

NSW DEPARTMENT OF EDUCATION
C/O - PUBLIC WORKS ADVISORY

HORNSBY SOUTH PUBLIC SCHOOL

ASBESTOS IN GROUNDS MANAGEMENT PLAN

MARCH 2020

CONFIDENTIAL



CONFIDENTIAL

ASBESTOS IN GROUNDS MANAGEMENT PLAN

CONFIDENTIAL

Hornsby South Public School Asbestos in Grounds Management Plan




NSW Department of Education
C/o - Public Works Advisory

WSP

Level 27, 680 George Street
Sydney NSW 2000
GPO Box 5394
Sydney NSW 2001

Tel: +61 2 9272 5100
Fax: +61 2 9272 5101
wsp.com

REV	DATE	DETAILS
1	09/03/2020	Revision 1

	NAME	DATE	SIGNATURE
Prepared by:	Daniel Abela	09/03/2020	
Reviewed by:	Matthew Murray	09/03/2020	
Approved by:	Matthew Murray	09/03/2020	

This document may contain confidential and legally privileged information, neither of which are intended to be waived, and must be used only for its intended purpose. Any unauthorised copying, dissemination or use in any form or by any means other than by the addressee, is strictly prohibited. If you have received this document in error or by any means other than as authorised addressee, please notify us immediately and we will arrange for its return to us.



TABLE OF CONTENTS

	DEFINITIONS	1
1	INTRODUCTION	3
1.1	BACKGROUND	3
1.2	SCOPE	3
1.3	OBJECTIVES.....	3
2	REGULATORY FRAMEWORK	3
3	RESPONSIBILITIES	5
4	ASBESTOS IN GROUNDS	5
4.1	ASBESTOS IN GROUNDS OCCURRENCES	1
4.2	ASBESTOS IN GROUNDS REGISTER	3
5	SITE MANAGEMENT REQUIREMENTS	1
5.1	RE-INSPECTIONS	1
5.2	ASBESTOS INCIDENT PROCEDURE.....	1
6	SAFE WORKING PRACTICES	3
6.1	GENERAL	3
6.2	PERMIT TO WORK.....	3
6.3	CONTRACTOR HEALTH AND SAFETY	3
6.4	AWARENESS TRAINING	4
7	ASBESTOS REMOVAL	6
7.1	ASBESTOS IN GROUNDS GENERAL REMOVAL PROCEDURES	6
7.1.1	SPARROW-PICKING OF ACM FRAGMENTS	6
7.1.2	ENCAPSULATION OF SOIL CONTAINING ACM ON-SITE	7
7.1.3	EXCAVATION OF SOIL CONTAINING ACM FROM SITE.....	7
8	LIMITATIONS	9

DEFINITIONS

ACM	Asbestos containing material
Air Monitoring	<p>Air monitoring involved sampling airborne asbestos fibres to assist in assessing exposure to asbestos and the effectiveness of implemented control measures. It must be conducted in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust, 2nd Edition [NOHSC: 3003 (2005)].</p> <p>It is a DoE requirement that air monitoring is a requirement when any form of asbestos disturbance works is undertaken.</p>
AMD	Asset Management Directorate (DoE state office)
AMP	Asbestos Management Plan
AMU	Asset Management Unit (DoE regional office)
Asbestos	Defined as the fibrous form of mineral silicates; belonging to the serpentine and amphibole groups of rock-forming minerals, including actinolite, amosite, crocidolite, chrysotile, anthophyllite, tremolite, or any mixture containing one or more of these.
Asbestos Assessor	A person who is SafeWork NSW licensed in accordance with the regulations for air monitoring, clearance inspections or the issuing of clearance certificates for class A asbestos removal work.
Class A Licensed Asbestos Removalist	As per Part 8.10 of the WHS Regulations, a contractor, SafeWork NSW licensed to remove all types and quantities of asbestos.
Contaminated Land Management Act	Contaminated Land Management Act 1997
Contaminated	Contaminated Land Management Regulation 2013
Class B Licensed Asbestos Removalist	As per Part 8.10 of the WHS Regulations, a contractor, SafeWork NSW licensed to remove any amount of non-friable asbestos or ACM.
Competent person	<p>For a clearance inspection under clause 473 – <i>A person who has acquired through training or experience, the knowledge and skills and is able to carry out a clearance inspection:</i></p> <ul style="list-style-type: none">a. a certification in relation to the specified VET course for asbestos assessor work, orb. a tertiary qualification in work health and safety, occupational hygiene, science, building, construction or environmental health.
DoE	Department of Education
Facility manager	Person with responsibility for the DoE Facility or a suitably appointed delegate
Fibrous cement	Cement based building material containing reinforcement of either asbestos or non-asbestos fibres. Trade names include but are not limited to Super Six, Hardiflex, Hardiplank and Villaboard.

Friable asbestos	Any material that contains asbestos and is in a powder form or can be crumbled, pulverised or reduced to powder by hand pressure when dry.
Hygienist	Note: for the purpose of this plan, the hygienist will also be a competent person / asbestos assessor / SafeWork NSW accredited licensed asbestos assessor as defined by regulations and selected from DoE hygienist panel.
Hygienist panel (contract)	A Public Works contract that provides a panel of three contractors for the supply of occupational hygienist services to DoE for the management of assets to ensure compliance with the relevant legislation, including the NSW Work Health and Safety (WHS) Regulation 2017, particularly as this related to asbestos.
Licensed asbestos removalist	Means a person conducting a business or undertaking who is SafeWork NSW licensed under the WHS Regulations to carry out class A or class B asbestos removal work.
Non-friable asbestos	Means material containing asbestos that is not friable asbestos, including material containing asbestos fibres reinforced with a bonding compound.
NSW EPA	New South Wales Environment Protection Authority
Permit to work	A Permit to work authority will need to be issued to and signed by the contractor, acknowledging presence of asbestos containing materials in the work area/s identified in the register prior to commencing work. The contractor is to indicate the control measures to be used. Permit to work authorities will only be issued by the DoE Facility Manager.
PCBU	Person conducting a business or undertaking
POEO	Protection of the Environment Operations (POEO) Act
PWA	Public Works Advisory, a division of Department of Finance, Services and Innovation
SSAMP	Site specific Asbestos Management Plan; also known as Asbestos in Grounds Management Plan
WHS Act	NSW Work Health and Safety Act 2011
WHS Regulation	NSW Work Health and Safety Regulation 2017

1 INTRODUCTION

1.1 BACKGROUND

Since 2003 NSW Department of Education (DoE) has had a separate Fibro in Grounds program to address school sites that have grounds asbestos related issues, these are typically fragments of non-friable AC (asbestos containing), FC (fibre cement) fragments.

1.2 SCOPE

WSP Australia Pty Limited (WSP) was engaged by NSW Department of Education (DoE) C/o - Public Works Advisory (the Client) to produce this Site Specific Asbestos Management Plan (SSAMP) for Hornsby South Public School (the site).

The SSAMP has been developed to address DoE's obligations under the *NSW Work Health and Safety Regulation 2017* and *NSW Work Health and Safety Act 2011* as it relates to the presence of asbestos in grounds, by managing and minimising asbestos related health risks to personnel working on or visiting the site.

This SSAMP is to be read in conjunction with any existing asbestos register for the site and the overarching Asbestos Management Plan (AMP) for NSW Government Schools.

1.3 OBJECTIVES

The SSAMP details the approach to be taken by the DoE in managing asbestos in grounds by documenting procedures designed to minimise the risk of exposure to asbestos of all personnel on the site, including all DoE and Public Works Advisory personnel, teaching staff, maintenance staff, students, maintenance contractors and other visitors.

The SSAMP contains the following information:

- scope and limitations of the SSAMP
- asbestos related regulatory requirements
- organisational responsibilities
- details of in-ground asbestos containing materials (ACM) when previous ACM ground works have been undertaken
- an asbestos in grounds register for already known asbestos issued detected on the site
- overview of the risk assessment process
- management of in-situ asbestos containing materials in grounds
- emergency response procedures
- safe working practices
- training, and
- requirements for asbestos removal.

The SSAMP should be updated where there is a reoccurrence of asbestos in grounds, when an asbestos Clearance Certificate is produced or remediation works completed.

2 REGULATORY FRAMEWORK

This SSAMP has been developed in accordance with the following applicable legislation and codes of practice:

- *Contaminated Land Management Act 2008*
- Contaminated Land Management Regulation 2013
- *NSW Work Health and Safety Act 2011*
- NSW Work Health and Safety Regulation 2017
- How to Manage and Control Asbestos in the Workplace: Code of Practice 2016
- How to Safely Remove Asbestos: Code of Practice 2016
- NSW EPA Waste Classification Guidelines – Part 1: Classification of waste 2014
- *Protection of the Environment Operations Act 1997*

3 RESPONSIBILITIES

The DoE, as a person with management or control of a workplace (PCBU) has an obligation under Part 8.3 of the NSW Work Health and Safety Regulation 2017 to assess the risk of harm to the health and safety of any person arising from asbestos hazards.

Those responsible for the management of DoE facilities and Contractors are duty holders who have a duty of care. Each duty holder is required to comply with all relevant NSW legislation.

This SSAMP is designed for all duty holders where asbestos and asbestos containing materials may be present in grounds. Duty holders include those responsible for the management of DoE facilities, such as:

- school principal
- AMU managers
- asset management directorate
- workers including voluntary staff, and
- contractors.

4 ASBESTOS IN GROUNDS

4.1 ASBESTOS IN GROUNDS OCCURRENCES

A summary of asbestos in grounds occurrences and remediation works completed is provided in Table 4.1.

Table 4.1 Asbestos in Grounds Occurrences at Hornsby South Public School

DATE	AREA	LOCATION	INCIDENT	REMEDIAL MEASURE / TREATMENT	COMMENT
February 2003	A	North of Block A.	Non-friable fibre cement fragments were observed on the ground surface	A sparrow pick was performed on the visibly accessible ground surface portion. An asbestos clearance certificate was provided following the successful remediation works.	Topsoil has become exposed in an area where asbestos containing materials may be present below clean soils/clean fill.
February 2003	B	South East of Block C.	Non-friable fibre cement fragments were observed on the ground surface	A sparrow pick was performed on the visibly accessible ground surface portion. An asbestos clearance certificate was provided following the successful remediation works.	Topsoil has become exposed in an area where asbestos containing materials may be present below clean soils/clean fill.
February 2003	C	West of Block G.	Non-friable fibre cement fragments were observed on the ground surface	A sparrow pick was performed on the visibly accessible ground surface portion. An asbestos clearance certificate was provided following the successful remediation works.	Topsoil has become exposed in an area where asbestos containing materials may be present below clean soils/clean fill.

DATE	AREA	LOCATION	INCIDENT	REMEDIAL MEASURE / TREATMENT	COMMENT
09/03/2020	D	Area South-west of Block G	Non-friable fibre cement fragments were observed on the ground surface	A sparrow pick was performed on the visibly accessible ground surface portion. An asbestos clearance certificate was provided following the successful remediation works.	Topsoil has become exposed in an area where asbestos containing materials may be present below clean soils/clean fill.

The approximate location of each area is detailed on the Site Plan in Appendix A.

4.2 ASBESTOS IN GROUNDS REGISTER

The location, type and condition of asbestos identified in grounds at the school is recorded in the asbestos in grounds register detailed in Table 4.2. The accompanying risk assessment has been performed following remediation works in accordance with the DoE AMP.

Table 4.2 Asbestos in Grounds Register for Hornsby South Public School

AREA	LOCATION*	MATERIAL DESCRIPTION	EXTENT	MATERIAL CONDITION	RISK STATUS^	CONTROL PRIORITY	MAINTENANCE REQUIREMENTS
A	North of Block A.	Non-friable fibre cement fragments were observed on the ground surface	Throughout – potential below surface ground	Unknown	Low	Low	Visual checks to ensure grass cover is adequate at three-monthly intervals. Periodic resting of area may be required otherwise turf will require re-laying if the surface becomes eroded. Adequate watering during drought periods (this option may not be suitable during periods of extended drought when reservoir levels drop below 40%)
B	South East of Block C.	Non-friable fibre cement fragments were observed on the ground surface	Throughout – potential below surface ground	Unknown	Low	Low	Visual checks to ensure grass cover is adequate at three-monthly intervals. Periodic resting of area may be required otherwise turf will require re-laying if the surface becomes eroded. Adequate watering during drought periods (this option may not be suitable during periods of extended drought when reservoir levels drop below 40%)

AREA	LOCATION*	MATERIAL DESCRIPTION	EXTENT	MATERIAL CONDITION	RISK STATUS^	CONTROL PRIORITY	MAINTENANCE REQUIREMENTS
C	West of Block G.	Non-friable fibre cement fragments were observed on the ground surface	Throughout – potential below surface ground	Unknown	Low	Low	Visual checks to ensure grass cover is adequate at three-monthly intervals. Periodic resting of area may be required otherwise turf will require re-laying if the surface becomes eroded. Adequate watering during drought periods (this option may not be suitable during periods of extended drought when reservoir levels drop below 40%)
D	Area South-west of Block G	Non-friable fibre cement fragments were observed on the ground surface	Throughout – potential below surface ground	Unknown	Low	Low	Visual checks to ensure grass cover is adequate at three-monthly intervals. Periodic resting of area may be required otherwise turf will require re-laying if the surface becomes eroded. Adequate watering during drought periods (this option may not be suitable during periods of extended drought when reservoir levels drop below 40%)

AREA	LOCATION*	MATERIAL DESCRIPTION	EXTENT	MATERIAL CONDITION	RISK STATUS^	CONTROL PRIORITY	MAINTENANCE REQUIREMENTS
* Refer to Appendix A – Site Plan for details of area locations							
^ Risk assessment conducted following remediation works							
RISK ASSESSMENT FACTORS							
Low Risk: Asbestos containing materials that pose a low health risk to personnel, employees and the general public providing they remain undisturbed.							
Medium Risk: Asbestos containing materials that pose a moderate risk to people in the area – there is a medium potential for the material to release asbestos fibres if disturbed.							
High Risk: Asbestos containing materials that pose a high health risk to personnel of the public in area of the material. There is a high potential for the material to release asbestos fibres if disturbed, or a potential for the materials to release fibres even if undisturbed.							

5 SITE MANAGEMENT REQUIREMENTS

5.1 RE-INSPECTIONS

In order to monitor the effectiveness of onsite management it is essential that the affected areas are regularly inspected. Visual inspections of the asbestos remedial measures should be carried out to ensure that they are maintained adequately. Reinspections will be the responsibility of the Principal or site manager. Such inspections should occur on the following occasions:

- at three monthly intervals (e.g. a walkover of remediated areas to ensure that applications of mulch, turf, etc. have been maintained)
- as part of routine building inspections
- after a period of prolonged heavy rain (e.g. a walkover of remediated areas to ensure that applications of mulch, turf, etc. have not been disturbed by heavy rain)
- whenever damage or disturbance has been reported (e.g. a walkover of remediated areas to ensure that applications of mulch, turf, etc. have not been disturbed by events such as vehicle trafficking).

Should areas of exposed soil or geo-fabric be identified where previous containment has occurred or where encapsulating measures appear to be damaged or are no longer effective, then these areas should be re-covered immediately. Some remedial measures, such as added surface layers of mulch and topsoils, will require ongoing maintenance to ensure that a sufficient barrier layer is in place.

Some sites, for example those with no new occurrence of asbestos in the past 5 years, are inspected at 12-monthly intervals and/or as points indicated above.

Records of these inspections should be kept using the Site Management Requirements checklists provided in Appendix B.

5.2 ASBESTOS INCIDENT PROCEDURE

This asbestos incident procedure aims to set out the steps to be taken for asbestos management when suspected ACMs have been found in DoE Facility grounds. Scenarios where suspected ACMs may be found in DoE Facility grounds include:

- Illegal dumping of suspected asbestos waste - dumped asbestos waste can be mixed with general builders' waste, which may include rubble and spoil.
- Single source at surface such as fibrous cement sheeting – this is usually due to demolition of a structure containing asbestos such as a building or fence where waste has been left at the surface or buried instead of being properly disposed of.
- Extensive surface contamination – this can be as a result of imported waste materials (schools may also be situated on old landfill sites) used for landscaping or from demolition of domestic dwellings previously found on the site, with fibrous cement fragments becoming exposed over time due to surface erosion and soil dynamics, or due to demolition of structures containing ACM.
- Fill materials – fill materials have been widely used in DoE Facilities, typically for landscaping / levelling purposes. Fill may also be present in building footprints. Fill generally comprises builders' rubble, typically bricks, although older fill often contains waste fibrous cement materials in addition to other building materials. Fill may also be generated on-site to build up depressions or level grounds.

- In-ground asbestos cement pipes – it is possible that asbestos cement drainage pipes may be present in-situ within the ground at DoE facilities. While such materials remain buried and in operation they represent a low risk.

The following procedure is set out as a guide to follow where suspected ACMs have been found at the surface of DoE Facility grounds:

- Restrict access immediately.
- Do not attempt to dispose of / move material.
- Check asbestos in grounds asbestos register.
- Contact DoE AMU on 132 779 as soon as practicable and Incident Report and Support Hotline on 1800 811 523.
- DoE or their representatives will arrange inspections and testing if necessary by consultant from DoE hygienist panel.
- DoE or their representatives to arrange removal of ACMs / remediation of site.
- Once asbestos removal or remediation works have been completed, an asbestos clearance certificate will be issued to return area to normal use.
- Site specific AMP is updated to enter area into asbestos in grounds register.

6 SAFE WORKING PRACTICES

6.1 GENERAL

Prior to commencing any works to grounds on any DoE facility, the asbestos in grounds register on-site must be consulted to determine if any known asbestos containing materials are present that are at risk of being disturbed (<https://education.nsw.gov.au/about-us/strategies-and-reports/our-reports-and-reviews/schools-asbestos-register>).

If documented asbestos containing materials are present in the area and may be impacted upon by the proposed works, the asbestos must be removed/encapsulated under controlled conditions prior to the commencement of any works.

If unknown materials or undocumented materials suspected of containing asbestos are encountered during works, such materials are to be treated as if they contain asbestos and any work that may impact on that material must immediately cease, pending sampling and analysis by a qualified person selected from the DoE hygienist panel. This will allow the DoE to determine what control methods are required.

6.2 PERMIT TO WORK

If it is determined, after consulting the asbestos in grounds register, that asbestos containing materials are present in the vicinity of the planned works, a permit to work authority will need to be issued to, and signed by, the contractor. Permit to work authorities will only be issued by the DoE Facility Manager. All asbestos works must be managed by an agent of DoE, such as Department of Public Works, following approval from the directorate. All asbestos works are to be undertaken outside of school hours.

Before being issued with a permit to work, individuals will be required to read and understand this SSAMP as well as copies of asbestos removal control plans or risk assessments prepared by DoE hygienist panel members. Individuals must be aware of their legal obligations in relation to health and safety specified in the NSW Work Health and Safety Act 2011 and the NSW Work Health and Safety Regulation 2017.

Workers engaged in the removal of asbestos and asbestos containing materials will not be issued with a permit to work unless they are employed by a company holding an asbestos removal licence issued by SafeWork NSW appropriate for the type of asbestos containing materials concerned.

The permit to work formally places a responsibility for compliance with this SSAMP and the NSW Work Health and Safety Regulation 2017 on the signatories.

The permit to work is designed to ensure appropriate work practices are employed in the vicinity of asbestos containing materials. The permit to work will document what asbestos is to be removed, encapsulated or otherwise protected, prior to the contracted maintenance or building works proceeding. The permit to work will also indicate whether other requirements such as use of personal protective equipment (PPE), the installation of barricading and airborne fibre monitoring are necessary and may provide recommendation for further consultation, sampling or investigation by a member of the DoE hygienist panel prior to permit and contract finalisation.

When a project involves a team of more than one worker, the person in charge of the team will be issued with the permit to work. That person will be responsible to ensure their workers are aware of their responsibilities. That person will also be responsible to ensure that each worker's signature appears on the appropriate section of the permit.

When work is completed, or the permit to work expires (whichever occurs first), the permit shall be signed by the contractor and returned to the DoE Facility Manager to cancel it after ensuring that a safe situation exists. The DoE Facility Manager shall review any documentation provided by the DoE hygienist panel member, such as asbestos air monitoring and asbestos clearance inspection certificate/s, and inspect the work area to ensure that it is fit for purpose prior to returning it to normal use. The AMU can provide assistance if required.

The DoE Asset Management Directorate shall be advised immediately by any site personnel of any incidents of non-compliance with the SSAMP that have occurred.

The DoE Facility Manager will maintain a register of all permits to work that have been issued and cancelled.

It will be a condition of engagement of contractors who are required to work on-site that a permit to work be issued and cancelled as required.

6.3 CONTRACTOR HEALTH AND SAFETY

Prior to undertaking any work that involves the removal, repair or disturbance of asbestos containing materials, a Safe Work Method Statement (SWMS) will be prepared that defines safe procedures to protect the health and safety of personnel. This statement should include the following measures, as a minimum:

- confirmation of their review of the relevant asbestos register, asbestos removal control plan and other relevant documentation, prior to preparation of the SWMS.
- review of risks associated with their possible exposure to asbestos or ACMs.
- all workers shall wear appropriate Personal Protective Equipment (PPE) for the work undertaken. This may include protective coveralls, gloves and safety boots.
- all workers shall wear appropriate Respiratory Protective Equipment (RPE) for the work undertaken.
- decontamination procedures and measures (if applicable).
- asbestos removal areas and buffer zones.
- asbestos air monitoring samples (number and frequency).

In addition,

- a reference to all appropriate licences and insurances held by the contractor should be included.
- a reference as an additional safety measure, that all works are to be undertaken outside school hours, should be included. Appropriate measures are to be included regarding this requirement.

The Safe Work Method Statement (SWMS) should be reviewed by the Agent of DoE that engages the contractor as per the requirements of the permit to work.

6.4 AWARENESS TRAINING

It is best practice that DoE Asset Management personnel and Facilities Maintenance Contractors who are not likely to be exposed to asbestos but work in areas where asbestos is, or may be present, in grounds be provided with an asbestos awareness training. It is recommended that such training shall include the following:

- overview of asbestos related legislation (State), standards and codes of practice.
- information on the presence of asbestos in DoE Facility grounds, including the types of asbestos and typical locations where asbestos may be encountered
- information should be provided on the differences between friable and non-friable products
- highlighting the need to avoid disturbing in-situ asbestos containing materials
- procedures to be followed in the event disturbed asbestos containing materials are identified, or unknown materials / products suspected of containing asbestos are encountered, including the relevant point of contact within the DoE
- information about general methods of asbestos management and removal

— information about airborne asbestos air monitoring.

Asbestos awareness training is to be provided by a consultant selected from the DoE hygienist panel.

7 ASBESTOS REMOVAL

A detailed and site specific work scope and technical specification will be developed by an agent of DoE or their representative, such as PWA, prior to the removal of ACMs from any DoE facility grounds. The removal of ACMs shall be performed by a licensed asbestos removal contractor selected from the DoE hygienist panel (i.e. the appropriate licence for the removal of asbestos issued by SafeWork NSW).

Please note, any work that involves disturbing asbestos must be administered by DoE or their representative.

It is DoE policy to engage a Class A licensed contractor as best practice for all occurrences of asbestos contaminated soil. The contractor will be engaged by an agent of DoE from a panel approved by DoE and all engagements will be according to SafeWork NSW guidelines and follow the advice of the hygienist / competent (asbestos assessor) person engaged from the DoE hygienist panel.

7.1 ASBESTOS IN GROUNDS GENERAL REMOVAL PROCEDURES

All works carried out that involves disturbance of ACMs (including removal) must be administered by DoE or their representative.

All removals are to be undertaken according to:

- *Contaminated Land Management Act 2008*
- Contaminated Land Management Regulation 2013
- NSW Work Health and Safety Act 2011
- NSW Work Health and Safety Regulation 2017
- How to Manage and Control Asbestos in the Workplace: Code of Practice 2016
- How to Safely Remove Asbestos: Code of Practice 2016
- NSW EPA Waste Classification Guidelines – Part 1: Classification of waste 2014
- Other relevant documentation issued from time-to-time by SafeWork NSW or NSW EPA.

Follow the advice of the hygienist / competent (asbestos assessor) person engaged from the DoE hygienist panel to conduct a risk assessment and determine the most appropriate control measures and remediation strategies prior to asbestos removal works getting underway.

Several examples of common circumstances involving soil and ACM have been determined. For each of those circumstances, the following procedures should be followed.

7.1.1 SPARROW-PICKING OF ACM FRAGMENTS

- Following determination of the area affected by fragments of ACMs by a competent person / asbestos assessor (hygienist) selected from the DoE hygienist panel and approval to commence works from DoE, a permit will be issued to engage a friable licensed asbestos contractor.
- It is likely that fragments of ACM are in the form of asbestos cement sheeting (ACS), bituminous membrane or vinyl tile.
- The asbestos removal contractor approved by DoE is engaged to sequentially and systematically travel across each area and remove all instances of fragments of potential ACM from exposed ground surfaces.
- All works are to require asbestos air monitoring provided by a hygienist selected from the DoE hygienist panel.

- All works to require an asbestos clearance inspection undertaken by a hygienist selected from the DoE hygienist panel following the completion of the asbestos removal works.
- All documents, including licenses, airborne asbestos monitoring, asbestos clearance inspections and tipping docket, is to be provided to DoE.
- All records are to be updated.

7.1.2 *ENCAPSULATION OF SOIL CONTAINING ACM ON-SITE*

- Ensure that the area is isolated in the interim and any potential dust is managed.
- Ensure that a document such as a remedial action plan (RAP), including a site specific asbestos management plan (SSAMP) is prepared or updated by a competent person / asbestos assessor (hygienist) selected from the DoE hygienist panel, detailing the encapsulation method (including comments on suitability for intended land use, e.g. car park) and environmental management requirements during implementation (e.g. dust and noise management). If the selected hygienist requires additional soil expertise, then engage a suitably experienced contaminated land management consultant, preferably from within their own company and known to DoE, with experience gained from DoE sites.
- Ensure that a permit is received from DoE to commence works.
- The AMP will determine if the asbestos is friable / non-friable and the extent of impact (lateral and vertical) through selected sampling and analysis.
- That document is to be submitted to SafeWork NSW, along with a permit application to SafeWork NSW by the selected asbestos removal contractor.
- DoE to obtain written approval from EPA before work permit is granted by DoE.
- DoE to verify compliance under WH&S Act and POEO Act.
- Notification by DoE is to be made to the respective council to allow inclusion on the site s149 certificate (under the NSW EPA Act 1997).
- In addition, the area to be encapsulated is to be documented / surveyed in such a manner to accurately determine location and depth at a later date.
- Upon receipt of both above mentioned permits from DoE and SafeWork NSW, works are to commence, along with asbestos air monitoring by a hygienist selected from the DoE hygienist panel during the encapsulation process.
- Upon completion an inspection is undertaken by the hygienist consultant to confirm activities as detailed within the RAP/AMP have been implemented and providing comment that the land has been remediated / encapsulated to allow for intended use and a site management plan is prepared to manage any future subsurface activities that may be required for the site (e.g. excavation of a trench to install new electricity cables or stormwater).

7.1.3 *EXCAVATION OF SOIL CONTAINING ACM FROM SITE*

The preferred method is encapsulation of soils on-site, however if excavation and removal of soils from site becomes necessary, then the following is to be implemented as a general guide:

- Ensure that the area is isolated in the interim and any potential dust is managed.
- Ensure that a document such as a remedial action plan (RAP) including an asbestos removal control plan (ARCP) is prepared by a competent person / asbestos assessor (hygienist) selected from the DoE hygienist panel providing recommendations for the excavation of soil so as to provide for environmental management requirements during implementation (e.g. dust and noise management). If the selected hygienist requires additional soil expertise, then they are to involve a suitably experienced contaminated land management consultant, preferably from within their own company and known to DoE, with experience gained from DoE sites.

- Ensure that a permit is received from DoE to commence works.
- The ARCP will determine if the asbestos is friable / non-friable.
- That document is to be submitted to SafeWork NSW, along with notification to SafeWork NSW by the selected asbestos removal contractor.
- Upon receipt of both above mentioned permits from DoE and SafeWork NSW, works are to commence, along with asbestos air monitoring by a hygienist selected from the DoE hygienist panel during the removal process.
- Upon completion of soil removal (that portion contaminated with ACM), an inspection is undertaken by the hygienist consultant to confirm activities as detailed within the RAP/ARCP have been implemented and providing comment that those works have been completed in respect to asbestos contamination to a satisfactory level to allow for the next stage of works to commence. The site management plan (inclusive of a possible unexpected finds protocol) continues to be followed to manage any future occurrence of subsurface ACM that may be exposed during the excavation of soils on-site.

Following the investigation, the material should be classified in accordance with NSW EPA Waste Classification Guidelines – Part 1: Classification of waste 2014, and taken to an approved landfill site that is licensed to receive waste relevant to its classification.

8 LIMITATIONS

This Report is provided by WSP Australia Pty Limited (*WSP*) for NSW Department of Education (*Client*) in response to specific instructions from the Client and in accordance with WSP's proposal dated 21/07/2016 and agreement with the Client dated 12/10/2016 (*Agreement*).

PERMITTED PURPOSE

This Report is provided by WSP for the purpose described in the Agreement and no responsibility is accepted by WSP for the use of the Report in whole or in part, for any other purpose (*Permitted Purpose*).

QUALIFICATIONS AND ASSUMPTIONS

The services undertaken by WSP in preparing this Report were limited to those specifically detailed in the Report and are subject to the scope, qualifications, assumptions and limitations set out in the Report or otherwise communicated to the Client.

Except as otherwise stated in the Report and to the extent that statements, opinions, facts, conclusion and / or recommendations in the Report (*Conclusions*) are based in whole or in part on information provided by the Client and other parties identified in the report (*Information*), those Conclusions are based on assumptions by WSP of the reliability, adequacy, accuracy and completeness of the Information and have not been verified. WSP accepts no responsibility for the Information.

Where the survey identifies that hazardous materials are on site, the Conclusions are indicative of the presence of hazardous materials and cannot be regarded as absolute without further extensive sampling, outside the scope of the services set out in the Agreement. Site conditions, including the extent and visibility of hazardous materials, can change with time. On all sites, varying degrees of non-uniformity of conditions are encountered and the presence of hazardous materials which are not visually apparent at the time of inspection, are not likely to be detected. No monitoring, common testing or sampling technique provides results that are totally representative of the presence or non-presence of hazardous materials at the Site.

Hazardous materials that could be routinely encountered in the normal day-to-day activities occurring on the Site, have been identified and assessed, however there is no guarantee that the Site is free of hazardous materials, since future activities may reveal hazardous materials in areas inaccessible or unknown to WSP.

Within the limitations referred to above, the preparation of this Report has been undertaken and performed in a professional manner in accordance with generally accepted practices, using a degree of skill and care ordinarily exercised by reputable consultants. No other warranty, expressed or implied, is made.

WSP has prepared the Report without regard to any special interest of any person other than the Client when undertaking the services described in the Agreement or in preparing the report.

USE AND RELIANCE

This Report should be read in its entirety and must not be copied, distributed or referred to in part only. The Report must not be reproduced without the written approval of WSP. WSP will not be responsible for interpretations or conclusions drawn. This Report (or sections of the Report) should not be used as part of a specification for a project or for incorporation into any other document without the prior agreement of WSP.

WSP is not (and will not be) obliged to provide an update of this Report to include any event, circumstance, revised Information or any matter coming to WSP's attention after the date of this Report. The passage of time; manifestations of latent conditions; or the impact of future events (including (without limitation) changes in policy, legislation, guidelines, scientific knowledge; and changes in interpretation of policy by statutory authorities); may require further investigation or subsequent re-evaluation of the Conclusions.

This Report can only be relied upon for the Permitted Purpose and may not be relied upon for any other purpose. The Report does not purport to recommend or induce a decision to make (or not make) any purchase, disposal, investment,

divestment, financial commitment or otherwise. It is the responsibility of the Client to accept (if the Client so chooses) the Conclusions and implement any recommendations in an appropriate, suitable and timely manner. WSP does not (and will not) accept liability arising out of or in connection with any health or safety risks associated with hazardous materials.

In the absence of express written consent of WSP, no responsibility is accepted by WSP for the use of the Report in whole or in part by any party other than the Client for any purpose whatsoever. Without the express written consent of WSP, any use which a third party makes of this Report or any reliance on (or decisions to be made) based on this Report is at the sole risk of those third parties without recourse to WSP. Third parties should make their own enquiries, rely on the results of their own site inspections, and / or obtain independent advice in relation to any matter dealt with or conclusions expressed in the Report.

DISCLAIMER

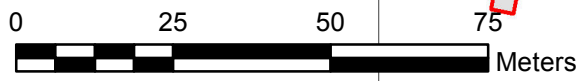
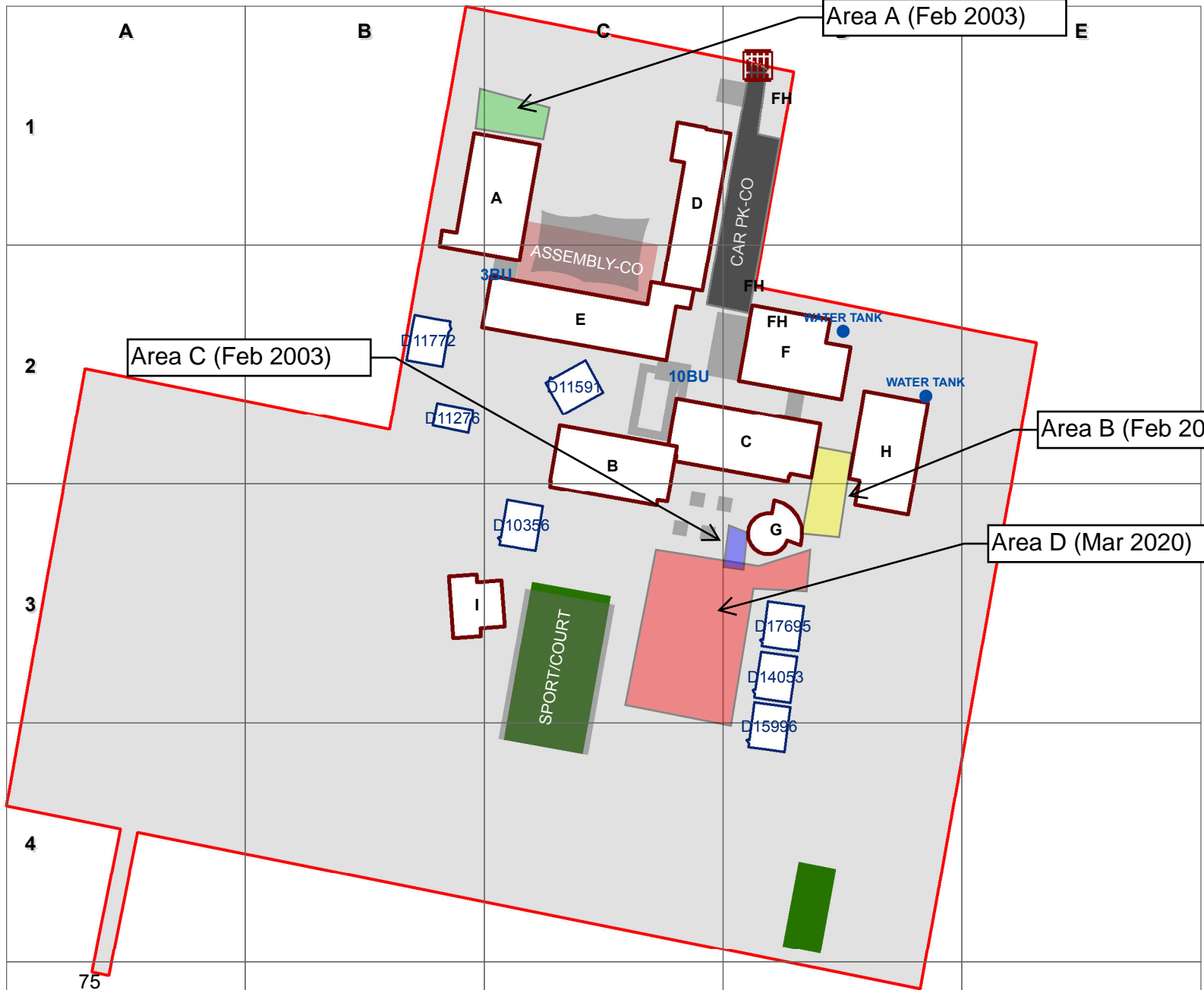
No warranty, undertaking or guarantee whether expressed or implied, is made with respect to the data reported or the conclusions drawn. To the fullest extent permitted at law, WSP, its related bodies corporate and its officers, employees and agents assumes no responsibility and will not be liable to any third party for, or in relation to any losses, damages or expenses (including any indirect, consequential or punitive losses or damages or any amounts for loss of profit, loss of revenue, loss of opportunity to earn profit, loss of production, loss of contract, increased operational costs, loss of business opportunity, site deprecation costs, business interruption or economic loss) of any kind whatsoever, suffered or incurred by a third party.

APPENDIX A

SITE PLAN



5191 - Hornsby South Public School
Site Plan (12657)



1:1,202

Printed: 17-Feb-2016

APPENDIX B

SITE MANAGEMENT REQUIREMENTS - CHECKLISTS



B1 SITE MANAGEMENT REQUIREMENTS - CHECKLISTS

Table B.1 Three-Monthly Interval Checklist

AREA	LOCATION	INSPECTION DETAILS	INITIAL INSPECTION	SUBSEQUENT THREE-MONTLY INSPECTIONS				
			DATE	DATE	DATE	DATE	DATE	
A	North of Block A.	Surface cover adequate? (Y/N)						
		Suspected asbestos materials visible? (Y/N)						
B	South East of Block C.	Surface cover adequate? (Y/N)						
		Suspected asbestos materials visible? (Y/N)						
C	West of Block G.	Surface cover adequate? (Y/N)						
		Suspected asbestos materials visible? (Y/N)						
D	South-west of Block G.	Surface cover adequate? (Y/N)						
		Suspected asbestos materials visible? (Y/N)						

Table B.2 Incident Inspection Checklist (e.g following heavy rain or disturbance)

AREA	LOCATION	INSPECTION DETAILS	INITIAL INSPECTION	SUBSEQUENT INCIDENT INSPECTIONS				
			DATE	DATE	DATE	DATE	DATE	
A	North of Block A.	Surface cover adequate? (Y/N)						
		Suspected asbestos materials visible? (Y/N)						
B	South East of Block C.	Surface cover adequate? (Y/N)						
		Suspected asbestos materials visible? (Y/N)						
C	West of Block G.	Surface cover adequate? (Y/N)						
		Suspected asbestos materials visible? (Y/N)						
D	South-west of Block G.	Surface cover adequate? (Y/N)						
		Suspected asbestos materials visible? (Y/N)						