Asbestos in Grounds, Asbestos Management Plan, Baryulgil Public School, Baryulgil, NSW

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NSW Public Works

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1. Introduction

1.1 Document Review

No Activity and/or no Re-occurrence of ACM in grounds on this site since October 2016, as such the following is recommended:

This document is to be reviewed and updated

- when works occur on site
- when works occur on site which may cause grounds disturbance
- when any ACM in grounds is reported
- every second year, if no activity.
- until ten years of inactivity, when document review and update will occur every five years

1.2 Background

In August 2004, areas of possible asbestos impacted soil were identified to the school grounds at Baryulgil Public School, Clarence way, Baryulgil, NSW 2460.

Based on the information provided to PB, it appears that the school site was built on the tailing of the old asbestos mine. Unverified discussions held with local residents of Baryulgil indicate that at some stage during the 1970s much of the asbestos from the site was excavated and removed from the School with the exception of those areas covered with concrete slabs and/or bitumen.

In the previous ground inspection report, reference 2139003A-RPT002Apc dated August 2004, it was proposed the area be encapsulated with top soil and turf, hard standing material and/or paving as appropriate.

The entire school grounds were dubbed **Area A**.

In October 2016 emergency septic tank (to Block A) works took place, requiring excavations in the following locations:

- shallow trenching, approximately 3.0mx0.4mx0.4m, from the eastern end of the septic tank

- deep trench, approximately 1.3mx0.8mx0.8m, from the western end of the septic tank

Following excavation works, the trenches were lined with geo-fabric. It's WSP Parsons Brinckerhoff's understanding that once works were completed, the trenches were back-filled with clean soil and new turf added. This area has been dubbed **Area B**.

In order to manage the risk of exposure to asbestos, any fibrous cement fragments found are to be removed from the ground surfaces (Refer to Section 1.3). The areas where fibrous cement fragments have been identified within the fill material (and further in-situ asbestos fragments may be present) have been designated as "asbestos zones".

This report outlines the plan for management of the identified asbestos impacted areas (zones), and should be read in conjunction with the existing Department of Education (DoE) Asbestos Management Plan for all other identified asbestos materials within the school.

1.3 Asbestos removal/clean-up works

Approval for the following asbestos removal/ clean up works was given. The works comprised;

- Paving areas of heavy use near building (1980),
- encapsulating bare areas with bitumen and/or topsoil and seeding as appropriate (1981),
- encapsulating bare areas with bitumen and/or returfing as appropriate (1987),
- concrete joints of capped area (1994),
- extend hard stand foot path in heavy traffic areas along eastern side of building adjacent to the green house (August 2004).

The asbestos removal/ clean up works completed in November 2016 comprised:

- the removal and disposal of soil as asbestos waste followed by the addition of a geo-fabric layer, clean fill, and turf.

The site layout is shown in Figure 1.

2. Asbestos materials

2.1 Asbestos zone locations

Asbestos cement fragments may be present as a component of buried fill within the asbestos zone areas. Refer to Figure 1 site plan.

Based on guidelines provided by SafeWork NSW 'Managing Asbestos in and on Soil 2014', as well as DoE's 'Asbestos Management Plan for NSW Government Schools 2015', a licenced asbestos assessor should be engaged to determine whether the asbestos within the Asbestos Zones is considered non-friable or friable.

2.2 Risk management

The in-situ asbestos within the asbestos zones can be classified as low risk provided that the following measures are undertaken:

- the in-situ asbestos remains undisturbed
- an asbestos management plan remains in effect
- any works undertaken on or near the asbestos zones are to be under the control of a permit to work where the contractor has acknowledged the presence of asbestos and has prepared a safe work method statement(s) to ensure that asbestos is not disturbed and therefore airborne asbestos fibres are not generated.

3. Asbestos register (Grounds)

Table 3-1 outlines the findings of the inspection of the grounds indicating the areas requiring management.

Table 3-1 Asbestos Register – Asbestos zones only for Baryulgil Public School

Event	Location	Description of Material	Extent	Condition	Risk Status	Control Priority	Control Recommendation/Comments
School Grounds*							
A	School grounds	Possible asbestos impacted soil	Throughout – below ground surface	Unknown	Low	Low	Maintain existing surface/ new surface in a good condition. Do not disturb soil surface. Inspect every three months or after adverse weather conditions for signs of surface wear and possible fragments at surface.
B	Trenching works east and west of septic tank, to Block A	Possible asbestos impacted soil	Throughout – below ground surface/installed geo-fabric	Unknown	Low	Low	Maintain existing surface/ new surface in a good condition. Do not disturb soil surface. If geo-fabric becomes visible ensure the material is not pierced or damaged and immediately top up clean soil/mulch/surface material.

*Refer to Figure 1 for detail of area locations

Risk assessment factors

Low risk: Asbestos materials that pose a low health risk to personnel, employees and the general public provided they remain undisturbed.

Medium risk: Asbestos 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 materials that pose a high health risk to personnel or the public in the area of the material – there is a high potential for the material to release asbestos fibres, if disturbed.

4. Asbestos zone routine management

4.1 Inspections by local staff

In order to monitor the effectiveness of the on-site asbestos zone 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. 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 and turf, etc. have been maintained)
- after a period of prolonged heavy rain (e.g. a walkover of remediated areas to ensure that applications of mulch and 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 and turf, etc. have not been disturbed by events such as vehicle movements).
- whenever works are about to commence that may cause grounds disturbance

Should areas be identified where encapsulating measures appear to be damaged or are no longer effective, these areas should be re-covered immediately. Some remedial measures such as the installation of layers of mulch and top soil will require ongoing maintenance to ensure that a sufficient barrier layer is in place.

4.2 Maintenance

All remediation measures carried out in the affected areas must be maintained as per their original application. In particular:

- All surface cover/treatments within the asbestos zones must be fully maintained at all times. For example, mulch levels should remain as per their original application, turf should be maintained to ensure full coverage and any other measures should be maintained in a good condition.
- All hard standing surfaces must be maintained and re-instated should any works that disturb them be carried out.
- If any portion of an affected area is found to be damaged (i.e. the surface cover has been damaged so that it has resulted or may result in the soil becoming exposed), the DoE local Asset Management Unit (AMU) should be contacted immediately.

4.3 Checklist

A checklist of site management requirements is presented in Appendix A of this document. This checklist should be used whenever walkover inspections are carried out and where maintenance issues have been raised. The checklist is specific to the requirements of the grounds at the Baryulgil Public School and sets out the frequency of inspections required. It is recommended that a hard copy of the check-list retained by the school and field copies are taken on-site when required.

5. Asbestos zone maintenance works management

5.1 General

An Asbestos Management Plan (AMP) has been implemented for all NSW state schools and educational facilities. The plan includes procedures for managing friable asbestos and working on asbestos. A generic permit to work template will also be included in the management plan which will be able to be used where any work is required that may disturb asbestos materials within an asbestos zone.

5.2 Sub-soil areas within school grounds

- Any contractor, maintenance person, Department of Commerce, Department of Education or other authorised person who may potentially disturb the soil surface must acknowledge the presence of buried asbestos cement materials within these areas. A copy of the asbestos register must be made available to any such person prior to commencing work.
- Any contractor, maintenance person, Department of Commerce, Department of Education or other authorised person who may potentially disturb the soil surface must complete a permit to work or similar form that ensures that any work will not disturb the buried asbestos.
- If work is to be carried out in grounds that will disturb or potentially disturb the buried asbestos, the contractor, maintenance person, Department of Commerce, Department of Education or other authorised person must engage a specialist asbestos removal contractor with a friable asbestos licence to undertake the work. The licensed contractor should prepare a safe work method statement detailing procedures that ensure that personnel working in the asbestos zones and any other persons within the school will not be exposed to asbestos fibres. The work area must be completely enclosed and work undertaken out of school hours.
- Work in progress asbestos air monitoring should be carried out during any work that disturbs or could potentially disturb the buried asbestos and/or the soil surface. Air-monitoring should be in accordance with the National Occupational Health & Safety Commission's *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust* and be conducted by National Association of Testing Authorities (NATA) accredited personnel operating from a NATA registered laboratory.
- All asbestos management measures originally installed must be re-instated at the completion of work and prior to the removal of the work area enclosure.

6. Permit for work

Any contractor who proposes to work in any of the asbestos zones where asbestos may be disturbed or the ground surface may be broken must complete a permit to work form.

Before a permit to work is issued, individuals will be required to read and understand the AMP, as well as copies of the relevant asbestos registers. Individuals must be aware of their legal obligations in relation to health and safety as specified in the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011.

Permits to work are designed to ensure appropriate work practices are employed in the vicinity of asbestos-containing materials/products. 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 the use of personal protective equipment (PPE), the installation of barricading and/or airborne fibre monitoring, are necessary.

When the work is completed, or the permit to work expires (whichever occurs first), the permit shall be signed and returned to the DoE Facility Manager for cancellation after that Manager has checked a safe situation exists.

The DoE local AMU shall be advised immediately of any incidents of non-compliance with the AMP.

Based on guidelines provided by SafeWork NSW 'Managing Asbestos in and on Soil 2014', as well as DoE's 'Asbestos Management Plan for NSW Government Schools 2015', a licenced asbestos assessor should be engaged to determine whether the buried asbestos is considered *non-friable* or *friable*. Therefore, any fibrous cement materials or other suspected asbestos-containing materials excavated should be inspected by a licenced asbestos assessor to determine if it's friable. This means that any such asbestos should be worked on only by contractors with an appropriate asbestos licence and a project specific permit issued by SafeWork NSW (in addition to the permit to work, mentioned above).

7. Legislative requirements

The following legislative requirements will apply to asbestos zone maintenance works:

- All asbestos removal and disposal work shall be carried out in accordance with the requirements of the SafeWork NSW Guidelines for Licensed Asbestos Removal Contractors.
- The asbestos contractor shall notify SafeWork NSW of the proposed work at least 5 days prior to the commencement of any work in accordance with NSW Occupational Health and Safety Regulation 2011. However this time period may be waived in the case for DoE properties.
- All work shall be carried out in strict accordance with the NSW Work Health and Safety Act 2011, the NSW Work Health and Safety Regulation 2011, How to Safely Remove Asbestos – Code of Practice 2016, and the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres, 2nd Edition [NOHSC 3003 (2005)].

8. Safe work procedures for friable asbestos work

The following safe work procedures will apply for asbestos work:

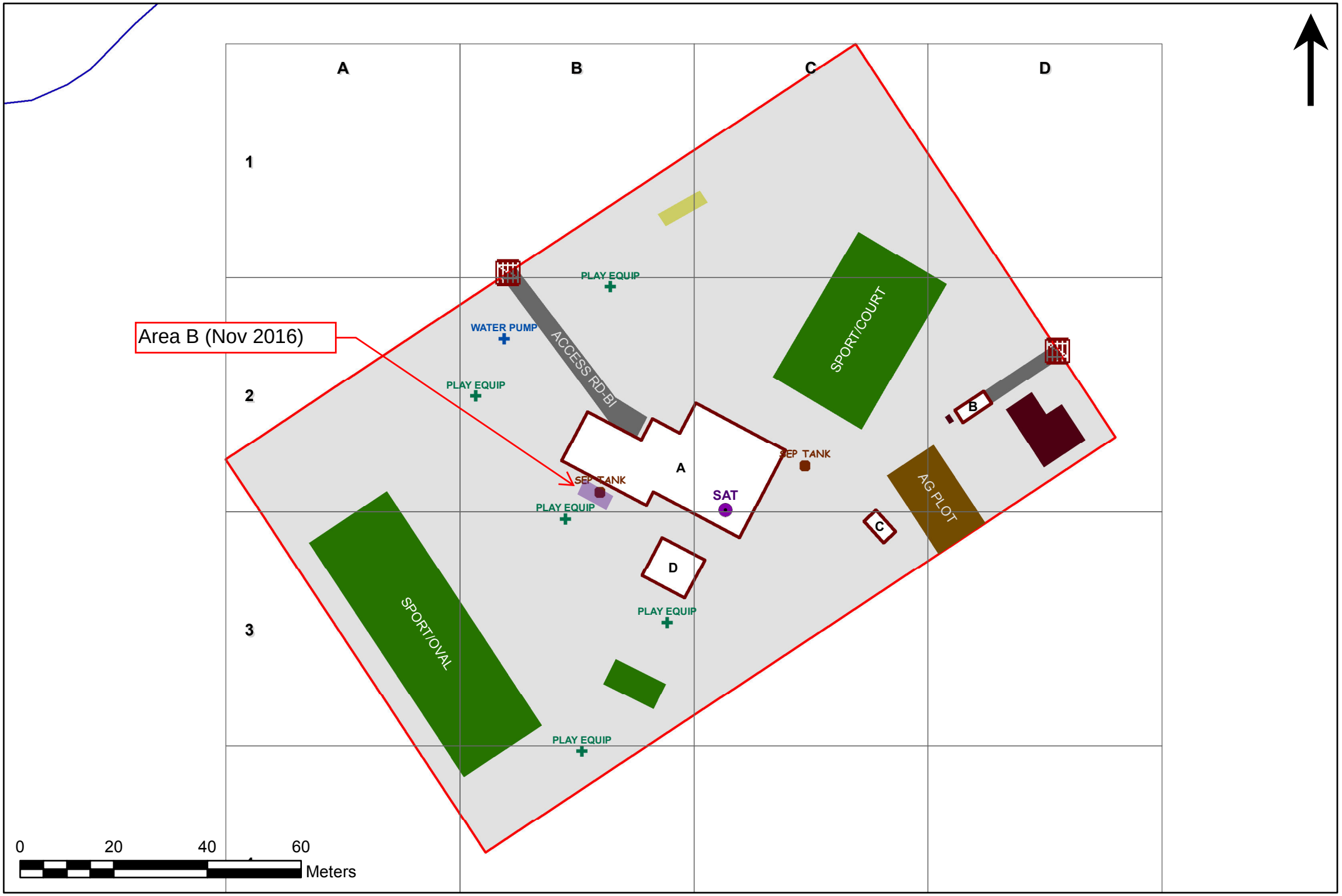
- The removal contractor must develop a site-specific asbestos removal plan before commencing the asbestos work. Such a plan must be prepared in accordance with Section 3 of the Work Safe Australia- How to safely remove asbestos: Code of Practice 2011.
- Only personnel who have been trained in work procedures for the safe removal of asbestos shall work on asbestos.
- A trained, experienced operator must remain on duty outside the removal area and/or enclosure (if installed) at all times that asbestos removal is in progress. Curricula vitae for all persons undertaking asbestos removal works must be submitted to the Principal prior to the commencement of work on the sites.
- Removal of asbestos must generally be carried out by wet removal techniques. That is, as the asbestos material becomes accessible during the removal process, it shall be thoroughly wetted down. Care must be exercised to prevent excessive use of water. The contractor will be held responsible for any water damage
- Decontamination facilities and procedures shall be undertaken to the complete satisfaction of a hygienist
- Any signage existing prior to removal must be re-affixed to any new or existing assembly
- The contractor must ensure that persons in the work area(s) are not exposed to fibre levels greater than those stated in the National Exposure Standard for the type of asbestos being removed.

Figures

Site layout plans

1146 - Baryulgil Public School

Site Plan (10174)



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Appendix A

Grounds management checklist

Baryulgil Public School grounds asbestos management checklist – Routine three monthly inspections

Table 1 Routine monthly inspection checklist

		Three monthly inspections	**Initial inspection**		**Subsequent three-monthly inspections**		
Area	**Location description**		Date:	Date:	Date:	Date:	Date:
A	School grounds	Surface cover adequate (Y/N)					
		Suspected asbestos materials visible (Y/N)					
B	Trenching works east and west of septic tank, to Block A	Surface cover adequate (Y/N)					
		Suspected asbestos materials visible (Y/N)					

Baryulgil Public School grounds asbestos management checklist – Incident inspections (e.g. after heavy rain or disturbance)

Table 2 Incident inspection checklist

		Incident inspections	**Date of inspection**				
Area	**Location description**		Date:	Date:	Date:	Date:	Date:
A	School grounds	Surface cover adequate (Y/N)					
		Suspected asbestos materials visible (Y/N)					
B	Trenching works east and west of septic tank, to Block A	Surface cover adequate (Y/N)					
		Suspected asbestos materials visible (Y/N)					