

# Asbestos in Grounds, Asbestos Management Plan, Farmborough Road Public School, Unanderra, NSW

June 2008

---

NSW Department of Commerce

---



Parsons Brinckerhoff Australia Pty Limited ABN 80 078 004 798

*Ernst & Young Centre*  
680 George Street  
Sydney NSW 2000  
GPO Box 5394  
Sydney NSW 2000  
Australia

Telephone +61 2 9272 5100  
Facsimile +61 2 9272 5101  
Email [sydney@pb.com.au](mailto:sydney@pb.com.au)

NCSI Certified Quality System ISO 9001

DRAFT

© Parsons Brinckerhoff Australia Pty Limited (PB) [2006].

Copyright in the drawings, information and data recorded in this document (the information) is the property of PB. This document and the information are solely for the use of the authorised recipient and this document may not be used, copied or reproduced in whole or part for any purpose other than that for which it was supplied by PB. PB makes no representation, undertakes no duty and accepts no responsibility to any third party who may use or rely upon this document or the information.

Author: ..... Sarah Ellem

Signed: ..... 

Reviewer: ..... Adrian Spankie

Signed: ..... 

Approved by: ..... Adrian Spankie

Signed: ..... 

Date: ..... June 2008

Distribution: .....

# Contents

Page Number

<b>1. Introduction.....</b>	<b>1</b>
1.1 Background	1
1.2 Asbestos removal/clean-up works	2
<b>2. Asbestos materials.....</b>	<b>3</b>
2.1 Asbestos zone locations	3
2.2 Risk management	3
<b>3. Asbestos register (Grounds).....</b>	<b>3</b>
<b>4. Asbestos zone routine management .....</b>	<b>3</b>
4.1 Inspections	3
4.2 Maintenance	3
4.3 Checklist	3
<b>5. Asbestos zone maintenance works management.....</b>	<b>3</b>
5.1 General	3
5.2 Sub-soil areas within school grounds	3
<b>6. Permit for work.....</b>	<b>3</b>
<b>7. Legislative requirements .....</b>	<b>3</b>
<b>8. Safe work procedures for friable asbestos work.....</b>	<b>3</b>

## List of Tables

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

## List of Figures

Site layout plan

## Appendices

Appendix A Grounds management checklist

# 1. Introduction

## 1.1 Background

In September 2005, areas of possible asbestos impacted fill material and exposed fill were identified to the:

- Area A - bank between concrete playground and Block E
- Area B - garden between Blocks C and D
- Area C - shaded areas around school oval
- Area D - boundary between Blocks D and H and school oval
- Area E - grasses area South-West of Block B
- Area F - grassed surface surrounding Block G

at Farmborough Road Public School, Farmborough Road, Unanderra, NSW 2526.

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 1.2). 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”.

In the previous ground inspection report, reference 2116240A.014/LT\_2456 REV B/AP:ks dated 28 September 2005, it was proposed that the following remediation measures be carried out.

### **Area A - bank between concrete playground and Block E**

- Encapsulate the area by laying down geofabric followed by raised mulched garden beds.
- The seat located in the centre of the bank should be relocated and all seats should be installed on top of a hard standing base.

### **Area B - garden between Blocks C and D**

- Encapsulate the area by laying down geofabric followed by raised mulched garden beds.
- Fences may be required to restrict access to the area.

### **Area C - shaded areas around school oval**

- The shaded areas should be encapsulated with raised mulched garden beds.
- Other worn areas on the oval should be returfed.

### **Area D - boundary between Blocks D and H and school oval**

- A path made hard standing material should be installed where access is gained onto the grass surface.
- Encapsulate all other bare surfaces by laying down geofabric followed by raised mulched garden beds.

- All seating should be installed on top of a hard standing material base.
- Appropriate drainage should be installed to divert storm water and prevent further erosion.

**Area E - grassed area South-West of Block B**

- Encapsulate the area by laying down geofabric followed by raised mulched garden beds.
- A fence may need to be installed along to path to the South-west side of Block B to restrict access by students.
- The existing drain should be extended to the oval to direct storm water.

**Area F - grassed surface surrounding Block G**

- Encapsulate the area by laying down geofabric followed by raised mulched garden beds.
- Fences may be required to restrict access to the area.
- All other grasses area should be repair by returfing. Periodic resting may be needed to maintain the grass.

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 and Training (DET) Asbestos Management Plan for all other identified asbestos materials within the school.

## 1.2 Asbestos removal/clean-up works

From the information provided to PB it appears that the asbestos removal/ clean up works comprised only the following:

- the removal, clean-up and disposal of the visible fragments of fibrous cement on the ground surface. Removal was limited to the accessible surface areas only.

The remediated areas are 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. All presumed asbestos within the Asbestos Zones should be considered as *friable* in accordance with the interpretation of the NSW WorkCover Authority published in 'Your Guide to Working with Asbestos. Safety guidelines and requirements for work involving asbestos, March 2003'.

### 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 control measures installed are fully maintained.
- 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 Farmborough Road Public School**

Event	Location	Description of Material	Extent	Condition	Risk Status	Control Priority	Control Recommendation/Comments
<i>School Grounds*</i>							
A	Bank between concrete playground and Black E	Possible buried asbestos cement fragments	Throughout – below ground surface	Unknown	Low	Low	Provide repair to surface coverage using geofabric, paving and/or mulched garden beds as appropriate. Do not disturb soil surface. Inspect every three months or after adverse weather conditions months for signs of surface wear and possible fragments at surface.
B	Garden between Blocks C and D	Possible buried asbestos cement fragments	Throughout – below ground surface	Unknown	Low	Low	Provide repair to surface coverage using geofabric and mulched garden beds as appropriate. Appropriate fencing may be required. Do not disturb soil surface. Inspect every three months or after adverse weather conditions months for signs of surface wear and possible fragments at surface.
C	Shaded areas around school oval	Possible buried asbestos cement fragments	Throughout – below ground surface	Unknown	Low	Low	Provide repair to surface coverage using turf and/or mulched garden beds as appropriate. Do not disturb soil surface. Inspect every three months or after adverse weather conditions months for signs of surface wear and possible fragments at surface.

D	Boundary between Blocks D and H and school oval	Possible buried asbestos cement fragments	Throughout – below ground surface	Unknown	Low	Low	Provide repair to surface coverage using geofabric, paving and/or mulched garden beds as appropriate. Appropriate drainage may be required. Do not disturb soil surface. Inspect every three months or after adverse weather conditions months for signs of surface wear and possible fragments at surface.
E	Grasses area South-West of Block B	Possible buried asbestos cement fragments	Throughout – below ground surface	Unknown	Low	Low	Provide repair to surface coverage using geofabric and mulched garden beds as appropriate. Appropriate fencing and drainage may be required. Do not disturb soil surface. Inspect every three months or after adverse weather conditions months for signs of surface wear and possible fragments at surface.
F	Grassed surface surrounding Block G	Possible buried asbestos cement fragments	Throughout – below ground surface	Unknown	Low	Low	Provide repair to surface coverage using geofabric, turf and/or mulched garden beds as appropriate. Appropriate fencing may be required. Do not disturb soil surface. Inspect every three months or after adverse weather conditions months for signs of surface wear and possible fragments at surface.

\*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

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).

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 DET 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 Farmborough Road 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) is due to be implemented for all NSW state schools and educational facilities. The plan will include 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 & Training 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 & Training 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 & Training or other authorised person must engage a licensed 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 Fibres 2<sup>nd</sup> Edition [NOHSC: 3003 (2005)]* 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 Occupational Health and Safety Act 2000 and the Occupational Health and Safety Regulation 2001.

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 DET Facility Manager for cancellation after that Manager has checked a safe situation exists.

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

In accordance with the interpretation of the NSW WorkCover Authority published in 'Your Guide to Working with Asbestos, Safety guidelines and requirements for work involving asbestos' March 2003, any asbestos cement materials that have been buried in the ground and found during exploration work or excavation work is classified as 'friable asbestos' therefore, any fibrous cement materials or other suspected asbestos-containing materials excavated should be considered to be potentially friable asbestos. 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 WorkCover NSW.

## 7. Legislative requirements

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

- All friable asbestos removal and disposal work shall be carried out in accordance with the requirements of the WorkCover NSW *Guidelines for Licensed Asbestos Removal Contractors*.
- The friable asbestos contractor shall notify WorkCover NSW of the proposed work at least 7 days prior to the commencement of any work in accordance with NSW Occupational Health and Safety Regulation 2001. However this time period may be waived in the case for DET properties.
- All work shall be carried out in strict accordance with the NSW Occupational Health and Safety Act 2000, the NSW Occupational Health and Safety Regulation 2001, the Code of Practice for the Safe Removal of Asbestos, 2<sup>nd</sup> Edition [NOHSC: 2002 (2005)] and the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres, 2nd Edition [NOHSC 3003 (2005)].

DRAFT

## 8. Safe work procedures for friable asbestos work

The following safe work procedures will apply for friable 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 8 of the *Code of Practice for the Safe Removal of Asbestos*.
- Only personnel who have been trained in work procedures for the safe removal of asbestos (with greater than 3 year's experience) shall work on the friable asbestos. A trained, experienced operator must remain on duty outside the removal enclosure 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-containing material 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.

## Figure

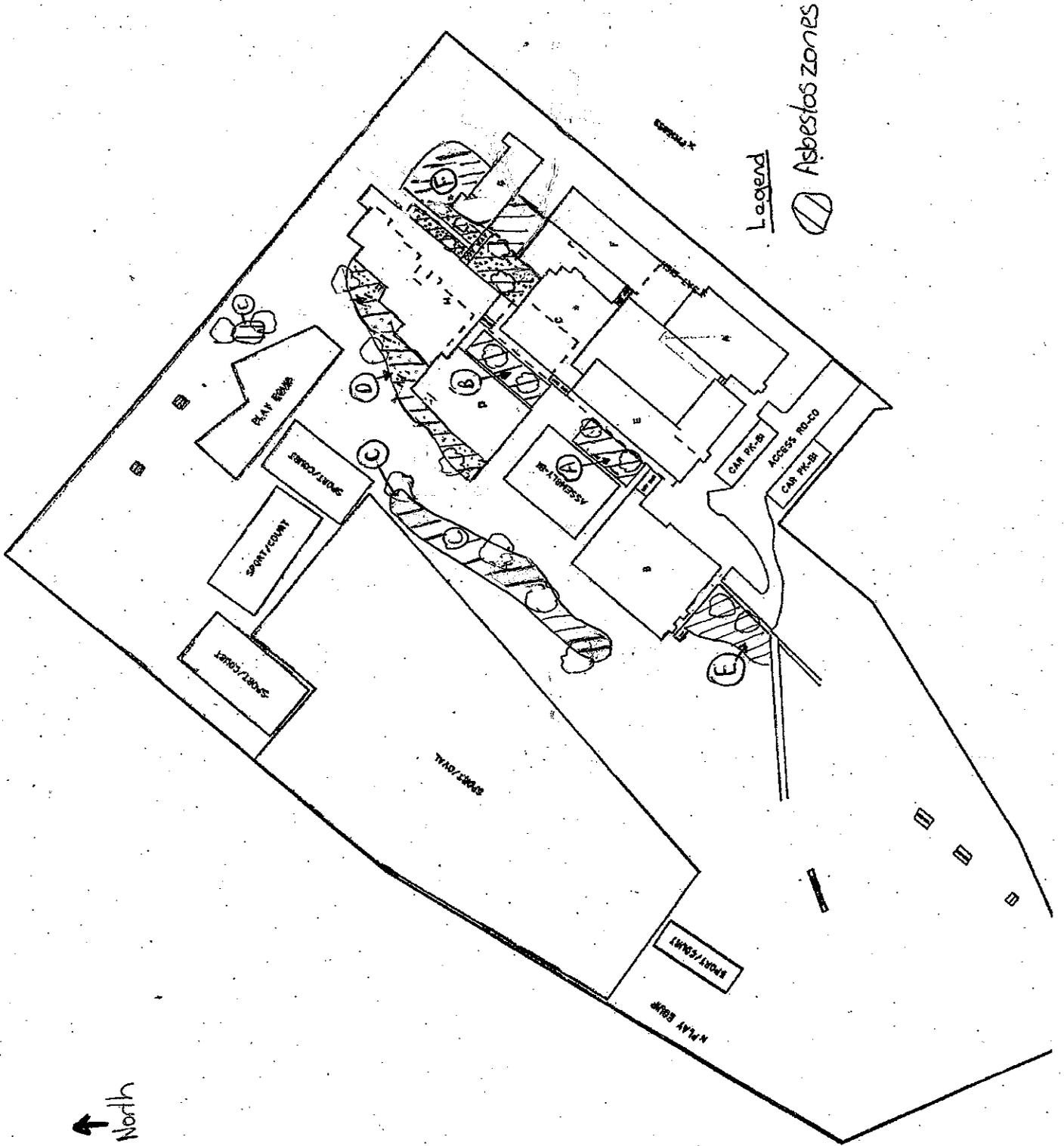
---

Site layout plan

Farnborough Road Public School

Site Layout

Figure 1



## **Appendix A**

---

Grounds management checklist

## Farmborough Road Public School grounds asbestos management checklist – Routine three monthly inspections

**Table 1 Routine monthly inspection checklist**

Area	Location description	Three monthly inspections	Initial inspection		Subsequent three-monthly inspections		
			Date:	Date:	Date:	Date:	Date:
A	Bank between concrete playground and Black E	Surface cover adequate (Y/N)					
		Suspected asbestos materials visible (Y/N)					
B	Garden between Blocks C and D	Surface cover adequate (Y/N)					
		Suspected asbestos materials visible (Y/N)					
C	Shaded areas around school oval	Surface cover adequate (Y/N)					
		Suspected asbestos materials visible (Y/N)					
D	Boundary between Blocks D and H and school oval	Surface cover adequate (Y/N)					
		Suspected asbestos materials visible (Y/N)					
E	Grasses area South-West of Block B	Surface cover adequate (Y/N)					
		Suspected asbestos materials visible (Y/N)					
F	Grassed surface surrounding Block G	Surface cover adequate (Y/N)					
		Suspected asbestos materials visible (Y/N)					

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

**Table 2 Incident inspection checklist**

Area	Location description	Incident inspections		Date of inspection		
		Surface cover adequate (Y/N)	Suspected asbestos materials visible (Y/N)	Date:	Date:	Date:
A	Bank between concrete playground and Black E	Surface cover adequate (Y/N)	Suspected asbestos materials visible (Y/N)			
B	Garden between Blocks C and D	Surface cover adequate (Y/N)	Suspected asbestos materials visible (Y/N)			
C	Shaded areas around school oval	Surface cover adequate (Y/N)	Suspected asbestos materials visible (Y/N)			
D	Boundary between Blocks D and H and school oval	Surface cover adequate (Y/N)	Suspected asbestos materials visible (Y/N)			
E	Grasses area South-West of Block B	Surface cover adequate (Y/N)	Suspected asbestos materials visible (Y/N)			
F	Grassed surface surrounding Block G	Surface cover adequate (Y/N)	Suspected asbestos materials visible (Y/N)			