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Integrated Practical Solutions

Hazardous Building Materials (HBM) Assessment

Narrabeen North Public School (3906)

Prepared for
School Infrastructure NSW (SINSW)
c/- Johnstaff Projects (NSW) Pty Ltd

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Executive Summary

Douglas Partners Pty Ltd (DP) was engaged by School Infrastructure NSW (SINSW), c/- Johnstaff Projects (NSW) Pty Ltd (Johnstaff Projects), to conduct a Hazardous Building Materials (HBM) assessment of Narrabeen North Public School (NNPS) (the Site). The assessment comprised a non-destructive, non-intrusive, walkthrough visual inspection to identify substantial occurrences of HBM likely to impact the business case for redevelopment of the Site. This assessment included examination of the Department of Education (DoE) asbestos register for the school as well as a limited program of sample analysis and testing.

HBM were identified or assumed present during the survey as indicated in Table 1 below. Table 1 should be read and interpreted in conjunction with the remainder of this report.

Table 1: Summary of Results

Building / Area	Non-Friable Asbestos	Friable Asbestos	SMF Insulation	Lead Dust	Lead Paint	PCB	Refrigerants
B00A	✓	×	✓	×	✓	✓*	✓
B00B	✓	✓	✓	×	✓	✓*	✓
B00H	✓	×	✓	✓	✓	✓*	✓
B00J	✓	×	✓	✓	✓	✓*	✓
B00K	✓	×	✓	✓	✓	✓*	✓
B00N	✓	×	✓	✓	✓	✓*	✓
B00P	✓	×	✓	✓	✓	✓*	✓
B00R	✓	×	✓	✓	✓	✓*	✓
B00S	✓	×	✓	✓	✓	✓*	✓
B00T	×	×	✓	×	×	×	✓
B00U	×	×	✓	×	×	×	✓
B00V	×	×	✓	×	×	×	✓

SMF = synthetic mineral fibre, PCB = polychlorinated biphenyls (in fluorescent light capacitors), ✓ = material identified or assumed present, ✓* = PCB's generally not identified but, based on age of building construction, may be present in relatively minor quantities, × = material not identified and/or not assumed present.

Limited or no access was available to certain areas of the site. Inaccessible areas should be assumed to contain HBM unless assessment of these areas by a Competent Person confirms otherwise.

HBM should be managed in accordance with the requirements of the NSW Work Health and Safety (WHS) Act 2011 (WHS Act), NSW WHS Regulation 2017 (WHS Regulation) and relevant Codes of Practice, Australian Standards and Guidelines.

A full HBM survey, which may include destructive / intrusive investigation, should be conducted to enable comprehensive identification and appropriate management of HBM at the Site. Such a survey should be:

- Considered during further planning of the proposed redevelopment; and
- Undertaken prior to any disturbance of the buildings at the Site that arises from maintenance, refurbishment, demolition and/or other relevant activity.

HBM should be removed prior to any significant disturbance including from maintenance, refurbishment and demolition work.

Limitations apply to this HBM survey and report as outlined in Section 7.

This report should be read in its entirety and may not be reproduced other than in full, except with the prior written approval of DP.

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1. Introduction

Douglas Partners Pty Ltd (DP) was engaged by School Infrastructure NSW (SINSW), c/- Johnstaff Projects (NSW) Pty Ltd (Johnstaff Projects), to conduct a Hazardous Building Materials (HBM) assessment at Narrabeen North Public School (3906), Narrabeen NSW 2101 (the Site).

The assessment comprised a non-destructive, non-intrusive, walkthrough visual inspection to identify substantial occurrences of HBM likely to impact the business case for redevelopment of the Site. For the purpose of this assessment HBM comprise:

- Asbestos containing materials (ACM);
- Synthetic mineral fibre (SMF) insulation;
- Polychlorinated biphenyls (PCBs) in fluorescent light fittings;
- Lead paint;
- Lead dust in ceiling cavities; and
- Refrigerants.

The assessment also included examination of the Department of Education (DoE) asbestos register for the school as well as a limited program of sample analysis and testing.

Notes about this report, and relevant drawings / plans, are contained in Appendix A.

The results of the survey, including details of the HBM identified and selected photographs, are provided in the HBM Registers (the Registers) in Appendices B to M.

Laboratory analysis certificates for the samples collected and analysed as part of the survey are provided in Appendix N. Not all sample analysis results in Appendix N apply to this Site however.

Limited or no access was available to certain areas as outlined in the Registers and Section 5 of this report.

2. Site Description

2.1 General

Narrabeen North Public School is located on the northern side of Namona Street and is bounded by residential properties to the east that adjoin Oak Street, Warriewood Valley Sports Ground to the north and west (adjoining Jacksons Road), and the Northern Beaches Indoor Sports Centre (NBISC) to the southwest. The school comprises the following buildings:

- B00A - Constructed circa 1973 and comprising a two storey concrete dome building built as slab on ground. This building holds the administration rooms;
- B00B - Constructed circa 1973 and comprising a two storey concrete dome building built as slab on ground. This building holds the library and after school care centre;
- B00H - Constructed circa 1928 and comprising a single level building of timber construction built on brick piers. This is a general classroom building;
- B00J - Constructed circa 1950 and comprising a single level building of timber construction built on brick piers. This is a general classroom building;
- B00K - Constructed circa 1938 and comprising a single level building of brick and timber construction built on brick piers. This is a general classroom building;
- B00N - Constructed circa 1950 and comprising a single level building of steel construction built on brick piers. This is a general classroom building;
- B00P - Constructed circa 1955 and comprising a single level building of timber construction built on brick piers. This is a general classroom building;
- B00R - Constructed circa 1958 and comprising a single level building of timber and steel construction build on brick piers. This is a general classroom building;
- B00S - Constructed circa 1950 and comprising a single level building of timber and steel construction built on brick piers. This is a general classroom building;
- B00T - Constructed circa 2001 and comprising a single storey building of brick construction. This is a general learning classroom building;
- B00U - Constructed circa 2009 and comprising a single storey building of brick construction. This is a general learning classroom building; and
- B00V - Constructed circa 2010 and comprising a double storey building of brick construction. This is a general learning classroom building.

The building construction dates above are as indicated in the DoE asbestos register for the school.

Johnstaff Projects advised DP that assessment of building B00C was not required and therefore DP did not assess this building.

Various demountable buildings are present at the school, in addition to the above listed buildings, but did not form part of the scope of work for this HBM assessment.

Relevant drawings and / or plans are provided in Appendix A and indicate the general layout of the site and / or buildings surveyed.

2.2 Proposed Development

SINSW is looking to redevelop Narrabeen North Public School and a number of other sites, including Narrabeen Sports High School and NBISC, which form the Narrabeen Education Precinct. A precinct wide masterplan is currently being developed to meet the needs of the community and achieve efficiencies across the precinct. Whilst details of the proposed development are yet to be confirmed it is understood that particular concerns at Narrabeen North Public School are the aging teaching facilities and undersized core facilities (specifically the library, staff amenities and lack of a school hall). There are also two Binishell structures on site which have been identified in the DoE Binishell Strategy to be retained.

3. Method

The assessment consisted of a non-intrusive, non-destructive walkthrough visual inspection of safely accessible areas to identify substantial occurrences of HBM likely to impact the business case for redevelopment of the Site. DP did not attempt to identify each and every occurrence of HBM in the buildings inspected.

The visual inspection was supplemented by a limited program of sample collection and laboratory analysis.

Samples of suspected ACM were collected by DP using hand tools (e.g. knife or pliers) and analysed for asbestos by a National Association of Testing Authorities (NATA) accredited laboratory. Sample size is typically limited to minimise disturbance of the material and potential structural or aesthetic impacts. The samples were analysed by polarised light microscopy (PLM) with dispersion staining in accordance with AS4964-2004 *Method for the qualitative identification of asbestos in bulk samples*.

Samples of suspected lead paint were either collected by DP for laboratory analysis and/or were tested for lead in the field using 3M™ LeadCheck™ swabs. According to their instruction manual, the swabs reliably detect lead in paints at 0.5% and may indicate lead in some paint films as low as 0.06%. Bulk paint samples, where collected, contain approximately equal portions of all layers of paint at the location sampled, to the extent practicable, and therefore typically reflect the average lead content of the overall paint system at location sampled.

The presence of lead dust in ceiling cavities was assessed by visual inspection and in consideration of the age of the buildings being assessed.

SMF was identified primarily by visual inspection or incidentally as a result of laboratory analysis for asbestos.

The presence of PCBs fluorescent light capacitors were assessed by visual inspection of the exterior of the light fittings and in consideration of building age.

Refrigerants were assessed by visual inspection of building plant, primarily air conditioners.

Surveys typically proceed on a 'risk management' basis whereby priority is given to addressing material(s) likely to pose greatest risk as they are encountered. Further, material sampling and analysis programs are necessarily limited and in the case of similar or repetitive buildings, building elements and / or rooms / areas, it is often necessary to assume consistent use of construction materials including HBM.

4. Asbestos Risk Assessment Method

ACM poses a health risk if asbestos fibres are released to the atmosphere and inhaled. There is also a risk of environmental contamination whenever asbestos is disturbed. The degree of risk associated with any given ACM depends on a range of factors such as the friability, extent, condition, and location/accessibility of the material, the asbestos mineral type(s) present, the nature of site activities and ventilation.

The asbestos risk assessment method employed by DP considers several key factors that influence risk and a numerical score is assigned to each (refer Table 2 below). These scores are then added together to determine an overall risk rating for the ACM (refer Table 3 below). A degree of professional judgement may be applied when determining the final risk rating since, for example, it is not practicable to include in Table 2 all risk factors that may be relevant to a given situation.

Risk assessments for ACM should be reviewed on a regular basis including when:

- The Asbestos Management Plan is reviewed;
- Further asbestos or ACM is identified at the workplace;
- Asbestos is removed, disturbed, sealed, enclosed or undergoes any other change in condition;
- There is evidence that the risk assessment is no longer valid;
- There is evidence that control methods are not effective; or
- A significant change is proposed for the workplace or for work practices or procedures relevant to the risk assessment.

An asbestos risk assessment review is to be conducted at least every 5 years. The review is to be performed by a Competent Person.

Table 2: Key Risk Factors

Risk Factor	Score	Description
Friability	0	Non-friable (fibre reinforced vinyls, bituminous materials, adhesives)
	1	Non-Friable (fibre reinforced cement products such as wall and roof sheeting)
	2	Semi-Friable (low density insulation board, millboard, ropes, paper, textiles, gaskets or highly weathered asbestos cement)
	3	Friable (thermal insulation to pipes/boilers, sprayed insulation, loose fill insulation)
Condition	0	Very Good. Very little or no visible indication of damage. Structurally sound. No significant repairs required. Material performs as intended.
	1	Good - Minor damage in small, localised areas. Structurally sound. Minor preventative action may be required as a precaution and/or to prolong material life. Material generally performs as intended.
	2	Fair. Localised damage in various areas. Material is generally structurally sound however local removal and replacement of damaged sections may be required. Material performance may be somewhat impaired in areas.
	3	Poor. Material exhibits significant damage throughout. Overall structural stability may be compromised. Material performance is significantly impaired.
Treatment	0	Fully enclosed, encapsulated or sealed. ACM is entirely contained, and the enclosure/encapsulation/sealing material is in good condition.
	1	Generally enclosed, encapsulated or sealed. ACM is generally contained however enclosure/encapsulation/sealing material may not be completely continuous or exhibits minor damage/penetrations.
	2	Partially enclosed, encapsulated or sealed. ACM is contained in area(s) however enclosure/encapsulation/sealing material is not present, significantly damaged or ineffective in area(s).
	3	Enclosure/encapsulation/sealing material is significantly damaged and/or generally ineffective or there is no treatment.
Accessibility	0	The ACM is not directly accessible to occupants. Contact is highly unlikely unless a significant, dedicated effort is made. Substantial demolition, dismantling and/or special access equipment would be required.
	1	The ACM is generally not accessible to occupants. Contact is unlikely but could be made with special tools or equipment (e.g. elevating work platform) or minor demolition/dismantling.
	2	Some portion(s) of ACM are accessible to occupants. Direct contact may occur periodically but often requires basic tools/equipment (e.g. step ladder).
	3	The majority of the ACM is accessible to occupants. Direct contact is a common occurrence and may be made with minimal or no effort.
Activity	0	Area generally not occupied. Normally very little or no activity. Activities may be highly restricted, or area secured. Examples may include subfloor voids, ceiling cavities, confined spaces and other inaccessible areas.
	1	Low level occupancy. Some activity in parts or area only occupied periodically. Examples may include plant rooms and store rooms.
	2	Moderate level occupancy. Activity normally present throughout area. May include offices, laboratories, classrooms, workshops, and warehouses.
	3	High level occupancy. Generally high levels of activity. Activities may be wide-ranging and/or largely unrestricted. Examples may include production/manufacturing areas, construction sites and public areas/thoroughfares.
Ventilation	0	Exterior area where natural ventilation and associated dilution is largely unlimited. Significant retention and/or build-up of airborne contaminants is unlikely.
	1	Interior area. Natural ventilation and dilution is limited but area is not particularly confined. Limited retention and/or build-up of airborne contaminants is possible.
	2	Confined areas where ventilation and associated dilution is significantly limited. Significant retention and/or build-up of airborne contaminants is possible or likely.
	3	Asbestos material subject to direct ventilation (e.g., inside an AC system or near a fan or air exhaust) which may result in disturbance and/or elevated fibre concentrations in air.

Table 3: Risk Rating

Overall Score	Risk Rating	Description
15-18	High (H)	The ACM poses an elevated and typically unacceptable risk of exposure and/or environmental contamination. Controls should generally be implemented as soon as possible to address the risk. Removal of the whole or part of the ACM is typically required. Other controls such as enclosure, encapsulation and/or sealing may also be necessary if portion(s) of ACM are to remain in place. As an interim measure, access to the area should be appropriately restricted. Air monitoring is often recommended to confirm airborne asbestos concentrations and provide a written record for future reference.
10-14	Moderate (M)	The ACM poses a moderate risk of exposure and/or environmental contamination. Often there has been minor damage or there is potential for disturbance/degradation in the foreseeable future. Consideration should be given to implementing appropriate controls in the short to medium term to address the risk(s) and/or prolong the lifespan of the material. Relevant controls typically include enclosure, encapsulation and/or sealing. Extensive removal is generally not required, and the material can generally be managed on site if desired and serving a useful purpose.
0-9	Low (L)	The risk of exposure and environmental contamination is generally low while the material remains undisturbed and in its present condition. The material may generally remain in place without the requirement for significant, material-specific control measures such as removal, enclosure, encapsulation or sealing.

Note: If the ACM is likely to be disturbed (e.g., by maintenance, refurbishment or demolition work) and/or is no longer serving a useful purpose then the ACM should generally be removed. All ACM should be clearly identified with a label where reasonably practicable.

5. Results

5.1 General

The overall results of the survey are summarised in Table 1 in the Executive Summary of this report. Table 1 should be read and interpreted in conjunction with the remainder of this report. This includes Appendices B to M that contain further details of the HBM identified at the site, including the results of asbestos risk assessments, and other relevant notes. General and material-specific results are also included in the following Sections 5.2 to 5.7.

The assessment conducted by DP comprised a non-destructive, non-intrusive walkthrough inspection with limited sampling and analysis. HBM additional to those identified in this report are likely to be present in the buildings assessed. Such occurrences could be substantive in areas that were inaccessible (e.g., building cavities and voids) or where materials have been encapsulated/enclosed or are otherwise hidden/obscured (e.g., below flooring materials).

Building layout plans that identified room numbers were not available to DP for the purposes of this inspection and therefore rooms were identified based upon the descriptions provided in the DoE register (e.g., room size and materials) and the assumed systematic and sequential numbering of rooms in general.

Limited or no access was available to certain areas as outlined in the Registers (Appendices B to M) and Table 4 below.

Table 4: Access Limitations*

Location / Area	Access Type	Reason(s)
Areas/materials at height (e.g. roofs)	Limited	Access limited to safely accessible areas and use of 1.8 m step ladder. Work at height and use of specialised access equipment not included in survey scope.
Plant, equipment and services in general (e.g., electrical panels, HVAC plant, generators, pumps, motors etc.)	Limited	Inspection limited to safely accessible exterior surfaces. Isolation and detailed dismantling and / or demolition typically required for further assessment.
Confined spaces	Nil	Not included in survey scope.
Ceiling cavities and subfloor voids	Limited	Access generally limited by number and location of designated access points, height, services and clearance within cavity/void. Inspection of crawl spaces not included in survey scope.
Below flooring materials (e.g., carpet, vinyl sheeting etc.)	Limited	Access limited due to nature of assessment, fixtures / furnishings and potential for damage to current finish.
Below ceramic tiled surfaces (e.g., walls and floors in wet areas)	Nil	Typically requires destructive removal of tiles and damage to current finish.
Enclosed building cavities and voids (e.g., lift shafts, service risers)	Nil	Detailed dismantling / demolition typically required. Access generally impractical.

* Refer also to the Register (Appendix A).

5.2 ACM

The existing DoE asbestos register for the Site indicates that a relatively thorough assessment for asbestos in vermiculite ceiling coatings, involving detailed composite sampling and analysis, may have previously been undertaken at the Site (refer page 2 of the DoE asbestos register). Notwithstanding this, the DoE asbestos register also generally indicates that limited samples have been taken of vermiculite and that further detailed sampling and analysis is warranted. While such sampling and analysis was beyond the scope of this assessment the risk of vermiculite at the school containing asbestos is generally considered to be low (but not nil) based on:

- The notes pertaining to the assessment of vermiculite on page 2 of the DoE asbestos register;
- The samples collected and analysed by DP;
- The samples referenced in the DoE asbestos register; and
- DP's experience with other similar sites.

Various items in the DoE asbestos register are reported as "No Asbestos Detected" however sample refence numbers are typically not provided (whereas the DoE register allows for this as indicated by the sample reference numbers provided for vermiculite in buildings B00A and B00B). As such, it is uncertain whether past assessment of these materials is based on visual inspection, direct sampling and analysis or cross-referencing of analysis results.

Limited or no access was generally available to building subfloor areas. Such areas at schools often contain ACM such as asbestos cement packing (e.g., between brick piers and timber joists) and asbestos cement fragments to ground surfaces (e.g., the DoE asbestos register identifies asbestos packing in the subfloor of B00H, B00J and B00N). The potential presence of such ACM in subfloors should generally not be disregarded due to the limitations often associated with assessment of subfloor areas.

Asbestos containing floor tiles were identified or assumed present in several buildings (e.g., B00H, B00J, B00K and B00P). Additional asbestos containing flooring materials (such as vinyl tiles, adhesives and/or backing materials) may also be present below carpets and/or other floor coverings which rendered them inaccessible during this walkover inspection and/or previous assessments by other consultants. Further, confirmatory sampling and analysis by DP identified:

- Asbestos-containing vinyl tiles in some buildings that are not listed as containing such tiles in the DoE asbestos register (e.g., B00H); and
- Asbestos in vinyl floor tiles that are listed in the DoE asbestos register as "No Asbestos Detected" (e.g., B00K R0003 and R0004).

ACM may occur within electrical cabinets / cupboards throughout the older buildings assessed (i.e., B00A through B00S). Such ACM may include electrical backing boards, fuse insulation and cabinet / cupboard linings).

5.3 SMF Insulation

SMF was detected in samples of the vermiculite present on ceiling / walls in buildings B00A and B00B. Based on the limited sample analysis conducted it is assumed that SMF is present in the vermiculite throughout these buildings in general.

SMF insulation / sarking was visually identified or assumed present in some building ceiling cavities however access to building ceiling and wall cavities was generally limited or prevented. As a precaution, SMF materials (e.g., insulation and/or sarking) are generally assumed present within ceiling and wall cavities throughout the buildings inspected (e.g., above set ceilings and/or within sheeted and framed walls).

Relatively minor occurrences of SMF may be present to building plant/services such as hot/boiling water units as well as air conditioning plant.

5.4 Lead Dust

Limited or no access was generally available to building ceiling cavities due to height of the ceilings and/or the availability of designated access points. Based on the age of buildings B00A through B00S, and as a precaution, it is generally assumed that ceiling cavity dust in these buildings contains elevated levels of lead. Buildings B00T, B00U and B00V are understood to have been constructed circa 2000's and it is considered less likely that the ceiling cavities of these buildings contain elevated concentrations of lead in dust.

5.5 Lead Paint

Lead paints were identified in a number of buildings (e.g., B00A, B00N, B00R and B00S). Based on the age of buildings B00A through B00S, and as a precaution, it is generally assumed that some paints in these buildings contain lead. Buildings B00T, B00U and B00V are understood to have been constructed circa 2000's and it is considered unlikely that these buildings contain lead paints.

5.6 PCB

The capacitors of fluorescent light fittings were generally inaccessible due to electrical hazard. Visual inspection of fluorescent light fittings indicates that these fittings are generally of a newer type that is unlikely to house capacitors that contain PCBs. Notwithstanding this, capacitors containing PCBs may be present in a relatively minor quantity of older fluorescent light fittings in buildings B00A through B00S.

Buildings B00T, B00U and B00V are understood to have been constructed circa 2000's and it is considered unlikely that fluorescent light capacitors containing PCBs are present in these buildings.

5.7 Refrigerants

Air conditioning plant containing refrigerants, including R32, was identified or assumed present in all of the buildings inspected. Such plant typically comprises split-system air conditioning units.

6. Recommendations

A summary recommendation for each HBM identified or assumed present at the site is provided in the Registers (Appendix B - M).

The general recommendations in Section 6.1 onwards are provided for informative purposes and should be considered where the relevant HBM has been identified or assumed present by DP or is subsequently suspected to be present based on reasonable grounds.

The presence of identified and assumed HBM at the site, and the potential presence of any as-yet undetected / unidentified HBM, should be considered during the risk assessment and planning process for any proposed work at the site or site use. Additional targeted inspection, sampling and analysis for HBM should be considered including prior to any work that may result in the disturbance of such HBM. Additional inspections may include destructive / intrusive inspections however these can generally only be undertaken once the relevant buildings / areas have been permanently vacated.

6.1 General

HBM should be managed in accordance with the requirements of the WHS Act, WHS Regulation and subordinate Codes of Practice, Australian Standards and guidelines.

The assessment conduct by DP is limited in nature and should not be relied on for the purpose of identifying and managing HBM during building work (e.g. maintenance, refurbishment and/or demolition work). A full HBM survey, which may include destructive/intrusive investigation, should be conducted to enable comprehensive identification and appropriate management of HBM at the Site. Such a survey should be:

- Considered during further planning of the proposed redevelopment; and
- Undertaken prior to any disturbance of the buildings at the Site that arises from maintenance, refurbishment, demolition and other relevant activity.

Building layout plans that include room numbers should be obtained for the purposes of informing any additional HBM assessment that may be conducted at the Site.

A hazardous materials management plan should be developed to aid compliance with the requirements of the WHS Act and Regulation including those that relate to the identification of hazards and control of associated risks.

HBM should be visually inspected on a regular basis. Any change to the condition of the material or relevant site conditions should be reported.

HBM should be removed prior to any significant disturbance such as maintenance, refurbishment and demolition work.

Prior to any work involving hazardous materials a risk assessment should be conducted and Safe Work Method Statement (SWMS) developed. The SWMS should outline the controls necessary to ensure that the risk of exposure to the hazardous materials is adequately controlled.

Hazardous materials remediation and removal work should be undertaken in controlled conditions.

Waste should be assessed and classified for disposal in accordance with the NSW Environment Protection Authority (EPA) *Waste Classification Guidelines, Part 1: Classifying Waste*, November 2014 (EPA, 2014).

At the completion of hazardous material remediation and removal work a clearance inspection should be conducted by a Competent Person, or in the case of friable asbestos, by a Licensed Asbestos Assessor.

6.2 ACM

Additional vermiculite sampling and analysis should be completed at the site, if not already, in accordance with the procedure reportedly agreed between DoE and SafeWork NSW (refer page 2 of the DoE asbestos register). Such sampling and analysis should occur as part of the planning process for the proposed redevelopment and prior to any disturbance of the vermiculite. If it can be clearly established that such sampling has already been completed, and analysis results are adequately confirmed, then:

- The DoE asbestos register should be updated to reflect the results; and
- This report prepared by DP should be updated to reflect the results.

The potential presence of ACM in building subfloor areas (e.g., asbestos cement packing materials and asbestos cement fragments to ground surfaces) should be duly considered. The need to conduct additional investigation of these areas, which may require the use of intrusive / destructive inspection techniques, should be evaluated during planning for the proposed redevelopment. Any additional investigations undertaken should occur prior to disturbance of the subfloor areas.

The potential presence of asbestos containing flooring materials (e.g., vinyl tiles, adhesive and backing materials) remaining unidentified below current flooring materials should be duly considered. The need to conduct additional investigation for such materials, which may require use of intrusive / destructive inspection techniques, should be evaluated during planning for the proposed redevelopment. Any additional investigations undertaken should occur prior to disturbance of the flooring materials.

Consideration should be given to obtaining sample refence numbers and analysis reports from the DoE for the materials identified in the DoE asbestos register as “No Asbestos Detected”. This is to confirm whether these materials have been directly sampled and analysed for asbestos or not. This should be undertaken during planning for the proposed development and prior to disturbance of these materials. Additional investigation and / or sampling and analysis may be required if results are inconclusive.

The following recommendations apply to management of ACM in general:

- ACM must be managed in accordance the WHS Regulation, the SafeWork NSW *Code of Practice: How to Manage and Control Asbestos in the Workplace* and the SafeWork NSW *Code of Practice: How to Safely Remove Asbestos;*
- Exposure to airborne asbestos in the workplace must be eliminated to the extent that is reasonably practicable. If it is not reasonably practicable to eliminate exposure it must be minimised to the extent that is reasonably practicable;
- An Asbestos Management Plan must be developed to enable compliance with the WHS Regulation (Regulation 429);
- The presence and location of asbestos or ACM identified at a workplace must be clearly indicated by a label if it is reasonably practicable to do so;
- Warning labels and signs should be consistent with the examples provided in the SafeWork NSW *Code of Practice: How to Manage and Control Asbestos in the Workplace* and comply with AS1319 *Safety Signs for the Occupational Environment;*
- Non-friable ACM that are structurally intact and in good to fair condition may typically remain in place provided that they are not significantly disturbed;
- Tools and equipment that generate dust must generally not be used on asbestos. These include high-speed abrasive power and pneumatic tools (e.g., angle grinders, sanders, saws and high-speed drills, brooms and brushes);
- Tools and equipment that cause the release of asbestos, including power tools and brooms, may only be used on asbestos if the equipment is enclosed and / or designed to capture or suppress asbestos fibres and / or the equipment is used in a way that is designed to capture or suppress asbestos fibres safely. In such a case, other controls including PPE may also be required based upon the results of a pre-work risk assessment and the SWMS adopted;
- The use of high-pressure water spray and compressed air on asbestos or ACM is specifically prohibited under the WHS Regulation;
- If ACM become damaged they should be repaired or removed and replaced with an alternative, non-asbestos building product as soon as possible;
- The scope of asbestos removal work should be outlined in a technical specification (i.e., Scope of Work Report) developed by a Competent Person (in the case of non-friable asbestos) or a Licensed Asbestos Assessor (in the case of friable asbestos);
- Removal of friable asbestos must only be undertaken by a Class A licensed asbestos removal Contractor;
- Removal of 10 m^2 or more of non-friable asbestos must only be undertaken by a Class A or Class B licensed asbestos removal contractor;
- Air monitoring is required during removal of friable asbestos. Air monitoring should also be considered during removal of non-friable asbestos particularly where sensitive receptors exist such as at schools, hospitals and similar sites;
- Air monitoring must be undertaken in accordance with the National Occupational Health and Safety Commission (NOHSC) *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres, 2nd Edition* [NOHSC:3003(2005)];

- All air monitoring samples must be analysed by a NATA accredited laboratory that holds accreditation for the required analysis;
- At the completion of asbestos removal, a clearance inspection must be conducted by a Competent Person (for non-friable asbestos removal) or a Licensed Asbestos Assessor (for friable asbestos removal);
- Air monitoring and clearance inspections must be performed by person/s independent of the asbestos removal contractor;
- All waste should be classified for disposal in accordance with the EPA (2014). Asbestos waste is preclassified as Special Waste under these guidelines;
- Asbestos transporters and facilities receiving asbestos waste must report the movement of asbestos waste to the EPA. Entities involved with the transport or disposal of asbestos waste in NSW, or arranging the transport of asbestos waste in NSW, must use the EPA's online tool, WasteLocate;
- All asbestos waste must be disposed at a waste collection facility licensed to receive asbestos waste. All disposal receipts should be retained; and
- A person who relinquishes management or control of the workplace must ensure that the Asbestos Register is given to the person, if any, assuming management or control of the workplace.

6.3 SMF Insulation

A further assessment of SMF in vermiculite should be considered, where practicable, as part of any further investigation of vermiculite materials for asbestos that is undertaken at the Site (refer Section 6.2).

SMF containing materials may generally remain in place providing that they are in good condition and unlikely to be disturbed.

To reduce the potential for disturbance, exposure and environmental contamination SMF materials may be encapsulated or enclosed. Higher risk materials, such as loose fill SMF insulation, may also be removed and replaced.

SMF work is to be undertaken in accordance with the requirements of the WHS Regulation and subordinate Codes of Practice, Guidance Notes and other documents. These include:

- WorkCover NSW *Safe management of synthetic mineral fibres (SMF) – glasswool and rockwool*; and
- Safe Work Australia *Guide to Handling Refractory Ceramic Fibres, December 2013*; and
- Guidance Note on the Membrane Filter Method for the Estimation of Airborne Synthetic Mineral Fibres [NOHSC:3006(1989)].

Relevant information may also be found in the Australian Institute of Occupational Hygienists (AIOH) *Synthetic Mineral Fibres (SMF) And Occupational Health Issues, Position Paper*, October 2011 (reformatted January 2018).

Where reasonable concern exists over possible respirable fibre concentrations in any application, the first step is often to confirm that the work practices, as recommended for the particular product, are being followed. Air monitoring may not be required when it has been clearly established that appropriate work practices are being carried out.

Notwithstanding the above, exposures should not exceed the relevant SWA exposure standards outlined in Table 4 below.

Table 4: SWA Exposure Standards for SMF

Standard Name	Time Weighted Average (TWA) Exposure Standard
Glass wool, rock (stone) wool, slag wool and continuous glass filament and low biopersistence Man Made Vitreous Fibres (MMVF)	2 mg/m^3 (inhalable dust)
Refractory ceramic fibres (RCF), special purpose glass fibres and high biopersistence MMVF	0.5 f/mL (respirable) 2 mg/m^3 (inhalable dust)

SMF waste should be disposed at a licensed waste collection facility. Synthetic fibre waste (from materials such as fibreglass, polyesters and other plastics) packaged securely to prevent dust emissions is pre-classified as General Solid Waste (non-putrescible) under EPA (2014).

All disposal receipts should be retained.

6.4 Lead Dust

The potential presence of lead in ceiling cavity dust at the Site should be considered during the risk assessment and planning process for any proposed works or site use. Additional, targeted sampling and analysis for lead dust should be considered prior to any work that may result in significant disturbance of lead dust.

No recognised Australian guidelines have been identified for the direct assessment of lead dust concentrations in ceiling cavities. Notwithstanding this, AS4361.2-1998 *Guide to Lead Paint Management, Part 2: Residential and Commercial Buildings* (superseded) outlined acceptance limits for lead in surface dust after lead paint management activities. These limits were:

- Interior floors: 1 mg/m^2 (as lead);
- Interior window sills: 5 mg/m^2 (as lead); and
- Exterior surfaces: 8 mg/m^2 (as lead).

The United States Environmental Protection Authority (US EPA) 40 CFR Part 745 *Lead; Identification of Dangerous Levels of Lead; Final Rule* establishes the following standards for lead hazard identification:

- Floors - 40 µg/ft^2 (~0.43 mg/m^2) lead;
- Interior Window sills - 250 µg/ft^2 (~2.7 mg/m^2) lead; and
- Window troughs - 400 µg/ft^2 (~4.3 mg/m^2) lead.

The above acceptance limits may be used as a guide to assessing lead concentrations in settled dust. As a precaution, and due to the sensitive nature of the site, a lead concentration of 0.5mg/m^2 may be used as screening criteria to help identify potentially hazardous conditions.

Where the concentration of lead in dust exceeds 0.5 mg/m^2 appropriate control and/or remedial measures may need to be identified via risk assessment and with a detailed knowledge of the workplace and proposed use / activities.

Where ceiling spaces and similar cavities are effectively enclosed and provide very limited or no opportunity for lead dust to enter occupied areas, the dust may typically remain in place. In such a case access to the cavities should be suitably restricted and all entrances signposted with appropriate warning signs.

Any personnel required to enter building cavities or other areas containing elevated concentrations of lead in dust should undertake an appropriate risk assessment and develop a Safe Work Method Statement (SWMS) for the work. The SWMS must identify controls that ensure the risk of exposure to lead remains at an acceptable level for the personnel entering the area and for occupants of the building and surrounds.

Consideration should be given to removal of lead containing dust including when:

- There is a significant risk of the lead entering occupied areas; or
- Significant disturbance of lead dust is likely due to maintenance, refurbishment or demolition work or other reason(s); or
- Removal is a reasonably practical means of eliminating the hazard.

Removal of lead dust should be undertaken by a suitably qualified and experienced removal contractor.

The lead dust removal method and control measures adopted should be determined by risk assessment and a detailed knowledge of the workplace and proposed use/activities.

Exposure to airborne lead must be maintained below the relevant SWA exposure standards pertaining to lead. The SWA 8-hour TWA exposure standard for lead (inorganic dusts and fumes) is 0.05 mg/m^3. Air monitoring for lead may be required based on the results of the risk assessment and the requirement to maintain airborne lead concentrations below the abovementioned exposure standard(s).

At the completion of lead dust removal, a clearance inspection should be conducted by a Competent Person. The Competent Person should determine the requirements for clearance including any air monitoring or sample analysis that may be required.

Lead waste should be assessed and classified for disposal in accordance with EPA (2014).

All disposal receipts should be retained.

6.5 Lead Paint

The potential presence of lead paint(s) at the Site should be considered during the risk assessment and planning process for any proposed works or site use. Additional, targeted sampling and analysis for lead paints should be considered prior to any work that may result in significant disturbance of paint system(s).

Lead paints should be managed in accordance with the WHS Regulation including (including Chapter 7, Part 7.2 Lead) and:

- AS4361.1 - 2017, *Guide to hazardous paint management - Lead and other hazardous metallic pigments in industrial applications*; and
- AS4361.2 - 2017, *Guide to hazardous paint management - Lead paint in residential, public and commercial buildings*.

In accordance with AS4361.1 - 2017:

- When one or more tests from a building or portion of a building indicate that lead is present, the paint should be treated as lead paint; and
- A project should not be classified as free of lead, unless all samples within the area are proven to be free of lead.

Lead paint that is in sound condition, not directly accessible (e.g., over-painted with lead-free paint) and unlikely to be disturbed may not require any immediate action.

Area(s) of lead paint that are in poor condition (e.g., flaking, delaminating) should generally be removed along with any lead paint debris and associated dust.

Exposed area(s) of lead paint that are intact may be stabilised by over-painting with a lead-free paint, or by covering with a suitable encapsulant. Stabilisation can provide an interim to long-term solution to a lead paint hazard.

The lead paint removal method and control measures adopted should be determined by risk assessment and a detailed knowledge of the workplace and proposed use / activities.

Exposure to airborne lead must be maintained below the relevant SWA exposure standards pertaining to lead. The SWA 8-hour TWA exposure standard for lead (inorganic dusts and fumes) is 0.05 mg/m^3. Other exposure standards apply for substances such as lead chromate.

Air monitoring for lead may be required during lead paint remediation works based on risk assessment and the requirements to maintain airborne lead levels below the abovementioned exposure standards.

At the completion of lead paint removal, a clearance inspection should be conducted by a Competent Person. The Competent Person should determine the requirements for clearance including any air monitoring or sample analysis that may be required.

Lead paint waste should be assessed and classified for disposal in accordance with EPA (2014):

- Waste contaminated with lead (including lead paint waste) from residential premises or educational or child care institutions is pre-classified as general solid waste (non-putrescible); and
- Lead paint waste arising otherwise than from residential premises or educational or child care institutions is pre-classified as hazardous waste.

Based on correspondence with the NSW EPA DP understands that EPA (2014) does not take into account AS4361.1 - 2017 or AS4361.2 - 2017, including the definition of lead paint therein, for waste classification assessment. As such, these standards have no bearing on how waste is classified in NSW.

All disposal receipts should be retained.

6.6 Polychlorinated Biphenyls (PCBs)

Prior to any significant disturbance, such as demolition, refurbishment or maintenance works, fluorescent light fittings should be electrically isolated and inspected in detail for metal canister-type capacitors that may contain PCB's. Any capacitors containing or suspected to contain PCB should be removed by a suitably qualified and experienced contractor.

PCB containing capacitors should be managed in accordance with the general requirements of the WHS Regulation and the:

- Environmentally Hazardous Chemicals (EHC) Act 2008 and subordinate *Polychlorinated Biphenyl (PCB) Chemical Control Order 1997*; and
- *Polychlorinated Biphenyls Management Plan, Revised Edition, April 2003*, issued by the Environment Protection and Heritage Council (EPHC).

Any PCB containing capacitors that exhibit leakage should be removed and replaced by a suitably qualified and experienced contractor as soon as possible. Access to areas containing leaking capacitors should be suitably restricted.

The conveyance and disposal of PCB material and PCB waste is subject to special requirements outlined in the *Polychlorinated Biphenyl (PCB) Chemical Control Order* 1997.

All disposal receipts should be retained.

6.7 Refrigerants

Refrigerants should be recovered by a licensed technician when equipment reaches end of life and prior to any significant disturbance such as demolition, refurbishment or maintenance works. Refrigerant must not be discharged or 'vented' except in a very limited number of specified circumstances.

All work on equipment containing refrigerants must be done by appropriately licensed technicians and typically:

- A Refrigerant Handling License is required to decant refrigerant, manufacture, install, commission, maintain or service equipment, irrespective of whether or not a controlled refrigerant is present. This license also covers decommissioning or disposal of equipment containing controlled refrigerant;
- A Refrigerant Trading Authorisation is required for any individual or business that acquires, possesses or disposes of controlled refrigerant;
- A Restricted Refrigerant Recoverer License is one of the license options for individuals (including a repairer or dismantler) who remove controlled refrigerant from any refrigeration or air conditioning systems; and
- Additional licensing requirements apply for working with some or all refrigerants in some States and Territories.

Refrigerants should be managed, where required, in accordance with relevant legislative requirements including the Ozone Protection Act 1989 (NSW).

The relevant state authority should always be consulted to ensure legal requirements are followed.

7. Limitations

Douglas Partners (DP) has prepared this report (or services) for this project at Narrabeen North Public School in accordance with DP's proposal SYD190874.P.001.Rev1 dated 3 September 2019. The work was carried out under SINSW Standard Form or Agreement made on 16 October 2019. This report is provided for the exclusive use of SINSW for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the conditions on the site only at the specific inspection, sampling and/or testing locations, and then only to the extent practicable and safely accessible at the time the work was carried out. Site conditions may change after DP's field inspection, sampling and testing has been completed.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in site conditions across the site between and beyond the inspection, sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

Although the sampling plan adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been inspected, sampled and/or tested. This is either due to the limited scope of work engaged, undetected variations in conditions or to budget constraints (as discussed above), or to parts of the site being inaccessible or unavailable, or to occupants, furnishings or stored items preventing access. It is therefore considered possible that HBM, including asbestos, may be present in unobserved or untested parts of the site, between and beyond the inspection, sampling and testing locations, and hence no warranty can be given that all HBM have been identified.

Inspections are limited to areas that are safely accessible at the time of the inspection without undue damage to building finishes or disturbance of occupants. Inspections exclude hidden and inaccessible locations such as within building cavities, voids and enclosed sections of risers/shafts as well as materials encased within the building structure or located below the exposed ground surface (e.g., pipes, drains and formwork). In addition, residual asbestos materials (e.g., asbestos lagging to pipes and vessels) may remain undiscovered below newer, asbestos-free materials (e.g., preformed SMF insulation). Such residual asbestos materials may not be identified without extensive intrusive investigation and/or dismantling/demolition work if at all.

Any disturbance of building materials, such as during renovation, maintenance or demolition work, may reveal additional HBM.

Limitations apply to the laboratory analytical methods used. For example, it can be very difficult or impossible to detect the presence of asbestos in some bulk materials (e.g., vinyl tiles) using the polarised light microscopy analytical method, even after ashing or disintegration of samples. This is due to the small length or diameter of asbestos fibres present in the material, or attributed to the fact that very fine fibres have been dispersed individually throughout the material.

While work is undertaken in a professional manner the nature of HBM and the limitations of the method(s) used mean that we cannot guarantee that all HBM have been identified. This report should therefore not be considered a definitive account of all HBM that may be present at the site.

DP personnel are not licenced or accredited quantity surveyors. Any quantities quoted in this report are provided for general guidance only and should not be relied upon. The services of a licenced quantity surveyor should be engaged in order to determine reliable quantities.

The recommendations and conclusions contained in this report shall not abrogate a person of their responsibility to work in accordance with statutory requirements, codes of practice, standards, guidelines, safety data sheets, work instructions or industry best practice.

The contents of this report do not constitute formal design components such as are required, by the Health and Safety Legislation and Regulations, to be included in a Safety Report specifying the hazards likely to be encountered during construction and the controls required to mitigate risk. This design process requires risk assessment to be undertaken, with such assessment being dependent upon factors relating to likelihood of occurrence and consequences of damage to property and to life. This, in turn, requires project data and analysis presently beyond the knowledge and project role respectively of DP. DP may be able, however, to assist the client in carrying out a risk assessment of potential hazards contained in this report, as an extension to the current scope of works, if so requested, and provided that suitable additional information is made available to DP. Any such risk assessment would, however, be necessarily restricted to the environmental components set out in this report and to their application by the project designers to project design, construction, maintenance and demolition.

Douglas Partners Pty Ltd

Appendix A

About This Report

Drawings and Plans

About this Report

Douglas Partners

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

4.0 Existing Building Report

4.1 AMU numbering

Narrabeen Sports High School (NSHS)

Buildings:
A - Tech. & Applied Studies, Gym - 1974
B - Science, Physical Education - 1974
C - General Learning - 1974
D - Library - 1974
E - Admin, General Learning - 1954 Brick / block
F - Art - 1970
G - Multipurpose Facilities, Amenities -1954
K - Commercial Use

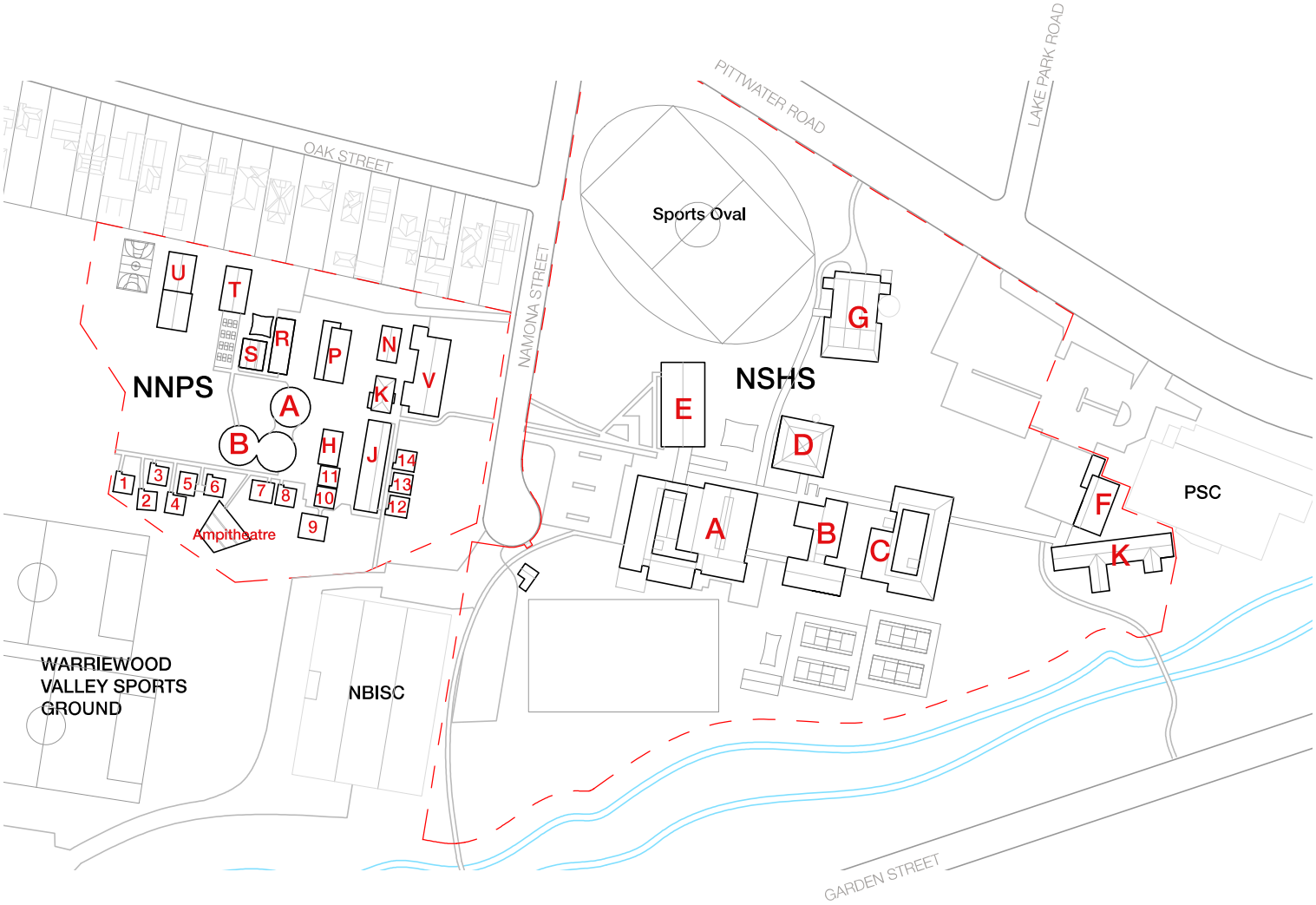
Narrabeen North Public School (NNPS)

Buildings:
A - Binidome, Admin, Staff, Storage - 1973
B - Binidome. OSHC Programs - 1973
H - Staff - 1950s Timber
J - Homebases - 1950s Timber
K - Programs, Craft - 1938
N - Homebases - 1950s Timber
P - Homebases - 1950s Timber
R - Homebases, Amenities -1958
S - Homebases - 1950s Timber
T - Homebases - 2001 Brick / block
U - COLA, Canteen, Amenities - 2009
V - Library, Homebases - 2010
1 to 14 - Demountable Homebases

Northern Beaches Indoor Sport Centre (NBISC)
Existing: 6 courts

Pittwater Sports Centre (PSC)

NEIGHBOURS
Warriewood Valley Sports Ground



djrd architects

Appendix B

B00A Register and Plates

Douglas Partners
Geotechnics · Environment · Groundwater

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00A	building in general	ceilings in general and some walls	vermiculite	Refer various samples in DoE Register. DP samples 234842-S27	non-asbestos assumed. **SMF assumed**.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	similar 1	Analysis results in the DoE asbestos register are generally listed as "Limited Samples Taken" and associated comments indicate that further detailed sampling and analysis is warranted. Such sampling and analysis should be completed, if not already, in accordance with the procedure reportedly agreed between DoE and SafeWork NSW (refer page 2 of the DoE asbestos register) and prior to any disturbance of the vermiculite. Reinspect SMF condition on a regular basis. Remove SMF containing material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00A	R1001 - Storeroom	ceiling	vermiculite	23484-S27	no asbestos detected by analysis. **SMF detected.**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	Analysis results in the DoE asbestos register are generally listed as "Limited Samples Taken" and associated comments indicate that further detailed sampling and analysis is warranted. Such sampling and analysis should be completed, if not already, in accordance with the procedure reportedly agreed between DoE and SafeWork NSW (refer page 2 of the DoE asbestos register) and prior to any disturbance of the vermiculite. Reinspect SMF condition on a regular basis. Remove SMF containing material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00A	exterior, throughout	walls	cream paint	spot test L6	negative for lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	No hazardous material identified.
B00A	exterior, throughout	walls	white paint	spot test L7	**positive for lead**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	Any areas of damaged/flaking lead paint and any associated debris should be removed by a suitably qualified and experienced contractor. Consider sealing or enclosing any remaining lead paint per AS4361. Reinspect condition on a regular basis. Avoid disturbance.
B00A	exterior, western and north-eastern garden beds	lining to garden bed	bituminous membrane	234842-S28	**asbestos detected by analysis**	0	2	3	1	2	0	8	Low	4	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00A	building in general	floors	vinyl tiles and associated adhesive	N/A	material(s) undergoing removal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Tiles generally reported as "No Asbestos Detected" in the DoE asbestos register however sample reference numbers are not provided. Further, floor tiles were being removed during DP's walkthrough inspection. Ensure that a Competent Person reinspects the floor areas to confirm the status of HBM following the current floor tile removal work.
B00A	R0013 - Cleaning Supplies	wall linings	mastic	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Assumed non-asbestos (however no sample number referenced in DoE register). Consider confirmatory sampling and analysis prior to any disturbance.
B00A	building in general	air conditioning plant	refrigerants	N/A	includes R32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.
B00A	building in general	fluorescent light fittings	capacitors, insulating oil	N/A	generally nil PCB assumed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inspect capacitors in detail when safe access available and prior to general demolition work. Remove any PCB containing capacitors prior to disturbance of light fittings. Removal and disposal to be in accordance with the requirements of the ANZECC PCB Management Plan, April 2003 and NSW EPA PCB Chemical Control Order 1997.

Photograph 1: B00A, R1001 - Storeroom, ceiling , vermiculite, no asbestos detected by analysis.

Photograph 2: B00A, exterior, throughout, walls, cream paint , negative for lead.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02 PLATE No: 1
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Photograph 3: B00A, exterior, throughout, walls, white paint, positive for lead.

Photograph 4: B00A, exterior, western and north-eastern garden beds, lining to garden bed , bituminous membrane, asbestos detected by analysis.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02
		PLATE No: 2
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Appendix C

B00B Register and Plates

Douglas Partners
Geotechnics · Environment · Groundwater

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00B	building in general	ceilings in general and some walls	vermiculite	Refer various samples in DoE Register. DP samples 234842-S29, and S30.	non-asbestos assumed. **SMF assumed.**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	similar 2	Analysis results in the DoE asbestos register are generally listed as "Limited Samples Taken" and associated comments indicate that further detailed sampling and analysis is warranted. Such sampling and analysis should be completed, if not already, in accordance with the procedure reportedly agreed between DoE and SafeWork NSW (refer page 2 of the DoE asbestos register) and prior to any disturbance of the vermiculite. Reinspect SMF condition on a regular basis. Remove SMF containing material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00B	exterior, north eastern garden beds	lining to garden bed	bituminous membrane	not provided in DoE register	**asbestos (assumed)**	0	2	3	1	2	0	8	Low	1	Asbestos assumed (however no sample reference number is provided in the DoE register). Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00B	R0003 - Reading Area	ceilings	vermiculite	234842-S29	no asbestos detected by analysis. **SMF detected.**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	Analysis results in the DoE asbestos register are generally listed as "Limited Samples Taken" and associated comments indicate that further detailed sampling and analysis is warranted. Such sampling and analysis should be completed, if not already, in accordance with the procedure reportedly agreed between DoE and SafeWork NSW (refer page 2 of the DoE asbestos register) and prior to any disturbance of the vermiculite. Reinspect SMF condition on a regular basis. Remove SMF containing material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00B	R1001 - Special Programs Room	ceilings	vermiculite	234842-S30	no asbestos detected by analysis. **SMF detected.**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	Analysis results in the DoE asbestos register are generally listed as "Limited Samples Taken" and associated comments indicate that further detailed sampling and analysis is warranted. Such sampling and analysis should be completed, if not already, in accordance with the procedure reportedly agreed between DoE and SafeWork NSW (refer page 2 of the DoE asbestos register) and prior to any disturbance of the vermiculite. Reinspect SMF condition on a regular basis. Remove SMF containing material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00B	R1001 - Special Programs Room	potential fire door to rear of room	internal insulation	N/A	**asbestos (assumed)**	3	0	0	1	2	1	7	Low	4	Door could not be opened/accessed during inspection. Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00B	exterior, throughout	walls	mastic	not provided in DoE register	**no asbestos detected by analysis**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Assumed non-asbestos (however no sample number referenced in DoE register). Consider confirmatory sampling and analysis prior to any disturbance.
B00B	interior, throughout	walls	cream paint	spot test L8	negative for lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified.
B00B	building in general	paint system	portion of paints	refer spot test L7 for B00A	**assumed positive for lead**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Areas of damaged/flaking lead paint and any associated debris should be removed by a suitably qualified and experienced contractor. Consider sealing or enclosing any remaining lead paint per AS4361. Reinspect condition on a regular basis. Avoid disturbance.

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00B	building in general	air conditioning plant	refrigerants	N/A	includes R32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.
B00B	building in general	fluorescent light fittings	capacitors, insulating oil	N/A	generally nil PCB assumed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inspect capacitors in detail when safe access available and prior to general demolition work. Remove any PCB containing capacitors prior to disturbance of light fittings. Removal and disposal to be in accordance with the requirements of the ANZECC PCB Management Plan, April 2003 and NSW EPA PCB Chemical Control Order 1997.

Photograph 1: B00B, exterior, north eastern garden beds, lining to garden bed , bituminous membrane, asbestos (assumed).

Photograph 2: B00B, R0003 - Reading Area, ceilings, vermiculite , no asbestos detected by analysis.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02 PLATE No: 1
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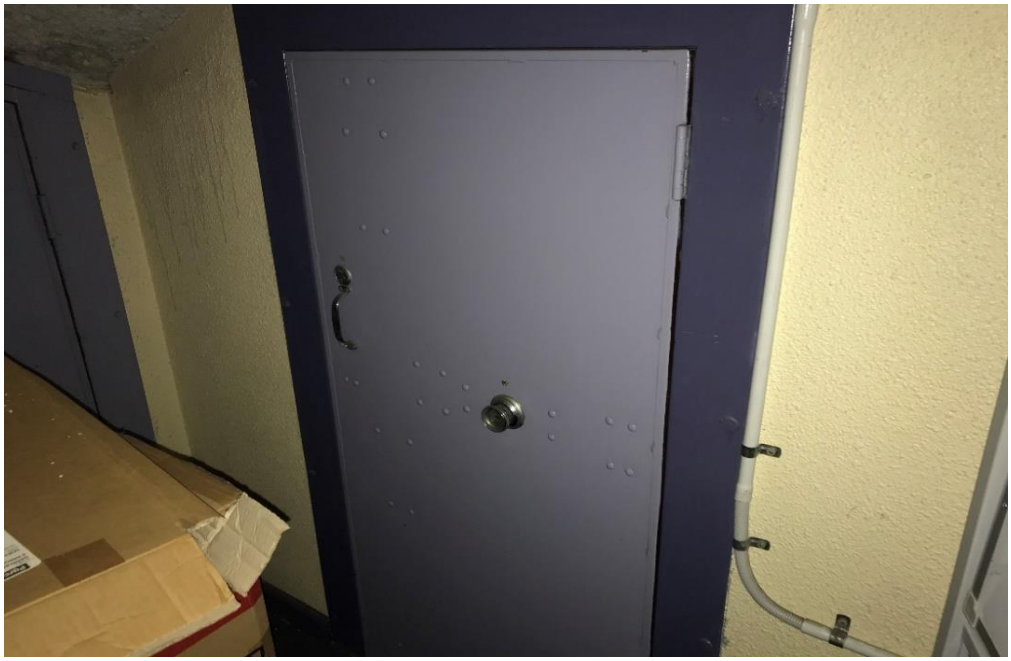
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Photograph 3: B00B, R1001 - Special Programs Room, ceilings, vermiculite , no asbestos detected by analysis.



Photograph 4: B00B, R1001 - Special Programs Room, potential fire door to rear of room, internal insulation, asbestos (assumed).

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02
		PLATE No: 2
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Appendix D

B00H Register and Plates

Douglas Partners
Geotechnics · Environment · Groundwater

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00H	exterior, subfloor	underfloor voids, packing materials	fibre cement fragments	not provided in DoE register	**asbestos detected by analysis**	1	3	2	1	0	1	8	Low	1	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00H	exterior	typical wall	cream paint	refer spot test L1 in B00P	assumed negative for lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	No hazardous material identified.
B00H	exterior	typical door	green paint	refer spot test L2 in B00P	assumed negative for lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	No hazardous material identified.
B00H	exterior	typical gutter and/or downpipe	green paint	refer spot test L3 in B00P	assumed negative for lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	No hazardous material identified.
B00H	interior	typical wall	white paint	spot test L4	negative for lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	No hazardous material identified.
B00H	R0005 - Staff Room	floor	vinyl tiles (green)	234842-S24	**asbestos detected by analysis**	0	0	0	1	2	1	4	Low	6	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00H	R0006 - Staff Room	floor	vinyl tiles (green)	refer 234842-S24	**asbestos (assumed)**	0	0	0	1	2	1	4	Low	similar 6	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00H	R0004 - Staff Room Annexe	floor	vinyl tiles (green)	refer 234842-S24	**asbestos (assumed)**	0	0	0	1	2	1	4	Low	similar 6	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).

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Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00H	ceiling cavity	cavity in general	settled dust/debris	N/A	**inaccessible - elevated lead assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00H	ceiling cavity	cavity in general	insulation materials (if present)	N/A	**SMF assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00H	building in general	air conditioning plant	refrigerants	N/A	present	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.
B00H	building in general	fluorescent light fittings	capacitors, insulating oil	N/A	generally nil PCB assumed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inspect capacitors in detail when safe access available and prior to general demolition work. Remove any PCB containing capacitors prior to disturbance of light fittings. Removal and disposal to be in accordance with the requirements of the ANZECC PCB Management Plan, April 2003 and NSW EPA PCB Chemical Control Order 1997.
B00H	building in general	throughout	paint system(s)	N/A	**lead paint (assumed)**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Lead paints assumed present as a precaution based on age of building. Consider further sampling and analysis prior to any disturbance. Any areas of damaged/flaking lead paint and any associated debris should be removed by a suitably qualified and experienced contractor. Consider sealing or enclosing any remaining lead paint per AS4361. Reinspect condition on a regular basis. Avoid disturbance.

Photograph 1: B00H, exterior, subfloor, underfloor voids, packing materials, fibre cement fragments, asbestos detected by analysis.

Photograph 2: B00H, exterior , typical wall, cream paint, assumed negative for lead.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02
		PLATE No: 1
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Photograph 3: B00H, exterior , typical door, green paint, assumed negative for lead.

Photograph 4: B00H, exterior , typical gutter and/or downpipe , green paint, assumed negative for lead.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment** **Narrabeen North Public School**	PROJECT: 86973.02 PLATE No: 2 REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Photograph 5: B00H, interior, typical wall, white paint, negative for lead.

Photograph 6: B00H, R0005 - Staff Room, floor, vinyl tiles (green), asbestos detected by analysis.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs**	PROJECT: 86973.02
	Hazardous Building Materials (HBM) Assessment	PLATE No: 3
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Appendix E

B00J Register and Plates

Douglas Partners
Geotechnics · Environment · Groundwater

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00J	exterior, subfloor	on brick piers between stilts and ant cap	fibre cement fragments	not provided in DoE register	**asbestos detected by analysis**	1	3	2	1	0	0	7	Low	1	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00J	exterior	eaves	fibre cement sheeting	not provided in DoE register	**asbestos detected by analysis**	1	1	1	1	2	0	6	Low	2	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00J	R0001	floor	vinyl tiles	not provided in DoE register	**asbestos detected by analysis**	0	1	3	2	2	1	9	Low	3	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00J	exterior, movement (balcony)	ceiling	fibre cement sheeting	not provided in DoE register	**asbestos detected by analysis**	1	1	1	1	2	0	6	Low	4	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00J	R0005 - Home Base	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00J	R0006 - Home Base	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00J	R0007 - Uniform Shop	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00J	R0008 - Uniform Shop	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00J	R0010 - Girls Toilets	partition walls	compressed fibre cement	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00J	R0010 - Girls Toilets	wall lining	fibre cement sheeting	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00J	R0011 - Boys Toilets	partition walls	compressed fibre cement	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00J	R0011 - Boys Toilets	wall lining	fibre cement sheeting	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00J	R0013 - Interview Room	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00J	R9001 - Garden Store	assumed stored item	redundant fibre cement sheeting	not provided in DoE register	**asbestos detected by analysis**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Material not identified by DP during inspection however assessment was limited by scope and available access. Caution is advised as material may remain present.
B00J	building in general	air conditioning plant	refrigerants	N/A	present	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.
B00J	building in general	fluorescent light fittings	capacitors, insulating oil	N/A	generally nil PCB assumed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inspect capacitors in detail when safe access available and prior to general demolition work. Remove any PCB containing capacitors prior to disturbance of light fittings. Removal and disposal to be in accordance with the requirements of the ANZECC PCB Management Plan, April 2003 and NSW EPA PCB Chemical Control Order 1997.

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DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00J	ceiling cavity	cavity in general	settled dust/debris	N/A	**inaccessible - elevated lead assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00J	ceiling cavity	cavity in general	insulation materials (if present)	N/A	**SMF assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00J	building in general	throughout	paint system(s)	N/A	**lead paint (assumed)**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Lead paints assumed present as a precaution based on age of building. Consider further sampling and analysis prior to any disturbance. Any areas of damaged/flaking lead paint and any associated debris should be removed by a suitably qualified and experienced contractor. Consider sealing or enclosing any remaining lead paint per AS4361. Reinspect condition on a regular basis. Avoid disturbance.

Photograph 1: B00J, exterior, subfloor, on brick piers between stilts and ant cap, fibre cement fragments, asbestos detected by analysis.

Photograph 2: B00J, exterior, eaves, fibre cement sheeting, asbestos detected by analysis.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02
		PLATE No: 1
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Photograph 3: B00J, R0001, floor, vinyl tiles, asbestos detected by analysis.

Photograph 4: B00J, exterior, movement (balcony), ceiling, fibre cement sheeting, asbestos detected by analysis.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02
		PLATE No: 2
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Appendix F

B00K Register and Plates

Douglas Partners
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DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00K	R0005 - Craft Store	floor	vinyl tiles	not provided in DoE register	**asbestos detected by analysis**	1	1	2	3	2	0	9	Low	1	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00K	R0006 -Distribution Board	electrical distribution board	resinous board	N/A	**asbestos (assumed)**	0	1	1	1	2	1	6	Low	2	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00K	R0008 - Special Movements Room	floor	vinyl tiles	not provided in DoE register	**asbestos detected by analysis**	0	1	2	3	2	1	9	Low	3	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00K	R0004 - Special Programs Room	floor	vinyl tiles	234842-S31	**asbestos detected by analysis**	0	1	2	3	2	1	9	Low	4	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00K	R0003 - Special Programs Room	floor	vinyl tiles	234842-S32	**asbestos detected by analysis**	0	1	2	3	2	1	9	Low	N/A	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00K	ceiling cavity	packing materials	fibre cement fragments	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00K	R0003 - Special Programs Room	ceiling	fibre cement sheeting	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00K	R0004 - Special Programs Room	ceiling	fibre cement sheeting	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.

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DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00K	R0005 - Special Programs Room	ceiling	fibre cement sheeting	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00K	building in general	air conditioning plant	refrigerants	N/A	present	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.
B00K	building in general	fluorescent light fittings	capacitors, insulating oil	N/A	generally nil PCB assumed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inspect capacitors in detail when safe access available and prior to general demolition work. Remove any PCB containing capacitors prior to disturbance of light fittings. Removal and disposal to be in accordance with the requirements of the ANZECC PCB Management Plan, April 2003 and NSW EPA PCB Chemical Control Order 1997.
B00K	ceiling cavity	cavity in general	settled dust/debris	N/A	**inaccessible - elevated lead assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00K	ceiling cavity	cavity in general	insulation materials (if present)	N/A	**SMF assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00K	building in general	throughout	paint system(s)	N/A	**lead paint (assumed)**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Lead paints assumed present as a precaution based on age of building. Consider further sampling and analysis prior to any disturbance. Any areas of damaged/flaking lead paint and any associated debris should be removed by a suitably qualified and experienced contractor. Consider sealing or enclosing any remaining lead paint per AS4361. Reinspect condition on a regular basis. Avoid disturbance.

Photograph 1: B00K, R0005 - Craft Store, floor, vinyl tiles, asbestos detected by analysis.

Photograph 2: B00K, R0006 -Distribution Board, electrical distribution board, resinous board, asbestos (assumed).

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02
		PLATE No: 1
	Narrabeen North Public School	REV: A
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Photograph 3: B00K, R0008 - Special Movements Room, floor, vinyl tiles, asbestos detected by analysis.

Photograph 4: B00K, R0004 - Special Programs Room, floor, vinyl tiles, asbestos detected by analysis.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment** **Narrabeen North Public School**	PROJECT: 86973.02 PLATE No: 2 REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Appendix G

B00N Register and Plates

Douglas Partners
Geotechnics · Environment · Groundwater

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00N	exterior, subfloor	packing to piers beneath metal ant cap	fibre cement fragments	not provided in DoE register	**asbestos detected by analysis**	1	3	2	1	0	0	7	Low	1	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00N	R0003 - Movement (Balcony)	wall linings to east and west walls	fibre cement sheet	not provided in DoE register	**asbestos detected by analysis**	1	1	1	2	2	1	8	Low	2	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00N	exterior, throughout	undercoat to walls	white paint	spot test L8	**positive for lead**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	Any areas of damaged/flaking lead paint and any associated debris should be removed by a suitably qualified and experienced contractor. Consider sealing or enclosing any remaining lead paint per AS4361. Reinspect condition on a regular basis. Avoid disturbance.
B00N	R0001	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00N	R0002	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00N	building in general	air conditioning plant	refrigerants	N/A	present	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.
B00N	building in general	fluorescent light fittings	capacitors, insulating oil	N/A	generally nil PCB assumed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inspect capacitors in detail when safe access available and prior to general demolition work. Remove any PCB containing capacitors prior to disturbance of light fittings. Removal and disposal to be in accordance with the requirements of the ANZECC PCB Management Plan, April 2003 and NSW EPA PCB Chemical Control Order 1997.
B00N	ceiling cavity	cavity in general	settled dust/debris	N/A	**inaccessible - elevated lead assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00N	ceiling cavity	cavity in general	insulation materials (if present)	N/A	**SMF assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.

Photograph 1: B00N, exterior, subfloor, packing to piers beneath metal ant cap, fibre cement fragments, asbestos detected by analysis.

Photograph 2: B00N, R0003 - Movement (Balcony), wall linings to east and west walls , fibre cement sheet, asbestos detected by analysis.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs**	PROJECT: 86973.02
	Hazardous Building Materials (HBM) Assessment	PLATE No: 1
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Photograph 3: B00N, exterior, throughout , undercoat to walls, white paint, positive for lead.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment** **Narrabeen North Public School**	PROJECT: 86973.02 PLATE No: 2 REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Appendix H

B00P Register and Plates

Douglas Partners
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DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00P	exterior, subfloor	packing to piers beneath metal ant cap	fibre cement fragments	N/A	**asbestos (assumed)**	1	3	2	1	0	1	8	Low	1	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00P	exterior	typical wall	cream paint	spot test L1	negative for lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	No hazardous material identified.
B00P	exterior, balcony	posts, bearers and joists	typical brown paint	spot test L2	negative for lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	No hazardous material identified.
B00P	R0010 - Movement (balcony)	ceiling/eave	fibre cement sheeting	not provided in DoE register	**asbestos detected by analysis**	1	1	0	1	2	0	5	Low	4	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00P	exterior	gutters and downpipes	green paint	spot test L4	negative for lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	No hazardous material identified.
B00P	R0001 - Staff Toilet	floor	vinyl tiles	not provided in DoE register	**asbestos detected by analysis**	0	1	2	3	2	1	9	Low	6	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00P	R0002 - Storeroom	floor	vinyl tiles	234842-S25	**asbestos detected by analysis**	0	1	1	1	2	1	6	Low	7	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00P	R0003 - Storeroom	floor	vinyl tiles	234842-S26	**asbestos (assumed)**	0	1	2	3	2	1	9	Low	8	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).

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DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00P	R0004 - Movement	floor	vinyl tiles	refer 234842-S26	**asbestos (assumed)**	0	1	2	3	2	1	9	Low	N/A	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00P	building in general	air conditioning plant	refrigerants	N/A	includes R32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.
B00P	building in general	fluorescent light fittings	capacitors, insulating oil	N/A	generally nil PCB assumed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inspect capacitors in detail when safe access available and prior to general demolition work. Remove any PCB containing capacitors prior to disturbance of light fittings. Removal and disposal to be in accordance with the requirements of the ANZECC PCB Management Plan, April 2003 and NSW EPA PCB Chemical Control Order 1997.
B00P	ceiling cavity	cavity in general	settled dust/debris	N/A	**inaccessible - elevated lead assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00P	ceiling cavity	cavity in general	insulation materials (if present)	N/A	**SMF assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00P	building in general	throughout	paint system(s)	N/A	**lead paint (assumed)**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Lead paints assumed present as a precaution based on age of building. Consider further sampling and analysis prior to any disturbance. Any areas of damaged/flaking lead paint and any associated debris should be removed by a suitably qualified and experienced contractor. Consider sealing or enclosing any remaining lead paint per AS4361. Reinspect condition on a regular basis. Avoid disturbance.

Photograph 1: B00P, exterior, subfloor, packing to piers beneath metal ant cap, fibre cement fragments, asbestos (assumed).

Photograph 2: B00P, exterior, typical wall, cream paint, negative for lead.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02 PLATE No: 1
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Photograph 3: B00P, exterior, balcony , posts, bearers and joists , typical brown paint, negative for lead.

Photograph 4: B00P, R0010 - Movement (balcony), ceiling/eave, fibre cement sheeting, asbestos detected by analysis.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02
		PLATE No: 2
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Photograph 5: B00P, exterior, gutters and downpipes, green paint, negative for lead.

Photograph 6: B00P, R0001 - Staff Toilet, floor, vinyl tiles, asbestos detected by analysis.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment** **Narrabeen North Public School**	PROJECT: 86973.02 PLATE No: 3 REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Photograph 7: B00P, R0002 - Storeroom , floor, vinyl tiles, asbestos detected by analysis.

Photograph 8: B00P, R0003 - Storeroom, floor, vinyl tiles, asbestos (assumed).

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02
		PLATE No: 4
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Appendix I

B00R Register and Plates

Douglas Partners
Geotechnics · Environment · Groundwater

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00R	R0010 - Boys Toilet	ceiling	fibre cement sheet	not provided in DoE register	**asbestos detected by analysis**	1	1	1	1	2	1	7	Low	1	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00R	R0010 - Boys Toilet	partition walls	compressed fibre cement	not provided in DoE register	**asbestos detected by analysis**	1	1	0	3	2	1	8	Low	2	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00R	R0009 - Girls Toilet	ceiling	fibre cement sheet	not provided in DoE register	**asbestos detected by analysis**	1	1	1	1	2	1	7	Low	3	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00R	R0009 - Girls Toilet	partition walls	compressed fibre cement	not provided in DoE register	**asbestos detected by analysis**	1	1	0	3	2	1	8	Low	4	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00R	interior, ceiling cavity (accessed through R0010)	sarking	waterproof membrane	N/A	**SMF identified visually**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00R	interior, ceiling cavity (accessed through R0010)	steel beams	red paint	spot test L5	**positive for lead**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6	Any areas of damaged/flaking lead paint and any associated debris should be removed by a suitably qualified and experienced contractor. Consider sealing or enclosing any remaining lead paint per AS4361. Reinspect condition on a regular basis. Avoid disturbance.
B00R	R0011 - Drinking Facility	ceiling	fibre cement sheet	not provided in DoE register	**asbestos detected by analysis**	1	1	1	1	2	1	7	Low	7	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00R	R0005 - Home Base	walls	green paint	spot test L6	negative for lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified.

Douglas Partners
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DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00R	exterior	ceiling / eaves	fibre cement sheet	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00R	interior, ceiling cavity (accessed through R0010)	packing materials	fibre cement fragments	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00R	R0001 - Movement (balcony)	ceiling	fibre cement sheet	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00R	R0004 - General Storeroom	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00R	R0005 - Home Base	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00R	R0006 - Practical Activities	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00R	R0007 - Movement	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00R	R0008 - Home Base	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00R	R0012 - Movement (Balcony)	ceiling	fibre cement sheet	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00R	building in general	air conditioning plant	refrigerants	N/A	present	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.
B00R	building in general	fluorescent light fittings	capacitors, insulating oil	N/A	generally nil PCB assumed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inspect capacitors in detail when safe access available and prior to general demolition work. Remove any PCB containing capacitors prior to disturbance of light fittings. Removal and disposal to be in accordance with the requirements of the ANZECC PCB Management Plan, April 2003 and NSW EPA PCB Chemical Control Order 1997.
B00R	ceiling cavity	cavity in general	settled dust/debris	N/A	**inaccessible - elevated lead assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00R	ceiling cavity	cavity in general	insulation materials (if present)	N/A	**SMF assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.

Photograph 1: B00R, R0010 - Boys Toilet, ceiling, fibre cement sheet, asbestos detected by analysis.

Photograph 2: B00R, R0010 - Boys Toilet, partition walls, compressed fibre cement, asbestos detected by analysis.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02
		PLATE No: 1
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Photograph 3: B00R, R0009 - Girls Toilet , ceiling, fibre cement sheet, asbestos detected by analysis.

Photograph 4: B00R, R0009 - Girls Toilet , partition walls, compressed fibre cement, asbestos detected by analysis.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02 PLATE No: 2
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Photograph 5: B00R, interior, ceiling cavity (accessed through R0010), sarking, waterproof membrane , SMF identified visually.

Photograph 6: B00R, interior, ceiling cavity (accessed through R0010), steel beams , red paint, positive for lead.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02
		PLATE No: 3
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20

Photograph 7: B00R, R0011 - Drinking Facility , ceiling, fibre cement sheet, asbestos detected by analysis.

Appendix J

B00S Register and Plates

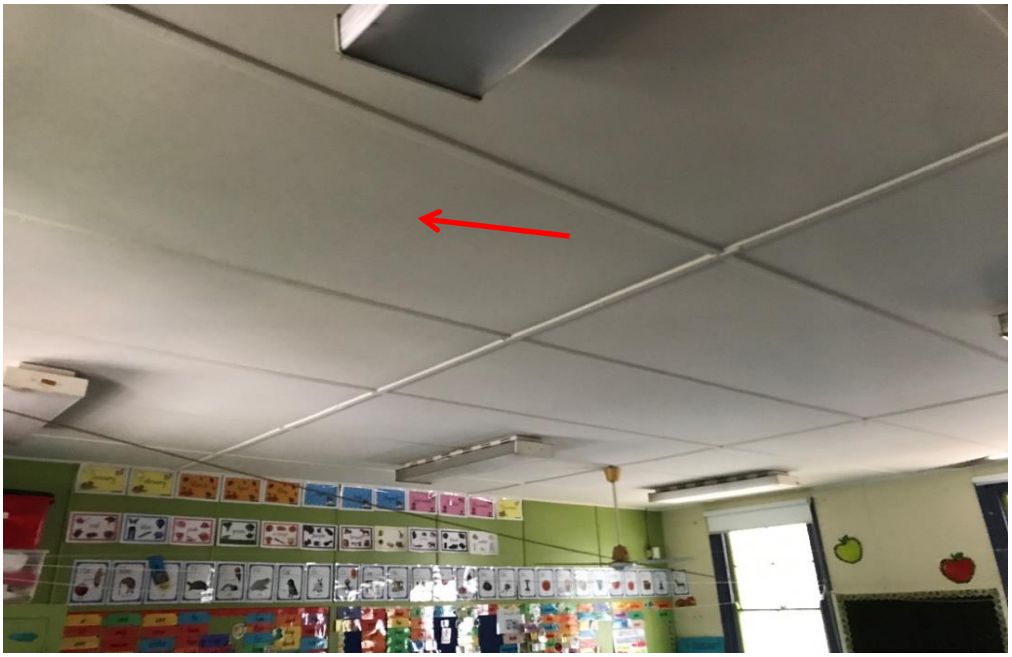
Douglas Partners
Geotechnics · Environment · Groundwater

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00S	R0002 - Home Base	ceiling	fibre cement sheet	not provided in DoE register	**asbestos detected by analysis**	1	1	1	1	2	1	7	Low	1	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00S	exterior, throughout	walls, undercoat	white paint	spot test L8	**positive for lead**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	Any areas of damaged/flaking lead paint and any associated debris should be removed by a suitably qualified and experienced contractor. Consider sealing or enclosing any remaining lead paint per AS4361. Reinspect condition on a regular basis. Avoid disturbance.
B00S	R0001 - Home Base	ceiling	fibre cement sheet	not provided in DoE register	**asbestos detected by analysis**	1	1	1	1	2	1	7	Low	3	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00S	R0003 - Ceiling Cavity	underside of ceiling	insulation	N/A	**SMF identified visually**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00S	R0001 - Home Base	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00S	R0001 - Home Base	ceiling cavity	dust	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00S	R0002 - Home Base	floor	vinyl tiles	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.
B00S	R0002 - Home Base	ceiling cavity	dust	not provided in DoE register	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No hazardous material identified however caution advised as no sample reference number provided in DoE register.

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

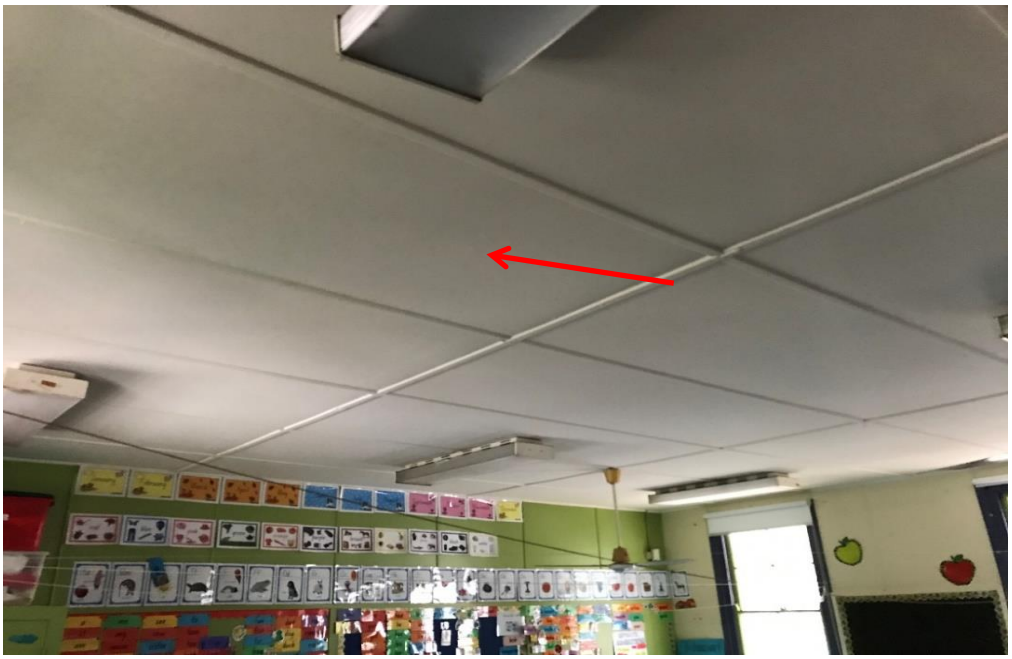
						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00S	building in general	air conditioning plant	refrigerants	N/A	present	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.
B00S	building in general	fluorescent light fittings	capacitors, insulating oil	N/A	generally nil PCB assumed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inspect capacitors in detail when safe access available and prior to general demolition work. Remove any PCB containing capacitors prior to disturbance of light fittings. Removal and disposal to be in accordance with the requirements of the ANZECC PCB Management Plan, April 2003 and NSW EPA PCB Chemical Control Order 1997.
B00S	ceiling cavity	cavity in general	settled dust/debris	N/A	**inaccessible - elevated lead assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
B00S	ceiling cavity	cavity in general	insulation materials (if present)	N/A	**SMF assumed**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Inaccessible area/material - Hazardous material(s) assumed present as a precaution. Confirm status of hazardous material(s) when safe access available and prior to any disturbance.



Photograph 1: B00S, R0002 - Home Base , ceiling, fibre cement sheet, asbestos detected by analysis.

Photograph 2: B00S, exterior, throughout, walls, undercoat , white paint , positive for lead.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment**	PROJECT: 86973.02 PLATE No: 1
	Narrabeen North Public School	REV: A
	CLIENT: SINSW c/- Johnstaff Projects	DATE: Jan-20



Photograph 3: B00S, R0001 - Home Base , ceiling, fibre cement sheet, asbestos detected by analysis.

Photograph 4: B00S, R0003 - Ceiling Cavity, underside of ceiling, insulation, SMF identified visually.

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Hazardous Building Materials (HBM) Assessment** **Narrabeen North Public School** CLIENT: SINSW c/- Johnstaff Projects	PROJECT: 86973.02 PLATE No: 2 REV: A DATE: Jan-20

Appendix K

B00T Register and Plates

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00T	building in general	cavities/voids	insulation (if present)	N/A	**SMF (assumed)**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00T	building in general	air conditioning plant	refrigerants	N/A	present	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.

Appendix L

B00U Register and Plates

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00U	building in general	cavities/voids	insulation (if present)	N/A	**SMF (assumed)**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00U	building in general	air conditioning plant	refrigerants	N/A	present	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.

Appendix M

B00V Register and Plates

DP Project No: 86973.02
Hazardous Building Materials (HBM) Assessment
Narrabeen North Public School

						Asbestos Risk Assessment									
Building	**Location (General)**	**Location (Specific)**	**Material**	**Sample No.**	**Material Status**	**Friability**	**Condition**	**Treatment**	**Accessibility**	**Activity**	**Ventilation**	**Risk Score**	**Action Priority**	**Photo No.**	**Summary Recommendation (Management Survey)**
B00V	building in general	cavities/voids	insulation (if present)	N/A	**SMF (assumed)**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Reinspect hazardous material - Reinspect condition on a regular basis. Remove material prior to any significant disturbance (e.g. renovation, demolition or maintenance work).
B00V	building in general	air conditioning plant	refrigerants	N/A	present	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ensure air conditioning units are decommissioned and refrigerant is reclaimed by an appropriately licensed technician prior to general demolition. Refrigerants should not be discharged or vented to the environment.

Appendix N

Laboratory Certificate(s) of Analysis

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 234842

Client Details

Client	Douglas Partners Pty Ltd
Attention	Tim Kulmar
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**86973.02**
Number of Samples	32 Material
Date samples received	20/01/2020
Date completed instructions received	20/01/2020

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

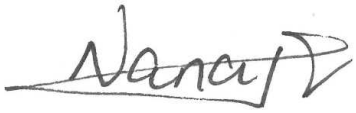
Date results requested by	23/01/2020
Date of Issue	23/01/2020

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By
Analysed by Asbestos Approved Identifier: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu
Results Approved By
Lucy Zhu, Asbestos Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

Asbestos ID - materials						
Our Reference		234842-1	234842-2	234842-3	234842-4	234842-5
Your Reference	UNITS	S1	S2	S3	S4	S5
Date Sampled		15/01/2020	15/01/2020	15/01/2020	15/01/2020	15/01/2020
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	22/01/2020	22/01/2020	22/01/2020	22/01/2020	22/01/2020
Mass / Dimension of Sample	-	20x20x1mm	31x15x2mm	18x7x1mm	65x26x2mm	43x41x5mm
Sample Description	-	Black sticky mastic	Beige fibrous insulation	Black bituminous material	Blue vinyl tile	Grey fibre cement material
Asbestos ID in materials	-	No asbestos detected Organic fibres detected Synthetic mineral fibres detected	Chrysotile asbestos detected Organic fibres detected	Chrysotile asbestos detected	No asbestos detected Synthetic mineral fibres detected	Chrysotile asbestos detected Amosite asbestos detected
Trace Analysis	-	No asbestos detected	[NT]	[NT]	No asbestos detected	[NT]

Asbestos ID - materials						
Our Reference		234842-6	234842-7	234842-8	234842-9	234842-10
Your Reference	UNITS	S6	S7	S8	S9	S10
Date Sampled		15/01/2020	15/01/2020	15/01/2020	15/01/2020	15/01/2020
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	22/01/2020	22/01/2020	22/01/2020	22/01/2020	22/01/2020
Mass / Dimension of Sample	-	64x26x4mm	80x25x3mm	30x25x4mm	23x8x1mm	30x10x1mm
Sample Description	-	Orange vinyl tile	Orange vinyl tile	Beige fibre cement material	Grey mastic	Black bituminous material
Asbestos ID in materials	-	Chrysotile asbestos detected	Chrysotile asbestos detected	Chrysotile asbestos detected Organic fibres detected	Chrysotile asbestos detected	Chrysotile asbestos detected Synthetic mineral fibres detected
Trace Analysis	-	[NT]	[NT]	[NT]	[NT]	[NT]

Asbestos ID - materials						
Our Reference		234842-11	234842-12	234842-13	234842-14	234842-15
Your Reference	UNITS	S11	S12	S13	S14	S15
Date Sampled		15/01/2020	15/01/2020	15/01/2020	15/01/2020	15/01/2020
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	22/01/2020	22/01/2020	22/01/2020	22/01/2020	22/01/2020
Mass / Dimension of Sample	-	90x5x3mm	172x15x4mm	39x12x2mm	70x42x4mm	76x31x2mm
Sample Description	-	Black bituminous material	Brown hardened mastic	Cream vinyl tile	Beige mica vermiculite	Beige vinyl tile
Asbestos ID in materials	-	No asbestos detected Synthetic mineral fibres detected	Chrysotile asbestos detected	No asbestos detected Synthetic mineral fibres detected	No asbestos detected	No asbestos detected
Trace Analysis	-	No asbestos detected	[NT]	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - materials						
Our Reference		234842-16	234842-17	234842-18	234842-19	234842-20
Your Reference	UNITS	S16	S17	S18	S19	S20
Date Sampled		15/01/2020	15/01/2020	15/01/2020	15/01/2020	15/01/2020
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	22/01/2020	22/01/2020	22/01/2020	22/01/2020	22/01/2020
Mass / Dimension of Sample	-	123x8x3mm	98x26x6mm	36x24x5mm	23x15x2mm	66x35x4mm
Sample Description	-	Grey soft mastic	Grey fibre cement material	Beige fibre cement material	Black bituminous material	Beige fibre cement-like material
Asbestos ID in materials	-	Chrysotile asbestos detected Organic fibres detected	Chrysotile asbestos detected	Chrysotile asbestos detected Amosite asbestos detected Organic fibres detected	No asbestos detected	No asbestos detected
Trace Analysis	-	[NT]	[NT]	[NT]	No asbestos detected	No asbestos detected

Asbestos ID - materials						
Our Reference		234842-21	234842-22	234842-23	234842-24	234842-25
Your Reference	UNITS	S21	S22	S23	S24	S25
Date Sampled		15/01/2020	15/01/2020	15/01/2020	15/01/2020	15/01/2020
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	22/01/2020	22/01/2020	22/01/2020	22/01/2020	22/01/2020
Mass / Dimension of Sample	-	85x61x2mm	105x100x5mm	110x73x4mm	55x41x3mm	55x43x3mm
Sample Description	-	Beige fibrous insulation	Grey fibre cement material	Beige fibrous insulation	Green vinyl tile	A)Beige vinyl tile B)Adhesive
Asbestos ID in materials	-	Amosite asbestos detected Synthetic mineral fibres detected	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected	Amosite asbestos detected Synthetic mineral fibres detected	Chrysotile asbestos detected	A)Chrysotile asbestos detected B)No asbestos detected
Trace Analysis	-	[NT]	[NT]	[NT]	[NT]	No asbestos detected

Asbestos ID - materials						
Our Reference		234842-26	234842-27	234842-28	234842-29	234842-30
Your Reference	UNITS	S26	S27	S28	S29	S30
Date Sampled		15/01/2020	15/01/2020	15/01/2020	15/01/2020	15/01/2020
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	22/01/2020	22/01/2020	22/01/2020	22/01/2020	22/01/2020
Mass / Dimension of Sample	-	98x50x3mm	148x38x4mm	58x31x3mm	150x63x4mm	146x67x6mm
Sample Description	-	A)Beige vinyl tile B)Adhesive	Beige vitreous fibrous insulation	Black bituminous membrane	Beige vitreous fibrous insulation	Beige vitreous fibrous insulation
Asbestos ID in materials	-	A)Chrysotile asbestos detected B)No asbestos detected	No asbestos detected Synthetic mineral fibres detected	Chrysotile asbestos detected Organic fibres detected	No asbestos detected Synthetic mineral fibres detected	No asbestos detected Synthetic mineral fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	[NT]	No asbestos detected	No asbestos detected

Asbestos ID - materials			
Our Reference		234842-31	234842-32
Your Reference	UNITS	S31	S32
Date Sampled		15/01/2020	15/01/2020
Type of sample		Material	Material
Date analysed	-	22/01/2020	22/01/2020
Mass / Dimension of Sample	-	113x38x3mm	54x45x3mm
Sample Description	-	Blue vinyl tile	Blue vinyl tile
Asbestos ID in materials	-	Chrysotile asbestos detected	Chrysotile asbestos detected
Trace Analysis	-	[NT]	[NT]

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Report Comments

Samples 234842-25 & 26; The supplied samples were sub-sampled (A & B) in order to accurately report the analytical results representative of the entire sample, as per AS4964-2004.