GRINDLEY CONSTRUCTION PTY LTD

INTERIM ENVIRONMENTAL MANAGEMENT PLAN EASTERN VALIDATION AREA, WENTWORTHVILLE PUBLIC SCHOOL

JUNE 2021





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Interim Environmental Management Plan Eastern validation area, Wentworthville Public School

Grindley Construction Pty LTD

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

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	NAME	DATE	SIGNATURE
Prepared by:	Poushali Talukder	30/04/2021	Bishali Tabibder
Reviewed by:	Julie Porter	30/05/2021	gulis Porter.
Approved by:	Hamish Donovan	31/05/2021	Monour

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TABLE OF CONTENTS

ABBREVIATIONS III			
1	INTRODUCTION4		
1.1	Overview and purpose4		
1.2	Objectives4		
1.3	IEMP context and Timing4		
1.4	consent requirements5		
1.5	Relevant Regulations and guidelines5		
1.6	Enforcement6		
2	SITE DESCRIPTION7		
2.1	Site identification7		
2.2	Site history SUMMARY7		
2.3	Previous investigations and findings8		
2.4	Remediation activities and status8		
3	MANAGEMENT ACTIVITIES10		
3.1	Responsibilities10		
3.1 3.2	Responsibilities		
3.1 3.2 3.3	Responsibilities		
3.1 3.2 3.3 3.4	Responsibilities10Communications Protocol11Exisiting environmental systems12Environmental Awareness and Training12		
3.1 3.2 3.3 3.4 3.5	Responsibilities10Communications Protocol11Exisiting environmental systems12Environmental Awareness and Training12IEMP Review12		
3.1 3.2 3.3 3.4 3.5 3.6	Responsibilities10Communications Protocol11Exisiting environmental systems12Environmental Awareness and Training12IEMP Review12Cap Inspection Protocol13		
3.1 3.2 3.3 3.4 3.5 3.6 3.7	Responsibilities10Communications Protocol11Exisiting environmental systems12Environmental Awareness and Training12IEMP Review12Cap Inspection Protocol13Cap Repair13		
 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 	Responsibilities10Communications Protocol11Exisiting environmental systems12Environmental Awareness and Training12IEMP Review12Cap Inspection Protocol13Cap Repair13Risk Assessment for Cap Breaches13		
3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 4	Responsibilities10Communications Protocol11Exisiting environmental systems12Environmental Awareness and Training12IEMP Review12Cap Inspection Protocol13Cap Repair13Risk Assessment for Cap Breaches13CONTINGENCY PLAN14		
 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 4 4.1 	Responsibilities10Communications Protocol11Exisiting environmental systems12Environmental Awareness and Training12IEMP Review12Cap Inspection Protocol13Cap Repair13Risk Assessment for Cap Breaches13CONTINGENCY PLAN14Closure and Permissions14		
 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 4 4.1 4.2 	Responsibilities10Communications Protocol11Exisiting environmental systems12Environmental Awareness and Training12IEMP Review12Cap Inspection Protocol13Cap Repair13Risk Assessment for Cap Breaches13CONTINGENCY PLAN14Closure and Permissions14GenEral requirements14		
 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 4 4.1 4.2 4.3 	Responsibilities10Communications Protocol11Exisiting environmental systems12Environmental Awareness and Training12IEMP Review12Cap Inspection Protocol13Cap Repair13Risk Assessment for Cap Breaches13CONTINGENCY PLAN14Closure and Permissions14GenEral requirements14Asbestos Fibre Air Monitoring14		
 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 4 4.1 4.2 4.3 4.4 	Responsibilities10Communications Protocol11Exisiting environmental systems12Environmental Awareness and Training12IEMP Review12Cap Inspection Protocol13Cap Repair13Risk Assessment for Cap Breaches13CONTINGENCY PLAN14Closure and Permissions14GenEral requirements14Asbestos Fibre Air Monitoring14Control of Earthworks Activities and Dust management15		

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4.6	Cap Reinstatement and clearance	16
5	INCIDENT AND EMERGENCY PROCEDURES	17
5.1	Planned Cap Breach - emergency response	17
5.2	Unplanned Cap Breach - emergency response	17
5.3	Complaints and environmental incident register	18
6	LIMITATIONS	19

LIST OF TABLES

Table 2.1	Site details	7
Table 3.1	Responsibilities	10
Table 5.1	Emergency contacts	18

LIST OF APPENDICES

Appendix A Figures Appendix B IEMP Notification register Appendix C Complaints and environmental incident register Appendix D Inspection checklist Appendix E Topographic Survey Appendix F Slab Construction Detail

ABBREVIATIONS

ACM	Asbestos-containing materials			
ASAP	Asbestos situation action plan			
ESA	Environmental site assessment			
IEMP	Interim environmental management plan			
mAHD	Metres Australian Height Datum			
mBGL	Metres below ground level			
NEPM	National Environment Protection (Assessment of Site Contamination) Measure 1999			
NSW EPA	New South Wales Environment Protection Authority			
POEO Act	Protection of the Environment Operations Act 1997			
SWMS	Safe work method statement			
UFP	Unexpected finds protocol			
WHS	Work Health and Safety			

1 INTRODUCTION

1.1 OVERVIEW AND PURPOSE

WSP Australia Pty Ltd (WSP) was commissioned by Grindley Construction Pty Ltd to prepare a interim environmental management plan (IEMP) for the Wentworthville Public School, located at 70-100 Fullagar Road, Wentworthville New South Wales. Refer to Appendix A - Figure 1 for school location. The 'site' comprises the 'Stage 1 – Eastern Validation Area' of the school, the specific area this IEMP relates to is burial pit 1 and burial pit 2 (void) within the footprint of the new 'Block G' building, which is illustrated in Appendix A - Figure 2.

Asbestos contaminated soils were previously identified at the site and have subsequently been remediated through offsite disposal and construction of two on-site burial pits which were capped by pavement hardstand that formed the basal slab to new school buildings. This IEMP provides the management requirements to ensure the longevity of the cap and containment solution and to ensure any works that penetrate the cap are appropriately controlled.

The 'cap' herein refers to the concrete pavement slab, underlying dense grade base (DGB) and geotextile material overlying burial pit 1 and the void.

1.2 OBJECTIVES

The objectives of this IEMP are to:

- define appropriate management and mitigation measures to be implemented to manage potential environmental and health and safety risks associated with capped contaminated soil within the burial pits;
- ensure activities associated with any future site works are managed in a way that minimises the potential impact to the surrounding environment; and
- ensure all personnel involved are aware of potential risks issues associated with the capped contaminated soil.

The objectives are to be achieved through the application of administrative and inspection protocols, health and safety procedures as well as the application of controls during the maintenance of utilities, site planning/preparation work and potential future excavation works at the site.

1.3 IEMP CONTEXT AND TIMING

The purpose of this IEMP is to manage asbestos contaminated soil remining on-site, which has been remediated by burial within constructed burial pits and contained void spaces beneath the new school building structure. As no active risks are presented to routine site users (e.g. students and school staff), this IEMP is considered 'passive'.

This IEMP will apply with immediate effect upon provision of an Occupancy Certificate for the site by the independent verifier (IV) as required by the consent. This IEMP indefinitely or until such a time that a site audit statement can be prepared by a NSW Environment Protection Authority (EPA) accredited site auditor stating that an environmental management plan (EMP) is not required for the site.

With regard to the context of this IEMP, the IEMP is prepared to manage residual contamination within 'Stage 1' of the school redevelopment. New revisions of this IEMP will be provided as other remediation areas within the school are completed under the approved development consent. Once remediation works under the development are complete, the IEMP will be finalised into a LTEMP in accordance with the consent.

WSP notes that NSW Department of Education (Doe) c/o Public Works Advisory commissioned the *Wentworthville Public School – Asbestos in Grounds Management Plan, March 2020* (DoE EMP), which is currently active for the

school. The DoE EMP is a site specific asbestos management plan (SSAMP) which establishes management or remediation responses should asbestos be identified within school grounds. This IEMP is a stand-alone document which manages residual contamination following the completion of remediation works.

The residual asbestos contamination described in this IEMP must be added to the existing asbestos register for the school.

1.4 CONSENT REQUIREMENTS

Under Section D28 of Development Consent – SSD9273 (Consent), a IEMP is required to be prepared within one month of completion of remediation works. Image 1 shows the modified LTEMP consent requirements issued on 28 October 2020: Image 1 Modified LTEMP consent requirements.

- be prepared by a suitably qualified and experienced person whose appointment has been endorsed by the Planning Secretary in consultation with EPA;
- (b) be submitted to the Site Auditor for review and endorsement and submitted to EPA. <u>Council and for review prior to submission to the Planning Secretary for information</u>; and
- (c) include, but not be limited to:
 - (i) a description of the nature and location of any contamination remaining on site;
 - provisions to manage and monitor any remaining contamination, including details of any restrictions placed on the land to prevent development over the containment cell;
 - (iii) triggers that would indicate if further remediation is required; and
 - details of any contingency measures that the Applicant is to carry out to address any ongoing contamination.
- (d) include any ongoing measures set out in the Asbestos Management Plan approved under condition B5.

With regards to a) the IEMP is prepared by the project environmental consultant (WSP), and will be subject to review by a NSW EPA accredited site auditor.

With regards to

- ci) refer to Section 2.3
- cii) refer to Section 4. No land restrictions are proposed in this IEMP
- ciii) refer to Section 7 (unexpected finds protocol) for triggers for further remediation
- civ) as this IEMP is 'passive' (i.e. requires no active management other than inspections), contingency management relates to scenarios where planned breaches of the cap are unavoidable. In these circumstances, contingency protocols and controls are provided in Section 4 for how to protect human health and the environment from exposure to contaminated soils.
- d) no ongoing measures required.

1.5 RELEVANT REGULATIONS AND GUIDELINES

Key legislation relevant to the proposed works is listed below:

- NSW EPA Environmental Planning and Assessment Act 1979
- NSW EPA Protection of the Environment Operations Act 1997 (POEO Act) and Protection of the Environment Operations Regulation 1997 (POEO Reg)
- NSW EPA Contaminated Land Management Act 1997
- NSW EPA Waste Avoidance and Resource Recovery Act 2000

- National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM, as amended 2013)
- SafeWork NSW Work Health and Safety Act, 2011
- SafeWork NSW Work Health and Safety Regulation, 2017
- SafeWork NSW, 2019 Code of Practice How to Manage Work Health and Safety Risks
- SafeWork NSW, 2019 Code of Practice How to Manage and Control Asbestos in the Workplace
- SafeWork NSW, 2019 Code of Practice How to Safely Remove Asbestos
- SafeWork NSW, 2019 Code of Practice Construction Work
- SafeWork NSW, 2020 Code of Practice Excavation Work

1.6 ENFORCEMENT

In order for the IEMP to be effective it must be practical and enforceable. Under the Consent, enforcement of the IEMP is provided though Section D28 which enables the commencement of the IEMP, and Section E17 which requires the IEMP implementation on-going post occupation.

Other mechanisms for enforcement also apply depending on certain activities and operations at the site as follows:

- i. 'passive' normal site operation (a primary school) which is not expected to have any notable impact on the function the cap
- ii. minor works which are required to breach the cap (such as installation of future utilities or services)
- iii. Major works or redevelopment which requires major breaches or removal of the cap.

With respect to i) and ii) ensuring routine site users or workers undertaking minor works staff are protected is the responsibility of NSW Department of Education (DoE) as the current owner of the site. NSW DoE has responsibilities under the Act and Regulation to provide a safe workplace. There is no strict or routine policing of site owners to ensure/enforce they are providing a safe workplace (including actively implementing this IEMP). However, the Act and Regulation both empower and mandate that site occupants or workers notify other site occupants, workers, or the site owners or operators of an unsafe workplace. Failure to provide a safe workplace can result in independent inspections of sites by state regulators (e.g. SafeWork NSW), who can issue improvement notices or penalties for unsafe places of work (including the implementation of a IEMP as part of providing a safe workplace). In this regard, the primary mechanism of enforcement of the IEMP is through the requirements of the Act and Regulation, and the powers and mandates imposed on site users, workers and owners, and independent government regulators. Under clause 428 of the regulation *'if a person with management or control of a workplace plans to relinquish management or control of the workplace, the person must ensure, so far as is reasonably practicable, that the asbestos register is given to the person, if any, assuming management or control of the workplace'*. This IEMP should be referred to in the site asbestos register and compliance is enforceable by SafeWork NSW.

With respect to iii) and in addition to the enforcement mechanism outlined for i) and ii), 'redevelopment work' at the site, is significant enough to require consent from the local council, Cumberland Council (formerly Holroyd Council), which provides an additional avenue for enforcement. *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55) provides the primary mechanism for ensuring the IEMP is enforced with respect to changes in the allowable land uses or material alterations to the building fabric on the site and surrounds. This IEMP will be bound to the ownership Title and compliance with this EMP will be triggered as part of any future development approval. The mechanism for enforcement will be Council or an appointed independent certifier will not provide a completion certificate (or occupation certificates of a new redevelopment) unless satisfied the requirements of this IEMP under a future condition of consent, have been met.

2 SITE DESCRIPTION

2.1 SITE IDENTIFICATION

The general property identification information is provided in Table 2.1 below.

Table 2.1 Site details				
Site address	The address of Wentworthville Public School which contains the site is 70-100 Fullagar road, Wentworthville NSW.			
Site identification	The site comprises part Lot 1 in Deposited Plan 1245593			
Site owner	NSW DoE			
Study area	Approximately 5355 m ²			
Local government area (LGA)	Cumberland Council (formerly Holroyd Council)			
Zoning	R2 – low density residential land use under the Cumberland Council Local Environment Plan (LEP) zoning maps (March 2021).			
Current site use	Primary school			
Current Site Condition	The site has been remediated and construction works for the library and 30 home bases are well progressed.			
Surrounding land uses	Other surrounding land uses include the following:			
	— To the north – Fullagar Road, residential properties and Wentworthville train station beyond			
	— To the east – Station Street, residential properties and Parramatta beyond			
	- To the south - Monash Street, the Western Motorway and residential properties beyond			
	 To the west – Garfield Street, Cumberland Highway with Ringrose Park and residential properties beyond. 			

2.2 SITE HISTORY SUMMARY

Historical records indicate that the site currently identified onsite are registered under the minister of education (previously identified as Her Most Gracious Majesty Queen Victoria) from 1880 to date, indicating that the land has been used as a school campus since then.

Aerial imagery shows that the site comprised of a small building in 1943, towards the South East corner of the site. By 1961, the small building had been extended with the irregular shaped building and three new buildings had been constructed at the northern portion. One building had been removed from the northern portion in 1975. The northern car park appeared to have been constructed in 1986. Since the 1990s the site has remained largely unchanged to its current configuration with the exception of some demountables and shaded areas. The surrounding area towards north west of site gradually developed between 1943 to its current configuration as a school campus.

2.3 PREVIOUS INVESTIGATIONS AND FINDINGS

The site has been subject to a number of historical geotechnical and environmental investigations since 2017. Most relevant investigation reports are listed here with summaries provided in following subsections.

- EIS. (2017). Preliminary Environmental Screening Proposed School Additions. Ref. E31057Klet.
- WSP. (2018b). Preliminary Site Investigation (PSI) and Detailed Site Investigation (DSI). Ref. PS110641-CLM-REP-WWPS RevB_Final.
- JKE, formerly EIS. (2019). Preliminary Salinity Assessment. Ref: E31057BTrpt2.
- P. Clifton and Assocaties Pty Ltd (PCA). (2020) Waste Classification of In-situ Soils Containing Asbestos Cement Sheet Debris. Ref: PCA6512-2020_WASTECLASSLET01_10Jan20.
- 4 Pillars. (2020). Waste Analysis and Classification Report Ref: 20200107WAL_01.
- WSP. (2020). *Remediation Action Plan*. Ref: PS119057_Wentworthville Public School-RAP-CLM-REP-Rev5-FINAL.
- WSP. (2020). Environmental Site Assessment (Block G and H). Ref: PS119057-CLM-REP-001-Rev3

2.4 REMEDIATION ACTIVITIES AND STATUS

2.4.1 REMEDIATION SUMMARY

As part the site to redevelopment the following remediation work was undertaken:

- scraping surficial fill material to natural surface and stockpiling scraped material in the western portion of the site
- excavation of natural soil beneath the footprint of the current Block G building for construction of an in-ground burial pit (burial pit 1). Then backfilling of the burial pit with stockpiled fill. The burial bit was dug approximately 1.5 m into natural soils with wall comprising dark red to brown, slightly mottled stiff clay.
- upon completion of backfilling burial pit 1, construction of an above ground burial pit (void). Then backfilling of the void with additional contaminated soils
- off-site disposal of remaining contaminated soils (approximately 3852 tonnes)
- installation of a capping layer for burial pit one and the void comprising a layer of high visibility synthetic geotextile material (geotextile layer), approximately 180 mm of dense grade base (dgb) and a minimum 150 mm thickness conventionally reinforced concrete slab, with a combined minimum thickness of 320 mm.
- A stormwater trench was installed on the eastern edge of the burial pit, however this was placed wholly within certified imported fill material and is physically separated by geotextile and a retaining wall from contaminated backfill. No utility or service is installed within the contaminated fill.

A topographic survey and 3D volumes of burial pit 1 and the void are included in Appendix E. A general arrangement drawing showing detail of the concrete slab construction and pavement profiles is included as Appendix F.

2.4.2 NATURE OF CONTAMINATION IN BURIED SOIL

Previous investigation findings from investigation reports listed in Section 2.3 provide a broad summary of the nature of the contamination in soils buried within burial pit 1 and the void. Identified contaminants of concern were TRH, BTEXN, PAHs, heavy metals and asbestos. With exception of asbestos, other chemical analytes recorded concentrations below the laboratory detection limit (LOR) or had low level detections which were compliant with the following site criteria as

defined in the National (Assessment of Site Contamination) Environmental Protection Measure (NEPM, 2013 as amended):

- Health investigation level A: Low density residential
- Health screening level A: Residential
- Ecological investigation and screening levels Urban residential / public open space

Asbestos was the primary contaminant of concern with non-friable and friable forms identified in soil exceeding HSL-A and HSL-D criteria.

3 MANAGEMENT ACTIVITIES

3.1 RESPONSIBILITIES

Table 3.1 provides a summary of the responsibilities for the implementation and management of the IEMP. The list of responsibilities does not replace any regulatory, planning or licensing responsibilities of the parties in undertaking works at the property. In any instance where an inconsistency arises between this IEMP and environmental law, the environmental law will take precedence over the IEMP.

Responsibilities

PARTY	RESPONSIBILITIES		
Site Owner — Department of Education / Schools Infrastructure NSW	Provide the IEMP to the Site Controller, and workers who are engaged directly by the Site Owner, have them sign the notification register and outline emergency response plan (<i>This function may be performed again by the Site Controller once workers are site</i>).		
	Attach a copy of the IEMP to any lease or contract for sale of the site.		
	Incorporate the IEMP into any other management plans implemented at the site.		
	Providing final clearance, in consultation with the Site Controller for major works, which are expected to disturb or breach the cap.		
	Liaise with Council to include the IEMP on any Section 10.7 planning certificate (i.e. zoning certificate) applicable to the site.		
	Maintain the school asbestos register		
	Minimum 12 monthly reviews of the IEMP		
	Risk assessment and options appraisals for proposal to breach the cap and review of contractor emergency protocols for planned cap breaches		
Site Controller — School Principal or nominated delegate	Provide the IEMP to school staff and workers at the site (whether engaged by the Site Owner or Site Controller), provide site inductions, have them sign the notification register and outline emergency response plan.		
	Comply with the IEMP during occupation of the property.		
	Conduct integrity inspections of the cap and inform the property owner if any deterioration of the cap is observed.		
	Providing final clearance for routine school maintenance works (or similar), which will not disturb or breach the cap.		
	Review the existing school emergency response protocol and update (if required) if there was an unplanned disturbance or breach of cap (e.g. review or contingency emergency assembly points if they coincide with burial pit or void)		
	Maintain the IEMP notification register. Refer to Appendix B.		
	Minimum 12 monthly reviews of the IEMP		
	Review of contractor emergency protocols for planned cap breaches for alignment/conflict with existing emergency protocols at the school		

PARTY	RESPONSIBILITIES		
School staff and workers — School staff or workers undertaking normal	Comply with the IEMP, including relevant legislation and guidance (including the <i>Work Health and Safety Act, 2011 and Regulation 2017</i> or relevant legislation current at the time of the works) when conducting works at the property.		
functions of the school	Understand the requirements of the IEMP and have signed the notification register.		
 Workers / contractors undertaking intrusive works below the cap 	Inform the Site Owner and Site Controller if after reading this IEMP, anticipate their works will disturb or breach the cap, and if so, <u>do not</u> proceed with works until formal clearance by the Site Owner and Site Controller has been provided to commence. A site		
works below the cap	specific emergency response plan must also be prepared.		

This IEMP is prepared with the assumption that any future works on the site shall be undertaken in accordance with relevant regulations, guidelines and laws current at the date works in NSW including but not limited to those referred to in Section 1.3.

3.2 COMMUNICATIONS PROTOCOL

3.2.1 PLANNED MAJOR WORKS – CAP BREACHES

For all major works which may breach the capping layer, SINSW are to drive and co-ordinate formal communications to the Site Owner, Site Occupants and relevant key external stakeholders. The Site Owner may request the Site Controller provide any additional briefings to Site Occupants and field and queries specific to the school's normal function.

Refer to Figure 1 for flow chart of communication protocol.



3.2.2 ROUTINE MINOR WORKS – NO DISTURBANCE / BREACHES TO CAP

For all minor works which are not expected to disturb or breach the capping layer, and the worker/contractor is engaged by the Site Controller, the Site Controller is to drive and co-ordinate formal communications to the Site Occupants, External Stakeholders and SINSW if required. If workers/contractors are engaged by SINSW directly, SINSW and the Site Controller are to communicate as required and as per existing communication protocols.

Refer to Figure 1 for flow chart of communication protocol.





3.2.3 CHANGES TO THE LTEMP

For changes to the IEMP lead by SINSW, the following must be undertaken:

- 1 SINSW must communicate any updates or changes in responsibilities by formal letter or email correspondence to the Site Controller, School staff and workers.
- 2 SINSW must allow an opportunity for review and consultation.
- 3 Once agreed and finalised, SINSW will provide the updated IEMP to the Site Controller, who can then communicate to School staff and workers and External Stakeholders, (as required).

For changes to the IEMP lead by the Site Controller, staff or workers, the following must be undertaken:

- 1 Site Controller must first communicate the desired updates or changes in responsibilities by formal letter or email correspondence to the Site Controller.
- 2 SINSW must be allowed an opportunity for review and consultation, which includes the Site Controller and School staff and workers as required
- 3 Once agreed and finalised, SINSW will provide the updated IEMP to the Site Controller, who can then communicate to School staff and workers and External Stakeholders, (as required).

3.3 EXISITING ENVIRONMENTAL SYSTEMS

This IEMP is prepared for only the footprint of burial pit 1 and the void within the remediated area of the site. This IEMP does not apply to the broader school. There are known asbestos impacts in other areas of the school which are managed through an overarching management plan *NSW Department of Education C/O – Public Works Advisory; Wentworthville public School, Asbestos in Grounds Management Plan, March 2020.*

3.4 ENVIRONMENTAL AWARENESS AND TRAINING

The Site Owner and Site Controller have joint responsibility in ensuring the existence and requirements of this IEMP are made aware to Site occupants and workers (e.g. school staff and general contractor works which do not disturb or breach the cap). This is documented by signing the IEMP notification register in Appendix B. For routine works as part of normal school operation which will not disturb or breach the cap, no emergency response training in the context of this IEMP is provided. Existing emergency response and training protocols in place at the school should be followed.

For any works which intend to disturb or breach the capping layer, a specific emergency response plan must be generated (as per Table 3.1) by the contractor in consultation with the Site Owner and Site Controller.

3.5 IEMP REVIEW

Review of this IEMP by the Site Owner and Site Controller (collectively or independently), should be conducted every 12 months, and would include but not be limited to the following aspects:

- review non-compliances and corrective actions during the period;
- ensure inspections have been undertaken;
- ensure maintenance recommended (if any) during inspections and/or intrusive works has been completed; and
- review whether any proposed changes to land use may conflict with the IEMP.
- following updates to legislation or codes of practice which may affect management protocols.

- Changes to site ownership or updates to responsible parties and roles.
- Any proposals for works which may disturb or breach the cap.

Review and updates to this IEMP can be undertaken by the Site Owner and Site Controller for administrative changes such as delegations of authority or outcomes of inspections and associated maintenance. However, a suitability qualified environmental specialist should be engaged to update the IEMP in the following circumstances (non-exhaustive list):

- Updates of the asbestos register (outside this IEMP)
- Updates to the IEMP from a planned or unplanned breach of the capping layer. For example, the IEMP may be
 updated with clearance certificates, air monitoring results, validation samples and confirmation of correct cap reinstatement/repair.

An inspection register is presented in Appendix D1.

An IEMP review register is presented in Appendix D2.

3.6 CAP INSPECTION PROTOCOL

On an annual basis, the cap should be inspected by the site owner or the site occupant (as directed by the site owner) to verify the cap is maintaining its function as a barrier between contaminated soils and site users. The inspection should look for evidence of deterioration of the cap such as:

- Deep cracks or breaks in the concrete surface which exposes geotextile; and
- Separation of grout between besser brick walls which exposes geotextile.

3.7 CAP REPAIR

Where deep cracks, breaks or separation between besser brick wall are observed, (i.e. are not superficial), these should be repaired with an appropriate filler to prevent exacerbation of the crack/break. If the crack/break continues to present after filling work, an engineer should be consulted to conduct an integrity assessment.

3.8 RISK ASSESSMENT FOR CAP BREACHES

Prior to any planned intrusive works where a breach of the capping layer is proposed, the work must undergo a risk assessment to verify the absolute need for the breach and exposure of contaminated soils. An options appraisal must be undertaken by the Site Owner to consider alternatives to breaching the cap and involve the Site Controller and any relevant key Stakeholders.

Procurement of works to breach the capping layer may only commence after the risk assessment process and verification of no alternative to breaching the cap has been undertaken.

4 CONTINGENCY PLAN

If after risk assessment and options appraisal it is determined unavoidable to breach the cap, the following sub-sections outline the minimum controls.

4.1 CLOSURE AND PERMISSIONS

For planned breaches of the capping layer, the corresponding area of the school should be shut down and access restricted to workers specifically engaged by the Site Owner or Site Controller to undertake the works. The control of entry to the work area, in-particular when the planned breach has occurred and asbestos contaminated soils are exposed, must always be maintained by the contractor.

Prior to any planned capping breaches, the contractor undertaking the works must acquire necessary permissions from the school and from Schools Infrastructure NSW (SINSW).

4.2 GENERAL REQUIREMENTS

To ensure that any asbestos encountered at the site is managed is accordance with the legislative requirements and current best practice, excavation works involving ACM and soils potentially impacted by asbestos will be conducted in accordance with the following guidelines:

- WA Department of Health (DoH) 2009, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia
- SafeWork NSW Work Health and Safety Act, 2011
- SafeWork NSW Work Health and Safety Regulation, 2017
- SafeWork NSW, 2019 Code of Practice How to Manage Work Health and Safety Risks
- SafeWork NSW, 2019 Code of Practice How to Manage and Control Asbestos in the Workplace
- SafeWork NSW, 2019 Code of Practice How to Safely Remove Asbestos
- SafeWork NSW, 2019 Code of Practice Construction Work
- SafeWork NSW, 2020 Code of Practice Excavation Work

It is noted that Clause 458 of the WHS Regulation 2017, requires a person conducting a business or undertaking that commissions the removal of asbestos must ensure that the asbestos removal work is carried out by a licensed asbestos removal Contractor unless the asbestos to be removed is:

- a) 10 square metres or less of non-friable asbestos or asbestos contaminated dust or debris associated with the removal of that amount of non-friable asbestos, or
- b) Asbestos containing debris that is not associated with the removal of friable or non-friable asbestos and is only a minor contamination.

As the nature of contamination within the burial pit contains friable asbestos, a Class A Licenced asbestos removalist should undertake/supervise the works, and workers involved trained in asbestos removal.

4.3 ASBESTOS FIBRE AIR MONITORING

Asbestos fibre air monitoring should be undertaken when asbestos contaminated soils are exposed. The following presents an overview of the recommended air monitoring and analysis requirements:

- Asbestos fibre air monitoring will be conducted along the perimeter of the asbestos work area. The number of
 monitoring locations will be dependent on the size of the asbestos work area but will be at a minimum of four
 locations.
- Sample collection and analysis should be conducted in accordance with the National Occupational Health and Safety Commission (NOHSC) *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust* (NOHSC: 3003 (2005)), referred to as the membrane filter method (MFM).
- Sampling should be done with portable asbestos air monitoring pumps fitted with a sampling cartridge housing the asbestos sampling filter.
- The samples will be analysed by a laboratory accredited by the National Association of Testing Authorities (NATA) and the results reported on NATA-endorsed certificates of analysis.
- The samples will be analysed by phase contrast microscopy in accordance with the MFM.
- The sampling parameters will be set such that the detection limit of <0.01 fibres/mL is achieved.

4.4 CONTROL OF EARTHWORKS ACTIVITIES AND DUST MANAGEMENT

The following information is provided as a guide to control dust during earthworks in areas of known or suspected asbestos impacted soil:

- An Asbestos Work Area (restricted area) is to be established.
- The restricted Asbestos Work Area (proposed excavation/stockpile zone) should be demarcated with appropriate warning signs to prevent unauthorised access.
- Prior to the first removal of the sub surface soil, builders plastic should be placed on an adjacent surface to contain excavated spoil.
- Prior to movement of stockpiled soils, dampen with water across the stockpile surface.
- During soil movement the materials should be kept sufficiently damp to minimise the emission of dust.

The excavation surface should be continually monitored and the surface wet down as drying occurs. This process should continue until the ACM or asbestos impacted soils excavation works in the Asbestos Work Area are completed.

The above method relies on the following factors:

- use of water fogging nozzle (not high-pressure hoses);
- constant vigilance of trained operators/contractor;

4.5 PPE AND DECONTAMINATION

Where personnel are required to work on the ground within the designated asbestos work areas and are required to handle, or are likely to come into direct contact with asbestos material, the following PPE is specified as a minimum requirement:

- safety boots with rubber soles (to permit easy cleaning);
- disposable Type 5/6 Tyvek® coveralls, or equivalent. Orange disposable overalls are recommended when working in close proximity to excavators;
- suitable respiratory protection, i.e. minimum P2 half face respirators; and

disposable gloves.

A decontamination area for personnel will be established at the entrance/exit to each Asbestos Work Area for the use of the personnel conducting the asbestos related works. The decontamination area will comprise a segregated area where the contaminated work clothing and respirators are removed and discarded. Contaminated PPE is to be disposed of in appropriately labelled waste bins or bags.

The decontamination area must not be used for purposes other than decontamination (e.g. as a materials storage area).

4.6 CAP REINSTATEMENT AND CLEARANCE

At the completion of works, the cap is to be re-instated to equal standard prior to breaching.

A geotextile layer should be placed over the footprint of the excavation, with any voids or depressions backfilled. Backfill material for excavation voids must use quarried products or certified VENM or ENM of an appropriate sizing and compaction to support the eventual concrete slab reinstatement.

The geotextile should be pinned in-place (steel 'U' pins or similar) to the edges of the concrete excavation/hole such that no contaminated soil is visible.

Geotechnical advice may be required prior to reinstatement of the concrete surface. Once the geotextile is placed, the concrete pavement cap should be formed in accordance with Pavement Type 3 (or equivalent).

For the purposes of the cap, Pavement Type 3 applies to the capping within Burial Pit 1 and the Void.

An independent environmental consultant or occupational hygienist should inspect the work area at completion of reinstatement to verify no residual soil, PPE or asbestos contaminated material remains, and issue a clearance certificate for the work area.



Figure 3 Concept cap reinstatement profiles

5 INCIDENT AND EMERGENCY PROCEDURES

5.1 PLANNED CAP BREACH - EMERGENCY RESPONSE

For planned breach of the capping layer, which will be undertaken by external contractors, emergency procedures will be detailed and explained at the start up induction or toolbox talk prior to the commencement of works. This will include at a minimum:

- the name(s) of the first aider/s on site
- the location of first aid kits and fire extinguishers
- emergency procedure details for the site, including contact details for emergency services and the nearest hospital
- site addresses details and map with route to nearest hospital highlighted
- location of the emergency assembly area.

As the contractor is responsible for controlling access to the work area where a cap breach is planned, it is also the Contractor's responsibility to present the emergency procedures to the work crew.

The emergency protocols may leverage an existing emergency response protocol for the school and prepared in conjunction/review of the Site Owner and Site Controller, but must be made specific to the planned works.

5.2 UNPLANNED CAP BREACH - EMERGENCY RESPONSE

All unplanned events, irrespective how minor, shall be reported at the first opportunity to the Site Controller and Site Owner (and other parties where delegated by the Site Owner). An emergency in the context of this IEMP is any unplanned breach of the capping layer, or unplanned exposure of contaminated soil (even if during planned work), where there is the potential for exposure to contaminated soil. An emergency may be triggered by some of the following scenarios:

- A failure in asbestos controls during planned cap breaches, and Site occupants may have been exposed.
- A failure or in the integrity of the wall or slab e.g. building collapse or fire.

Any potential exposure event should be immediately managed and contained. The following steps should be undertaken when an unplanned breach of the cap, or exposure event has occurred.

- 1 The worker/contractor undertaking planned major work, should <u>immediately</u> isolate the area and restrict access to all personnel. If the breach of cap, or exposure to soil occurs during unplanned work (e.g. building failure or fire), the Site Controller is to isolate the area. Isolation should be performed with barriers to physically separate the area from personnel.
- 2 Notify the Site Controller (if not already part of the isolation process) and Site Owner.
- 3 Engage a required specialists (e.g. engineers to investigate and assess the area
- 4 Alert appropriate regulatory authorities, such as the NSW EPA, SafeWork NSW, Council etc. as required.

Emergency contacts are listed in Table 5.1.

Table 5.1 Emergency contacts

PERSON/AGENCY	PHONE NUMBER		
Department of Education – Schools Infrastructure NSW	1300 482 651		
Site owner (Principal - Wentworthville Public School)	02 9631 8529		
Emergency services			
Emergency	000		
Police – non-emergency (Granville Police Station)	+61 298 974 199		
Ambulance – non-emergency (NSW Ambulance)	+61 293 207 777		
NSW Fire and Rescue – non-emergency (Wentworthville Fire Station)	+61 296 310 908		
Other			
Cumberland City Council	02 8757 9000		
SafeWork NSW	13 10 50		

5.3 COMPLAINTS AND ENVIRONMENTAL INCIDENT REGISTER

The receipt of complaints will be handled and responded to according to Wentworthville Public School's policy.

The purpose of the Complaints and Environmental Incident Register is to maintain a register of complaints from local residents or concerned parties, which will include a record of any action taken with respect to the complaints.

The complaints and environmental incident register is required to be completed immediately following the receipt of any complaints associated with works undertaken at the site. Written complaints should be addressed or acknowledged within five days of the complaint being received. Complaints made by telephone or in person should be addressed or acknowledged within two days of receipt. Complaints and incidents will be forwarded to Wentworthville Public School.

A copy of the complaints and environmental incident register is included in Appendix C.

6 LIMITATIONS

SCOPE OF SERVICES

This environmental site assessment report (the report) has been prepared in accordance with the scope of services set out in the contract, or as otherwise agreed, between the client and WSP (scope of services). In some circumstances the scope of services may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints.

RELIANCE ON DATA

In preparing the report, WSP has relied upon data, surveys, analyses, designs, plans and other information provided by the client and other individuals and organisations, most of which are referred to in the report (the data). Except as otherwise stated in the report, WSP has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report (conclusions) are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. WSP will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to WSP.

ENVIRONMENTAL CONCLUSIONS

In accordance with the scope of services, WSP has relied upon the data and has not conducted any environmental field monitoring or testing in the preparation of the report. The conclusions are based upon the data and visual observations and are therefore merely indicative of the environmental condition of the site at the time of preparing the report, including the presence or otherwise of contaminants or emissions.

Within the limitations imposed by the scope of services, the assessment of the site and preparation of this report have been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. No other warranty, expressed or implied, is made.

REPORT FOR BENEFIT OF CLIENT

The report has been prepared for the benefit of the client and no other party. WSP assumes no responsibility and will not be liable to any other person or organisation for or in relation to any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report (including without limitation matters arising from any negligent act or omission of WSP or for any loss or damage suffered by any other party in relying upon the matters dealt with or conclusions expressed in the report). Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own enquiries and obtain independent advice in relation to such matters.

OTHER LIMITATIONS

WSP will not be liable to update or revise the report to take into account any events, emergent circumstances or facts occurring or becoming apparent after the date of the report.

The scope of services did not include any assessment of the title to nor ownership of the properties, buildings and structures referred to in the report, nor the application or interpretation of laws in the jurisdiction in which those properties, buildings and structures are located.

APPENDIX A FIGURES







APPENDIX B IEMP NOTIFICATION REGISTER



B1 IEMP NOTIFICATION REGISTER

The purpose of the notification register is to acknowledge acceptance and compliance with the procedures outlined within this IEMP by signing the attached log. Copies of this document must be made available for review and be readily available at the job site.

The register is required to be completed by each person notified of the IEMP undertaking minor or major works at the site.

DATE	PERSON	COMPANY	TASK/JOB	SIGNATURE/ POSITION

Project No PS119057 Interim Environmental Management Plan Eastern validation area, Wentworthville Public School Grindley Construction Pty LTD

> WSP June 2021 Page B-1

APPENDIX C COMPLAINTS AND ENVIRONMENTAL INCIDENT REGISTER



C1 COMPLAINTS AND ENVIRONMENTAL INCIDENTS REGISTER

DATE	TIME	TYPE OF COMMUNICATI ON	NAME, ADDRESS CONTACT NUMBER OF COMPLAINANT	NATURE OF COMPLAINT	RESPONSE/ CORRECTIVE ACTION	DATE OF RESPONSE	DATE COMPLAINANT NOTIFIED OF RESPONSE TAKEN	SIGNATURE/ POSITION

Project No PS119057 Interim Environmental Management Plan Eastern validation area, Wentworthville Public School Grindley Construction Pty LTD

> WSP June 2021 Page C-1

APPENDIX D INSPECTION AND REVIEW CHECKLISTS



D1 INSPECTION CHECKLIST

WENTWORTHVILLE PUBLIC SCHOOL (WWPS), WENTWORTHVILLE NSW			
Date & Time of Inspection			
Name and Position of person(s) conducting the inspection			
GENERAL SITE INFORMATION			
Current Site Occupier			
Current Site Use			
SITE INSPECTION			
Are there any areas where the capping surfacing appears damaged / surfacing is not intact and geotextile is exposed??	 No Yes – provide details 		
Are there any areas where the capping walls appears damaged or are separating and geotextile is exposed?	 No Yes – provide details 		

SIGNATURE (INSPECTOR)	DATE	
SIGNATURE (YPS REPRESENTATIVE)	DATE	

D2 IEMP REVIEW REGISTER

The purpose of the review register is to document 12 month review and any other updates of this IEMP.

DATE	PERSON	SECTION	DESCRIPTION OF UPDATE	SITE CONTROLLER SIGN	SITE OWNER SIGN

APPENDIX E SURVEY AND AREAS UNDER MANAGEMENT





plot date: Tuesday, 7 April 2020 file location: BIM Server: sydbimsyd 21 - BIM Server 21/7097 WVPS_BUILDING G

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LEGEND w - west

Copyright

NE- NORTH EAST

S - SOUTH

А	For Information	16/10/2019	JFK
В	For Information - Door Hardware Selection	06/11/2019	LW
С	For Information - Wall Types	19/11/2019	LW
D	For Information - Corner Facade	3/12/2019	JFK
Е	For EFSG Review	11/12/2019	AK
F	For Information	11/02/2020	JFK
1	For Construction	10/03/2020	JFK
2	For Construction	7/04/2020	AK
REV.	DESCRIPTION	DATE	INIT.





2

AG-2001



SLAB EDGE REBATE LOCATIONS & DEPTHS

	K.S.	P.K.	11-06-21	
	K.S.	P.R.	25-08-20	
	K.S.	P.R.	01-07-20	
	S.K.	P.R.	18-06-20	
	S.K.	P.R.	31-01-20	
&	S.K.	P.R.	09-12-19	
D	S.K.	P.R.	25-11-19	
	S.K.	P.R.	18-10-19	
	DRAWN	DESIGNED	DATE	

NSW Department of Education

FULTON TROTTER ARCHITECTS

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Telephone +61 2 9417 8400 Facsimile +61 2 9417 8337 Email email@hhconsult.com.au Web

Project WENTWORTHVI 70 - 100 FULLAC BLOCK G - LEVE

www.henryandhymas.com.au henry&hymas

SLAB ON GROUND LEGEND:

++

+++ DENOTES SLAB THICKNESS

DENOTES LOCAL SLAB SETDOWN

DENOTES SLAB STEPDOWN

DENOTES 2-N12 TRIMMERS TOP x 1200 LONG

VJ DENOTES BLOCKWALL VERTICAL JOINT, REFER DETAILS

SLAB JOINTS DENOTED THUS:

'EL 1 SLAB PLAN SHEET 2	17788-S4.01			
Draw	Drawing number			Revision
GAR RD, WENTWORTHVILLE NSW	cked	Approved R.K.	Scale As indica	ated
/ILLE PUBLIC SCHOOL	vn .W.	Designed P.R.	Date 09/25/18	3

530	APPROX NORTH
	LEGEND:
er	SETOUT POINT PLACED GRID LINE PLACED OFFSET DIMENSION GRID LINES BOUNDARY DESIGN LINEWORK
,,,	© 2014 Geosurv Pty Ltd. This plan and any information contained within is and shall remain the property of Geosurv Pty Ltd. Any use of this plan or the information contained within, either in part or whole, except for ifs indexide purpose and without permission is deemed infingement of
	ooppinght. NOTES. 1. ALL MARKS PLACED ARE ACCURATE AND CORRECT AT DATE OF SURVEY. 2. IF MARKS ARE PLACED PRIOR TO STRESSING, GEOSURY TAKE NO RESPONSIBILITY FOR THE ACCURACY OF THOSE MARKS PLACED ONCE STRESSING HAS BEEN CARRIED OUT.
	3. CONSTRUCTION WORKS MUST BE RELATED TO THE BENCHMARK ONLY AND NOT LEVELS OF STRUCTURES SHOWN ON THIS PLAN.
	MAINTAIN THE INTEGRITY OF MARKS TO BE USED BY CONTRACTORS PRIOR TO USE. 5. THIS SURVEY IS FOR SETOUT PURPOSES ONLY AND
	SHOULD NOT BE USED FOR ANY OTHER PURPOSE 6. PLAN HAS BEEN PRODUCED AS A PRIORITY AS PER BUILDERS REQUEST. FOR CLARITY OF THE OFFSET MARKS SHOWN PLEASE ENLARGE SECTION OF THE PLAN WHEN PRINTING. SEEK CLARIFICATION FROM GEOSURV IF UNSURE OF THE OFFSET OR THE DIRECTION OF THE OFFSET TO THE LOCATION OF THE MARK PLACED
	PLANS USED FOR SETOUT: L1_Slab AG-2403 Rev 3
	01 03/06/2021 HEIGHTS ADDED REV. DATE AMENDMENTS
	CONSULTION OF THE PREPARED BY: CONSULTING SURVEYORS, planners & engineers CECSURV PTY LTD ABN 99 121 987 004 WWW.geosurv.com.au CECSURV COMMENT WWW.geosurv.com.au CECSURV COMMENT COMME
	GRINDLEY
	PLAN: RET WALL AB LEVEL 1 SOUTH WENTWORTHVILLE SCHOOL WENTWORTHVILLE
	ORIGINAL SIZE: A1 scale: co-ord:
	DATUM: AHD ORIG DATUM: NA DATE OF SURVEY: 2020-08-17 DATE OF PLAN: 2021-08-03
	SURVEY BY: JONATHAN C. DRAWN BY: JONATHAN C. CHECKED BY: JONATHAN C. DATE: 2020-08-17 APPROVED BY: JONATHAN C. DATE: 2020-08-17
OOL (GRINDLEY))09. SITE VISITS'2020-08-17 JC (PLANTER BOX + WALL VOLUME	PREVENTION OF THE 2021-06-03