10	96.9m ²
11	187.9m ²
12-13	111.2m ²
14	56.1m ²
15	45.1m ²
16	72.9m ²
17	52.9m ²
18	49.8m ²
19	41.3m ²
20	57.4m ²
21	91.8m ²
22	55.2m ²
23	55.8m ²
24-25	109.3m ²
26-27	98.2m ²
27A	21.7m ²
28	148.4m ²
28A	40.3m ²
29	109.4m ²
29B	238.1m ²
32	103.8m ²
33	150.8m ²
34	518.9m ²
35	78.9m ²



Note
Areas are Gross Lettable Area - Retail
Areas have been calculated using the Property
Council of Australia Method of Measurement,
March 1997



eja
earl james & associates

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LOTS 1836, 1837, 4861 TO 4863 AND 8635

TOWN OF NIGHTCLIFF

LEASE SURVEY

Client: **433 QUEEN STREET PTY LTD**

Glenn
Licensed Surveyor
Date: 19/11/14
Drawn by: GL
Date: 19.11.14
Cad File: 6967-5B.DWG

Scale: 1:500 (A3)
Datum:
Drawing No: **14/6967/5B**

Appendix B

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ASBESTOS MATERIALS CONTROL LOG

To comply with the *Work Health and Safety Regulations 2011*, all actions taken to control asbestos and asbestos containing materials are to be recorded in the table below. It is recommended that similar details also be recorded for any other asbestos materials identified.

NAME	COMPANY	DATE	ASBESTOS MATERIAL RELATED WORK UNDERTAKEN (Include any assessment concerning asbestos that took place before the work was carried out)	REFERENCE NUMBER (Include sample numbers, report numbers, quote number and/or purchase order number etc)
Paul Turyn	SLR Consulting Australia Pty Ltd	22/01/15	Asbestos Building Materials Survey	Report No 680.10137.00000/ASR1/R0

APPENDIX C - PHOTOGRAPHS

PHOTOGRAPHS



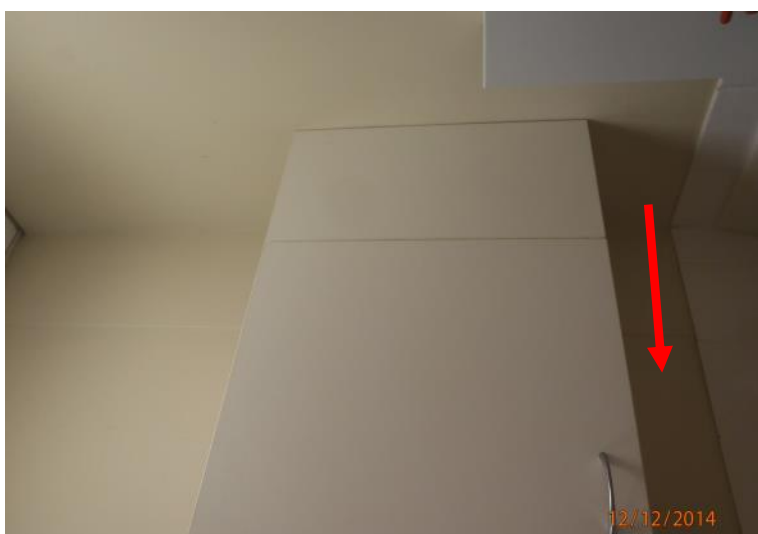
Photograph 1

AC ceiling tiles throughout Shop 1
(assumed asbestos containing).



Photograph 2

Vinyl Floor Tiles to Shop 1 – photo
shows numerous different tile colours
(assumed asbestos containing).



Photograph 3

AC sheeting to riser in Shop 3 kitchen
(asbestos containing).

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PHOTOGRAPHS



Photograph 4

AC Sheeting to riser in Shop 3
boardroom
(assumed asbestos containing).



Photograph 5

AC Ceiling tiles to Shop 4
(assumed asbestos containing).



Photograph 6

AC Ceiling tiles to Shop 5
(assumed asbestos containing).

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PHOTOGRAPHS



Photograph 7

AC Ceiling tiles to Shop 6

(assumed asbestos containing).



Photograph 8

Minor damage to AC Ceiling tiles to Shop 6

(assumed asbestos containing).



Photograph 9

AC Ceiling tiles to main office area of Shop 7

(assumed asbestos containing).

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PHOTOGRAPHS



Photograph 10

AC Ceiling tiles assumed to be present above the refurbished false ceiling to the rear office of Shop 7 (assumed asbestos containing).



Photograph 11

AC sheet wall lining to toilet area in Shop 7 (assumed asbestos containing).



Photograph 12

AC sheet wall lining to kitchen area in Shop 7 (assumed asbestos containing).

PHOTOGRAPHS



Photograph 13
Backing boards to electrical boxes in
Shop 7
(assumed asbestos containing).



Photograph 14
AC ceiling tiles throughout Shop 8
(assumed asbestos containing).



Photograph 15
AC sheet to lower wall lining to
laundry area of Shop 8 – note
damage around tap
(assumed asbestos containing).

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PHOTOGRAPHS



Photograph 16

AC ceiling tiles throughout Shop 10
(note water damage)

(assumed asbestos containing).



Photograph 17

AC sheeting to riser in Shop 10

(assumed asbestos containing).



Photograph 18

AC ceiling tiles throughout Shop 11
(note water damage)

(assumed asbestos containing).

PHOTOGRAPHS



Photograph 19

AC ceiling tiles throughout Shop 10
(note water damage)
(assumed asbestos containing).



Photograph 20

AC ceiling tiles throughout Shops 12,
13 and 14 (representative)
(assumed asbestos containing).



Photograph 21

AC ceiling tiles throughout Shop 15
and AC wall lining to toilet
(assumed asbestos containing).

PHOTOGRAPHS



Photograph 22

AC ceiling tiles throughout Shop 16

(assumed asbestos containing).



Photograph 23

Backing board to electrical box in Shop 16

(assumed asbestos containing).



Photograph 24

AC ceiling tiles throughout Shop 17
(assumed asbestos containing).

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PHOTOGRAPHS



Photograph 25

Backing board to electrical box in
Shop 17

(assumed asbestos containing).



Photograph 26

AC ceiling tiles throughout Shop 18
(assumed asbestos containing).



Photograph 27

Backing board to electrical box
(assumed asbestos containing).

PHOTOGRAPHS



Photograph 28

AC ceiling tiles throughout Shop 19
and AC sheeting to A/C ductwork
(assumed asbestos containing).



Photograph 29

AC ceiling tiles throughout Shop 20
(assumed asbestos containing).



Photograph 30

Backing board to electrical box in
Shop 20
(assumed asbestos containing).

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PHOTOGRAPHS



Photograph 31

AC ceiling tiles throughout Shop 21
(assumed asbestos containing).



Photograph 32

Backing board to electrical box
(assumed asbestos containing).



Photograph 33

AC sheeting to wall linings of toilet
(assumed asbestos containing).

PHOTOGRAPHS



Photograph 34

AC ceiling tiles throughout Shop 22
and backing board to electrical box
(assumed asbestos containing).



Photograph 35

AC ceiling tiles throughout Shop 23
(assumed asbestos containing).



Photograph 36

AC sheeting to upper walls in rear
area of Shop 23
(assumed asbestos containing).

PHOTOGRAPHS



Photograph 37

AC sheeting to upper walls in kitchen area of Shop 23
(assumed asbestos containing).



Photograph 38

AC sheeting to upper walls in office area of Shop 23
(assumed asbestos containing).



Photograph 39

AC ceiling tiles throughout Shops 24 and 25
(assumed asbestos containing).

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PHOTOGRAPHS



Photograph 40

AC ceiling tiles throughout Shop 26
(assumed asbestos containing).



Photograph 41

Textured AC sheeting to wall linings
in Shop 26
(asbestos containing).



Photograph 42

Textured AC sheeting to wall linings
in Shop 26
(asbestos containing).

PHOTOGRAPHS



Photograph 43

AC ceiling tiles throughout Shop 27A
(assumed asbestos containing).



Photograph 44

AC sheeting to riser in Shop 27A
(assumed asbestos containing).



Photograph 45

Backing board to electrical box in
Shop 27A
(assumed asbestos containing).

PHOTOGRAPHS



Photograph 46
AC ceiling tiles throughout Shop 28
(assumed asbestos containing).



Photograph 47
Backing boards to electrical boxes (x
2) to Shop 28 (Power Room 1)
(assumed asbestos containing).



Photograph 48
Loose AC ceiling tiles stored behind
AC ducting to upper plant room off
Shop 28A
(assumed asbestos containing).

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PHOTOGRAPHS



Photograph 49

AC ceiling tiles throughout Shop 29
(assumed asbestos containing).



Photograph 50

AC ceiling tiles throughout Shop 29
(assumed asbestos containing).



Photograph 51

Backing board to electrical box
(assumed asbestos containing).

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PHOTOGRAPHS



Photograph 52

AC sheeting to awning (x 2 – north and south elevations)

(asbestos containing).



Photograph 53

AC ceiling tiles throughout Shop 32

(assumed asbestos containing).



Photograph 54

AC ceiling tiles throughout Shop 33 – note water damage

(assumed asbestos containing).

PHOTOGRAPHS



Photograph 55

AC sheeting to upper walls of Shop 33

(assumed asbestos containing).



Photograph 56

AC sheeting to upper walls of Shop 33

(assumed asbestos containing).



Photograph 57

AC ceiling tiles throughout Shop 34
(representative)

(assumed asbestos containing).

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PHOTOGRAPHS



Photograph 58

AC ceiling lining throughout Shop 34 male toilet (representative)
(assumed asbestos containing).



Photograph 59

AC ceiling tiles to walkway area between Shops 34, 35 and 27A
(assumed asbestos containing).



Photograph 60

AC ceiling tiles throughout Shop 35
(assumed asbestos containing).

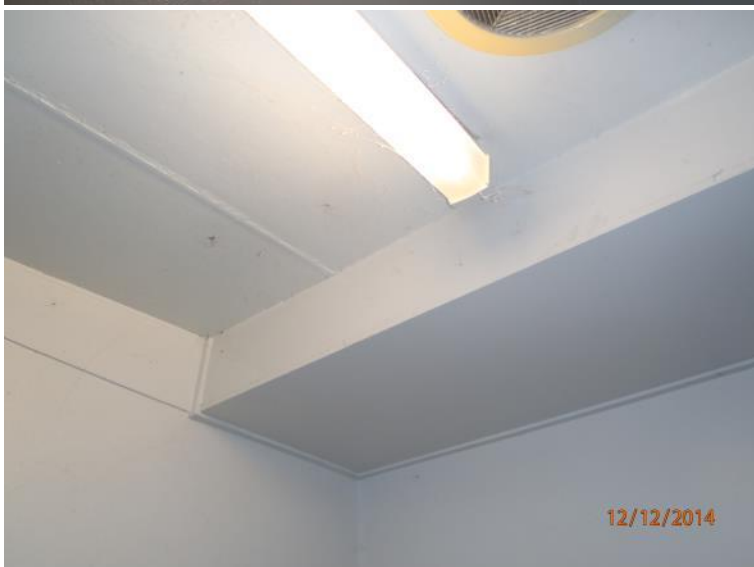
PHOTOGRAPHS



Photograph 61
AC sheeting ceiling to Male public
toilets
(asbestos containing).



Photograph 62
AC sheeting ceiling to female public
toilets
(assumed asbestos containing).



Photograph 63
AC sheeting to ceiling and bulkhead
of male tenant toilets
(assumed asbestos containing).

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PHOTOGRAPHS



Photograph 64

AC sheeting to ceiling of Power Room 2 – note broken edges
(assumed asbestos containing).



Photograph 65

AC sheeting to ceiling of Power Room 2 – note broken edges
(assumed asbestos containing).



Photograph 66

AC sheeting debris to ground of Power Room 2
(assumed asbestos containing).

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PHOTOGRAPHS



Photograph 67

AC sheeting to ceiling of Female
tenant toilets

(assumed asbestos containing).

GENERAL INFORMATION

ASBESTOS

Asbestos: Description, Properties and Uses

Asbestos is the generic term given to a group of naturally occurring fibrous minerals, based on hydrated silicates, which are found in various rock formations. Differing ratios of oxygen, hydrogen, sodium, iron, magnesium and calcium elements account for several different types of asbestos minerals, the most common varieties being Amosite (brown asbestos), Chrysotile (white asbestos), Crocidolite (blue asbestos). Other types include Anthophyllite, Actinolite and Tremolite.

The immense popularity of asbestos as a building material is attributed to its near unique properties of fire resistance, high abrasion resistance and superb acoustical characteristics coupled with its relatively low cost. Prior to 1973, asbestos was the material of choice for fire proofing, thermal insulation, sound insulation and abrasion resistance. It was used as a spray-on insulation of ceilings and steel girders; as a thermal insulation of boilers, pipes, ducts, air conditioning units, etc; as an abrasion resistant filler in floor tiles, vinyl sheet floor coverings, roofing and siding shingles; as a flexible, though resistant joining compound and filler of textured paints and gaskets; as the bulking material with the best wear characteristics for automobile brake shoes and in countless domestic appliances such as toasters, grills, dishwashers, refrigerators, ovens, clothes dryers, electric blankets, hair dryers, etc.

Asbestos: Health Effects

Many asbestos bearing materials or products are of no significant health risk whatsoever when used in the normal course of events. A health risk exists when asbestos fibres are released into the air and when that air is inhaled into the lungs. Even then, it appears that most people exposed to relatively small amounts of asbestos do not develop any related health problems. There is however no "safe" level of asbestos exposure since the risk is dependent on numerous factors including the time since exposure, exposure duration and concentration, asbestos type, the attributes of the particular individual and environmental factors such as exposure to cigarette smoke and other airborne pollutants.

There are three main diseases associated with airborne asbestos fibres:

Asbestosis - A fibrosis (or scarring) of the lung associated with relatively massive exposure to asbestos.

Lung Cancer - Indistinguishable from that caused by smoking and a common cause of death. The risk of lung cancer is much higher when there is exposure to both cigarette smoking and to airborne asbestos.

Mesothelioma - A cancer of the chest and abdominal lining, it is specific to asbestos exposure.

A feature of these diseases is that symptoms take a long time to appear, generally 5 to 40 years. Once symptoms are evident the disease progresses rapidly.

There is some evidence that Chrysotile asbestos is less carcinogenic than Amosite, and that Amosite is less carcinogenic than Crocidolite in causing mesothelioma, but the evidence is less clear for lung cancer.

Measurement of Airborne Asbestos Fibres

The *Work Health and Safety Regulations 2011* and the Safe Work Australia Asbestos Codes of Practice & Guidance Note set the maximum allowable time weighted average for all forms of asbestos at 0.1 fibre/mL of air.

Air monitoring is used to determine airborne fibre levels. SLR Consulting is NATA certified for Asbestos Fibre Counting and Volume Measurement to carry out such monitoring.

The Safe Work Australia Code of Practice *How to Safely Remove Asbestos 2011* states that air monitoring should be performed whenever Asbestos Containing Materials (ACMs) are being removed, to ensure the control measures are effective.

The onus to provide a safe environment rests with persons in control of a business or undertaking, persons with management or control and persons carrying out demolition or refurbishment work. To meet these obligations it is recommended that SLR Consulting be engaged by the site controller, or their representative, and not an asbestos removal contractor as there could be a conflict of interest in the latter arrangement.

Asbestos Survey

Asbestos surveys are undertaken to identify any asbestos materials/hazards and assess the risk associated with the material/hazard.

Surveys are conducted through visual inspection by experienced personnel. During the inspection material samples are taken as appropriate for analysis.

GENERAL INFORMATION

Limitations

Due to the nature of the task all asbestos surveys are limited. Since asbestos can occur in so many forms and in so many locations, and as there is no instrument to detect asbestos, it is never possible to guarantee all asbestos has been identified. Access is usually restricted, and there may be asbestos hidden behind walls or other structures. Building plans are of great assistance to consultants undertaking surveys.

Asbestos Register

An asbestos register is a record of the location, type and condition of all asbestos containing products identified in a building. Under the Codes of Practice and legislation, any place of work constructed after 31 December 2003 must have an Asbestos Register. A SLR Consulting Asbestos Survey Report includes an asbestos register.

Registers must be maintained and changes in the condition or extent of any asbestos present should be recorded. Registers should also detail the next review date, at present annually since the condition of asbestos materials, legislation, guidelines and standards change.

Management Plan

An asbestos management plan is required where asbestos materials have been identified and are to remain on site. The plan would normally be a component in the overall Hazard Management Plan for the site.

Control Options

Asbestos judged to constitute a health risk should be removed, enclosed or encapsulated by an approved asbestos contractor.

Enclosure

This involves the installation of a permanent, solid, non-porous, impervious barrier between the asbestos material and the surrounding environment. Examples include building boxes around steam pipes etc. A suspended ceiling is not permanent and, since occasional access is necessary above a suspended ceiling, enclosure is negated. Furthermore, many suspended ceilings act as return air plenums so enclosure is impossible.

Encapsulation

Encapsulation involves coating the material with a sealant. Good sealants penetrate through the asbestos material to the substrate. The encapsulating substance then hardens and binds all the asbestos fibres into a solid matrix. This is usually a short to medium term management option.

Removal

Removal is not without hazards to the occupants of the building. If not strictly controlled, the removal process can result in increased fibre counts in other areas. Technical competence, experience and integrity are of prime importance in evaluating asbestos removal plans.

We advise clients to work within the usual practised time frames of the experienced asbestos removal companies under strict supervision by a qualified person. Pressing for quicker turnaround times may result in low quality workmanship and unnecessary asbestos risk. Building owners may be in part responsible for risks created by the removal Contractor due to carelessness or negligence.

An independent consultant such as SLR Consulting, experienced in the supervision of asbestos removal, should be retained to act on the client's behalf.

Clearance Inspection

A clearance inspection must be conducted at the completion of asbestos removal works. The clearance inspection may include airborne asbestos monitoring and/or sampling/analysis of materials and should be completed by a suitably qualified and experienced consultant, such as SLR Consulting.

GENERAL INFORMATION

ASBESTOS CEMENT SHEETING

A large number of building products used in the building and construction industry have been made with asbestos and cement. Products include:

- Flat or corrugated, compressed sheeting
- Pipes for water, drainage, flues
- Roof shingles
- Building boards eg. Villaboard, Hardiflex, Wundaboard, Flexiboard
- Cable trays for electrical wiring
- Numerous preformed items such as cisterns, protective housings, etc

Provided these products are maintained in good condition, they present no health risk, however precautions must be observed during demolition, refurbishment etc.

Licensing Requirements

Asbestos-containing products are classified as **non-friable or friable**. **Asbestos cement (AC)** is classified as **non-friable asbestos** however once it is significantly broken, crushed or otherwise damaged WorkSafe NT may consider it to be friable asbestos. The rules governing **friable** asbestos are far more stringent.

A WorkSafe NT asbestos licence is required to remove 10 square metres or more of non-friable asbestos and there must be WorkSafe NT notification.

Anyone wishing to carry out friable asbestos removal must obtain a friable asbestos removal licence from WorkSafe NT. A friable asbestos removal permit must be obtained for all friable asbestos jobs.

Removal Procedures

The following procedures are recommended for demolition work involving non-friable asbestos cement sheeting in order to reduce the potential health risk to workers and to building occupants.

All asbestos removal and/or decontamination should be undertaken by a competent person working in accordance with the requirements specified in the Safe Work Australia Asbestos Codes of Practice and the *Work Health and Safety Regulations 2011*. A licensed, experienced asbestos removal contractor is required to remove friable asbestos and >10m² of non-friable asbestos.

1. Prior to commencement of asbestos removal works, suitable warning signs must be erected. All windows and doors etc in the occupied areas of these buildings should be closed so as to prevent the spread of contamination.
2. All asbestos removal operatives to wear half-face particulate filter (cartridge) respirators and approved disposable coveralls.
3. The bolts fixing the asbestos cement sheets to the main frame must be cut out and removed. Abrasive cutting or sanding discs shall not be used on asbestos cement products. Only approved power tools may be used.
4. The asbestos cement sheets should be wetted or PVA coated (polyvinyl acetate). **High water pressures should not be used.**
5. All asbestos cement sheets should be removed with minimal breakage and be **lowered** to ground level, not dropped.
6. All asbestos cement dust and residues should be cleaned from the work area using an approved vacuum cleaner.
7. All asbestos containing waste must be removed from the site as soon as possible. The bins should be plastic lined, covered and taped secure prior to removal.
8. The asbestos waste shall be disposed of in accordance with the existing regulations.
9. Prior to engagement in the work, all asbestos operatives must be trained in safe working practices. These training aspects include:
 - Health hazards of asbestos
 - Safe working procedures
 - Wearing and maintenance of protective clothing and equipment

GENERAL INFORMATION

ASBESTOS CONTAINING VINYL TILES

Vinyl tiles which contain asbestos are considered to be of minimal risk whilst undisturbed and in good condition. The asbestos contained within vinyl tiles is well bound in the parent matrix and fibre release is virtually impossible provided the tiles are not ground, drilled, or otherwise abraded. Normal floor cleaning operations will not release asbestos fibres.

If the tiles are intact and not abraded or drilled etc it is safe to leave them *in-situ*. However, prior to demolition and/or refurbishment all asbestos containing vinyl tiles in the work area must be removed in accordance with the *Work Health and Safety Regulations 2011* and the Safe Work Australia Asbestos Codes of Practice.

Removal Procedures

The following procedures are recommended for the removal of asbestos containing vinyl tiles in order to avoid potential asbestos health risks to workers and building occupants.

If 10 m² or more of vinyl tiles are to be removed the work should be completed by a licensed, experienced asbestos removal contractor with notification to WorkSafe NT.

1. Prior to commencement of removal works, suitable warning signs must be erected. All windows, doors and vents etc in the occupied areas of the buildings should be closed to reduce the potential for cross-contamination/exposure.
2. All vinyl tile removal operatives are to wear appropriate personal protective equipment (PPE) including respiratory protection, safety glasses/goggles, disposable coveralls, hearing protection and gloves. Steel capped boots, hi-visibility vests and hard hats should also be worn as per the normal requirements for work on construction sites.
3. The tiles can be removed by heating the surface to loosen them or by use of a mechanical chisel to wedge them up. Care should be taken when heating tiles and the glues holding them in place to avoid the generation of toxic fumes. Do not grind, drill or otherwise abrade the tiles in any fashion that generates unnecessary dust/debris.
4. All waste is to be double bagged or placed in lined bins, sealed, and disposed of as asbestos waste in accordance with the Asbestos Codes of Practice and existing guidelines and regulations.
5. The removal area should be detailed clean using an approved vacuum cleaner fitted with a High Energy Particulate (HEPA) filter, and by wet wiping. A detergent should be used when wet wiping as this improves cleaning efficiency.
6. Obtain a clearance inspection and report from an independent, suitably qualified and experienced consultant such as SLR Consulting.
7. Upon satisfactory clearance inspection spray the area with a dilute PVA emulsion at low pressure. Multiple applications may be required to provide adequate coverage.
8. Prior to engagement in the work, all asbestos operatives must be trained in safe working practices. These training aspects include:
 - Health hazards of asbestos
 - Safe working procedures
 - Wearing and maintenance of protective clothing and equipment

Air Monitoring

The Safe Work Australia Code of Practice *How to Safely Remove Asbestos 2011* states that air monitoring should be performed whenever Asbestos Containing Materials (ACMs) are being removed, to ensure the control measures are effective.

All air monitoring must be completed by a NATA accredited organisation as specified in the *Work Health and Safety Regulations 2011*.

Asbestos fibres are generally well bound in the vinyl matrix and fibre release is unlikely provided the tiles are not ground, drilled or similarly disturbed.

Note:

These are general recommendations. In all cases the asbestos removalist should be familiar with, and comply with, the relevant Codes of Practice and the *Work Health and Safety Regulations 2011*. There may also be site specific requirements which should be complied with.