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Integrated Practical Solutions

Environmental Management Plan

Proposed High School
Stages 1 and 2, Picton High School,
480 Argyle Street, Picton, NSW

Prepared for
Taylor Construction Group Pty Ltd

Project 92254.08
April 2021

Douglas Partners
Geotechnics / Environment / Groundwater

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The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

	Signature	Date
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Reviewer	pp for DW	16 April 2021

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Table of Contents

Page

Report on Environmental Management Plan
Stages 1 and 2, Picton High School, 480 Argyle Street, Picton, NSW

1. Introduction

This report presents the environmental management plan (EMP) prepared for Stages 1 and 2 of the Picton High School redevelopment at 480 Argyle Street, Picton (the Site). The report was commissioned by Taylor Construction Group Pty Ltd on behalf of the Department of Education. The redevelopment of the site is divided into three stages (Stages 1 to 3) with the boundaries shown on Drawing 1, Appendix A.

The objective of this EMP is to detail the long-term control measures to aid in the management of the contamination risks associated with potential asbestos containing materials (ACM) impacted fill at the site to protect human health and the environment.

This EMP does not include Stage 3 of the redevelopment of Picton High School which requires further assessment upon completion of Stages 1 and 2. If further assessment of Stage 3 identifies the requirement for additional management, further revision to this EMP can be made to include these requirements.

2. Site Identification

Site Address	Stages 1 and 2, Picton High School, 480 Argyle Street, Picton, NSW
Legal Description	Lot 2 Deposited Plan 520158
Area	Stages 1 and 2 – 3.23 ha Stage 3 – 2.54 ha Total – 5.77 ha
Zoning	Zone R2 Low Density Residential
Local Council Area	Wollondilly Shire Council
Current Use	Secondary School
Surrounding Uses	North – Residential East – Recreational/Industrial South – Rural Residential/Commercial West – Rural Residential/Commercial

The current site layout for Stages 1 and 2 comprises a mixture of newly constructed and existing buildings along with various hardstand, soft fall and landscaped areas. The general site layout is shown on Drawing 1, Appendix A.

A survey plan (provided by Taylors and prepared by Total Surveying Solutions Pty Ltd) showing the site boundary pertaining to this EMP is also provided in Appendix A.

The stage and site boundaries are shown on Figure 1, following page.

Figure 1: Site Location

3. Previous Reports

The following relevant reports were prepared by DP for the Picton High School site:

- DP *Report on Phase 1 Contamination Assessment, Picton High School Proposed Metals Fabrication Trade School, Argyle Street, Picton.* Ref 34252.01 Rev 1 dated August 2010 ('the PCA').
- DP *Report on Preliminary Site Investigation with limited sampling – Picton High School Redevelopment, Picton High School, Picton, NSW,* Ref.34252.02.R.002.Rev0, dated 11 April 2017 ("the PSI").
- DP *Report on Additional Contamination Investigation – Picton High School Redevelopment, Picton High School, Picton, NSW,* Ref.92254.00.R.001.Rev0, dated 12 February 2018 ("the ACI").
- DP *Report on In Situ Waste Classification Assessment, Proposed High School, 480 Argyle Street. Picton,* Ref: 92254.01.R.001.Rev1, dated 21 June 2019 ("the waste classification").
- DP *Report on Building Footprint Contamination Investigation, Proposed High School Redevelopment, 480 Argyle Street. Picton,* Ref: 92254.01.R.002.Rev0, dated 22 November 2019 ("the BFI").
- DP Report on Stockpile Waste Classification, Proposed High School, 480 Argyle Street, Picton, Project 92254.07.R.001 and dated 5 March 2021 (DP,2021A).

- DP Report on Stockpile Waste Classification, Proposed High School, 480 Argyle Street, Picton, Project 92254.07.R.002 and dated 19 March 2021 (DP,2021B).
- DP Report on Contamination Summary Letter, Proposed High School, 480 Argyle Street, Picton, Project 92254.07.R.001.Rev0 and dated 19 March 2021 (DP,2021C).
- DP Report on Response to Auditor Comments, Proposed High School, 480 Argyle Street, Picton, Project 92254.07.R.002.Rev0 and dated 29 March 2021 (DP,2021D).
- DP Report on *Data Gap Assessment, Proposed High School, Stages 1 and 2 Picton High School, 480 Argyle Street, Picton,* Project 92254.07.R.003.Rev1 and dated 14 April 2021 (DP,2021E).
- DP Report on *Northern Fill Area Investigation Summary, Proposed High School, Stages 1 and 2 Picton High School, 480 Argyle Street, Picton,* Project 92254.07.R.007.Rev1 dated 15 April 2021 (DP,2021F).

In addition to the above, numerous inspection memoranda were prepared detailing the observations made by DP during the excavation works completed between 20 June and 25 July, 24 September to 30 October 2019 and the 21 and 27 November 2019, 4, 16, 17 December 2019 and 7, 8 15, 16, 20 and 31 January 2020 as required by the DP waste classification.

DP has not been made aware of any other contamination investigation reports prepared for the site.

Based on the results of the above investigations the extent of possible contamination still present at the site is described in Section 4.

4. Nature and Extent of Contamination

4.1 Existing Building Footprints and Hardstands

The existing buildings and hardstand areas will require investigation by a suitably qualified environmental consultant following any future demolition of structures or removal of hardstand to confirm the contamination status of the underlying materials.

The existing building footprints and existing hardstand areas pertaining to this EMP are shown on Drawing 1, Appendix A.

For the purposes of this EMP, it is recommended that the building footprint and hardstand areas, as a precautionary approach, be treated as being constructed on fill which is potentially impacted with metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn), Organochlorine pesticides (OCP), Organophosphorus pesticides (OPP), Polychlorinated biphenyls (PCB) and asbestos (the primary contaminants of concern for building footprints) unless otherwise confirmed. As no investigations have been completed for these footprints, the selected COPC have been based on DP's experience with previous investigations of building footprints and due to the possible use of pesticides (for possible termite treatment etc).

Upon exposure of the underlying soil/fill, it is recommended that the exposed area be inspected by a qualified Environmental Consultant to determine if contaminated soils are present. An appropriate sampling programme must be determined prior to the commencement of works for the subject works area.

If no contaminated soils are present, then no management controls will be required. If contaminated soils are identified (or until such time that their absence is confirmed) the protocols in Section 6 should be adopted.

4.2 Northern Fill Area

Fill within the northern portion of the site (with location shown on Drawing 1, Appendix A) was observed to comprised trace to some anthropogenic materials including building demolition waste and asbestos containing material (ACM) fragments at depth (i.e. a single location where ACM was observed in DP(2021F) which was identified within a fill layer observed at a depth >0.6 m bgl) . The vertical extent of fill could not be determined in DP(2021F) due to early refusal / pit termination as a result of site access constraints and identified services.

In addition, a number of asbestos finds were also identified within this area during excavation and construction works, for which a visual clearance of exposed surface soils was completed.

The lateral extent of this area (as shown on Drawing 1, Appendix A) is based on the following:

- Northern Extent – Site Boundary;
- Eastern Extent – Stage Boundary (fill may extend beyond the Stage boundary but will need to be confirmed as part of future Stage 3 works);
- South – Existing buildings and previous excavation works (i.e. fill was removed under DP full time inspections); and
- West – Existing buildings and DP observations, however, further fill to the west is to be addressed as per Section 4.5.

As per the current development, hard stand now covers the western portion of the northern fill area with a carpark and road constructed. In addition, a new building has also been constructed within the northern fill area between the two existing buildings. The balance of the northern fill area comprised landscaped areas and boardwalks. The above site features are shown on Drawing 1, Appendix A.

For the purposes of this EMP, this area of the site comprises fill which is impacted with ACM. If excavation works are required to be undertaken within this area of the site, the protocols in Section 6 should be adopted.

4.3 Areas of Retained ACM

During construction works, ACM was retained on site in two locations, the first under and adjacent to an existing building, and the second was an in-situ pipe which was removed up to the Stage 3 boundary.

The approximate locations of the retained ACM are shown on Drawing 1, Appendix A.

The ACM retained within central portion of the site, comprised ACM pipes (redundant service pipes) which were concrete encased, below existing ground level.

The ACM retained along the southern boundary, was excavated to the most practicable extent (i.e. to the Stage boundary and it is understood that excavation of this ACM pipe will continue as part of the Stage 3 works.

For the purposes of this EMP, these areas of the site should be treated as comprising fill which is impacted with ACM. It is recommended that if excavation works are required within these identified areas of the site, the protocols in Section 6 should be adopted.

4.4 Previous ACM Find Areas

During the course of construction works for the Stage 1 and 2 redevelopment, ACM finds were identified and a clearance was provided based on visual assessment only. As such, there is a potential for further underlying fill within these areas to also be potentially impacted with ACM.

The location of these finds (excluding those which were located within the Northern Fill Area), are shown on Drawing 1, Appendix A.

For the northern ACM find location (refer Drawing 1, Appendix A), this find was identified in an area of the site where fill was not excavated under inspection by DP and the extent of the find is bound to the north and east by the existing buildings and to the south and west to where natural material have been observed by DP. Since identifying the find, this area of the site has had a building constructed over the bulk of the area, with the balance comprising hardstand and landscaping.

For the southern ACM find location (refer Drawing 1, Appendix A), this find was identified in an area of the site where fill was not excavated under inspection by DP and remains in-situ. The lateral extent of the find is bound to the north to where natural material had been observed by DP, to the south and west by existing buildings and hardstands and to the east by further fill which is addressed in Section 4.5. Since identifying the find, this area of the site was subsequently paved and now comprises hardstand and landscaping.

For the purposes of this EMP and as a precautionary approach, these areas of the site are to be treated as comprising fill which is impacted with ACM, unless otherwise confirmed.

It is recommended that if excavation works are required within these areas of the site the management procedures outlined herein should be adopted.

Upon exposing of the underlying soil, it is recommended that the exposed area be inspected by a qualified Environmental Consultant to determine if contaminated soils are present. An appropriate sampling programme for the works area must be determined prior to the commencement of works.

If no contaminated soils are present, then no management controls will be required. If asbestos contaminated soils are identified (or until such time that the absence of asbestos confirmed) the protocols in Section 6 should be adopted.

Alternatively, materials within these areas can be assumed to be ACM impacted and works can proceed without the need for inspection or investigation by a qualified Environmental Consultant being completed, by following the protocols in Section 6.

4.5 Balance of Remaining Fill

For the balance of the remaining fill still present on the site which was not excavated as part of the current development under full time inspections by DP (i.e. along the eastern, southern and western boundaries of the site and excluding those areas discussed in Section 4.1 to Section 4.4), these areas are considered suitable for the intended land use. However, due to the limited density of testing completed and as a precautionary approach, these areas have also been included within the EMP, however as they are considered suitable no covering requirements are considered required.

These areas of the site are shown on Drawing 1, Appendix A.

It is recommended that if excavation works are required within these areas of the site, the management procedures outlined herein should be adopted.

Upon exposing of the underlying soil, it is recommended that the exposed area should be inspected by a qualified Environmental Consultant to determine if contaminated soils are likely to be present. An appropriate sampling programme for the works area must be determined prior to the commencement of works.

If no contaminated soils are present, then no management controls will be required. If asbestos contaminated soils are identified (or until such time that the absence of asbestos confirmed) the protocols in Section 6 should be adopted.

Alternatively, materials within these areas can be assumed to be ACM impacted and works can proceed without the need for inspection or investigation by a qualified Environmental Consultant being completed, by following the protocols in Section 6.

5. Responsibilities

The Department of Education (DoE) is responsible for maintenance and implementation of the EMP. DoE via the DoE Asset Management Unit is responsible for:

- Overall implementation of the EMP;
- Appointing an EMP Officer;
- Maintaining a copy of the EMP in head office with the Asset Management Unit;
- Appointing an Environmental Consultant at the outset for any intrusive works to advise on methodologies and ensure contaminated fill is appropriately managed/disposed;
- Ensuring that appropriate financial mechanisms are in place to fund its implementation and work procedures described in this EMP; and
- Audit implementation of the EMP.

EMP Officer should be responsible for:

- Inspecting and maintaining the inspection and works register;
- Inducting relevant staff/contractors who may conduct intrusive works into the requirements of the EMP;
- Ensuring that contractors are 'aware' of contaminated fill and EMP requirements, have prepared a Safe Work Method Statements (SWMS), WHS and undertaken an induction and have a permit to work as per the DoE Asbestos Management Plan (refer Section 6);
- Review of SWMS/WHS and provision of inductions;
- Complete inspection registers;
- Ensure that works registers are completed by contractors;
- Review and update EMP; and
- Review DoE AMP.

Contractors should:

- Prepare SWMS/WHS relevant to the tasks being undertaken;
- Attend any inductions required;
- Report any signs of contamination to EMP Officer; and
- Complete works register.

Environmental Consultant should:

- Inspect and assess areas of the site where future excavation works are required within management areas and provide recommendation (where required);
- Review and revise EMP (where required); and
- Undertake initial induction to EMP officer.

Consent Authority

- To ensure the EMP is on file for the site and reference is provided in future Section 10.7 certificates; and
- Consider the EMP during assessment of future development consents.

The DoE can delegate the implementation of the EMP to a nominated person on staff. The nominated person is to be aware of the areas pertaining to this EMP; and any issues arising from inspection and maintenance. The nominated person is to ensure that the contaminated works activity register is kept up to date. The contaminated works activity register is to be kept with a copy of this EMP.

Those responsible for implementation of this EMP must be inducted into the EMP and a record of the inductions maintained with the EMP. The initial induction of the EMP Officer must be undertaken by a suitably qualified Environmental Consultant and recorded in the Person Responsible Register in Appendix B. Subsequent staff inductions into the EMP may be undertaken by the EMP Officer. Records of inductions into the EMP must be maintained.

All people working on the site should be inducted into this EMP and records of the induction maintained.

Any alterations or revisions to the EMP must be conducted by a suitably qualified contaminated land consultant.

6. Management Procedures

All works completed within areas which are considered to have ACM within fill must be completed with reference to the procedures detailed within this EMP and also with reference to any additional requirements within the DoE Asbestos Management Plan (AMP) which can be located on the Schools Infrastructure Website. Particular reference should be made to Sections 5 and 7 of the AMP with any additional management requirements detailed within the AMP be undertaken in addition to what is provided within this EMP.

6.1 Procedures for Works within ACM Impacted Fill

All contractors undertaking works that may potentially expose asbestos contaminated soils (i.e. bulk excavations, service replacement and installation, maintenance, landscaping etc) within the areas subject to this EMP, must be made aware of the presence of ACM. When conducting works within these areas, the following procedures should be adopted:

1. Notify the appointed environmental consultant prior to commencement of works and remove all employees not required for the works (including all students) from the immediate area of the proposed works.
2. Obtain an approved permit to work as per the requirements of the AMP;
3. Prior to commencement of work, the works area should be barricaded to restrict entry of unauthorised personnel to the works area and to control contamination.
4. Placement of an adequate number of indelibly labelled warning signs at the boundary of the area of asbestos removal works, which comply with AS 1319 *Safety Signs for Occupational Environment.*
5. Prohibit access to all personnel unless wearing PPE that is appropriate for protection against airborne asbestos fibres. Appropriate PPE is listed in Section 6.3.

The following procedure should be adopted for handling asbestos contaminated soils:

- If asbestos contaminated soils are stockpiled on site, then the stockpiles should be placed on plastic lining, geotextile fabric or hardstand surfaces (e.g. bitumen/concrete) to avoid cross contamination of underlying soils;
- Suspected contaminated soil should be appropriately lightly wetted at all times (without generating leachate);

- All soils should be reused on site, where possible and subject to the advice of the environmental consultant. However, if disposal of asbestos contaminated soil is required, the spoil must be assessed prior to disposal in accordance with the appropriate guidelines;
- In the event that off-site disposal is required, during transport, all asbestos waste should be placed in a sealed truck, with appropriate cover, then transported to an NSW EPA licensed disposal facility;
- Decontaminate all trucks that are used to transport asbestos contaminated soil before leaving the worksite and after disposing of the contaminated soil at the disposal facility;
- In dry and windy conditions stockpiled soil should be lightly wetted and covered with plastic sheeting or geotextile fabric whilst awaiting disposal;
- All work associated with asbestos in soil must be undertaken by a Class B SafeWork NSW licenced contractor at a minimum. WorkCover must be notified 7 days in advance of any asbestos works;
- Asbestos fibre monitoring must be undertaken during excavation of the material in accordance with Section 6.4;
- Any future service trenches excavated through the contaminated filling should be lined with a suitable marker fabric layer and backfilled with VENM. The contaminated material should be disposed of off-site to a suitably licenced facility; and
- All disturbances of the contaminated soil and details of any material disposed off-site are to be recorded in the Contamination Related Works Activity Register (Appendix D).

6.2 Classification and Disposal of Contaminated Soils

All soils requiring off-site disposal must be classified in accordance with the NSW EPA *Waste Classification Guidelines* 2014 (NSW EPA 2014) or as amended.

If contaminated soil is classified for off-site disposal ,the following procedure should be followed (unless the NSW EPA (2014) requirements are altered, in which case the latest guidelines should be referenced):

- The material in question should be stockpiled and placed on a hardstand surface, plastic lining or geotextile fabric to prevent cross-contamination;
- The stockpile/s for classification should not exceed 500 m^3 each;
- The stockpile/s should be carefully inspected by a Site Environmental Management Consultant (or qualified Environmental Consultant) including test pitting into the interior of the stockpile;
- The stockpile should be covered with a plastic sheeting or geotextile fabric to limit potential dust and fibre generation;
- Asbestos fibre monitoring must be undertaken during excavation and loading of the material in accordance with Section 6.4;
- Waste classification samples should be collected and analysed at a NATA accredited laboratory for the following contaminants (followed by the preparation of a waste classification assessment report);
    - 1 sample per 50 m^3 for asbestos; and
    - 3 samples per 500 m^3 for heavy metals, total petroleum hydrocarbons, polycyclic aromatic hydrocarbons, benzene, toluene, ethyl benzene, xylenes, organochlorine pesticides, polychlorinated biphenyl and phenols (or at least three samples per stockpile).

6.3 Personnel Protective Equipment

Excavation works conducted within locations where potential ACM or ACM impacted fill is present must be undertaken by an appropriately licensed contractor meeting the current NSW Work Health and Safety (WHS) and SafeWork requirements. All contractors are required to show compliance with the Work Health and Safety Act (2011), including the preparation of a Site Safety Management Plan and Safe Work Method Statements.

When working in the vicinity of suspected or proven ACM, personnel must wear the following appropriate PPE at all times:

- Steel-capped boots;
- Safety glasses or safety goggles with side shields meeting AS1337-1992 requirements (as necessary, particularly during demolition);
- Hard hat meeting AS1801-1981 requirements;
- Disposable coveralls (high visibility if possible);
- Disposable high visibility vest (if available with disposable coveralls);
- Disposable gloves; and
- A minimum P2 grade dust mask or similar.

All work should be undertaken with due regard to the minimisation of environmental effects and to meet all statutory requirements and as such that work on the site complies with the requirements of the following Acts and Codes of Practice:

- *Work Health and Safety Act* (2011);
- *Work Health and Safety Regulation* (2011);
- *Environmentally Hazardous Chemicals Act* (1985);
- *OHS Amendment (Dangerous Goods) Act* (2003) and the supporting *OHS Amendment (Dangerous Goods) Regulation* 2005;
- *Protection of the Environment Operations Act* (1997);
- *Protection of the Environment Operations (Waste) Regulation* (1996);
- *Code of Practice : How to Safely Remove Asbestos* (Safe Work Australia, 2011);
- *Code of Practice: How to Manage and Control Asbestos in the Workplace* (Safe Work Australia, 2011); and
- *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibre*, 2nd Edition [NOHSC: 3003 (2005)].

6.4 Asbestos Fibre Monitoring

It is recommended that during all excavation works within ACM impacted fill, asbestos fibre monitoring should be undertaken. Control monitoring comprises measuring airborne respirable fibre levels by an occupational hygienist (to be engaged the contractor) and comparing them with the action levels shown in Table 2. If these levels are exceeded, action should be taken to re-evaluate controls.

Table 2: Allowable Levels of Asbestos Fibres in Air

Action Level (airborne asbestos fibres/ml)	Action
Less than 0.01	Continue with control measures
Between 0.01 and 0.02	Review Control Measures
More than 0.02	Stop removal and identify the cause with appropriate rectification action

Code of Practice for the Safe Removal of Asbestos [NOHSC:2002 (2005)]

6.5 Imported Fill

The importation of fill material on-site (such that may be required to raise site levels or backfill trenches) should not cause additional contamination to the site and therefore all material imported to the site should be suitable for the proposed site use. The following table provides the procedures for the importation of fill to the site.

Table 3: Control Measures for the Importation of Filling

Item	Control Measures
1	Each truck load of imported fill must be recorded
2	No fill shall be accepted on-site without copies of appropriate paperwork indicating the source and nature of the filling first being submitted to the Site Environmental Consultant for approval. The paperwork should be prepared by a suitably qualified consultant and indicate if the material can legally be accepted at the site (e.g. VENM as defined under the POEO Regulation) and that the material is suitable for the proposed site use and poses no unacceptable risks to site users and the environment. No contaminated or waste material (excluding waste materials meeting the relevant Resource Recovery Exemption requirements for reuse under the POEO Act) is to be imported to the site. All requirements of the NSW EPA and Council will need to be met for all filling materials imported onto the site.
3	All imported filling is to be geotechnically suitable for its proposed use and placement of fill should be supervised for geotechnical purposes. All fill must be placed and compacted in accordance with the requirements of Australian Standards. No fill shall be imported to the site prior to receipt of a written approval from the Site Owner (or respective representative). All fill sources other than quarry products must be inspected and approved by the Site Environmental Consultant prior to the issuing of an approval. All chemical and geotechnical sampling and test data must be reviewed and approved by the Site Environmental Consultant prior to the issuing of an approval.
4	Fill locations should be recorded and be able to be linked with the documentation submitted upon entering the site.
5	Any fill that is imported to the site and does not meet these control measures shall be removed from the site and a record maintained of its ultimate fate and replaced with suitable material.

7. Regular Site Inspections

Regular inspections are required to be completed by a suitability competent person on a regular basis (approximately 3 monthly as per the requirements of the AMP) of surface soils within the areas pertaining to this EMP (refer Section 4) to ensure that no ACM has breached the surface. Inspections will require to include observations and recording of signs of soil disturbance and any other changes to the site that have the potential to disturb ACM impacted filling.

Dates of site inspections, any Environmental Observations and actions taken to resolve issues are to be recorded on the site inspection register included in Appendix F.

In the event that the site inspection identifies ACM, the procedures set out in Section 10 will need to be considered.

8. Enforcement and Public Notification of this EMP

All operations and activities conducted on the site must fully comply with the provisions of relevant NSW environmental legislation and occupational health and safety (OH&S) legislation, as well as any further requirements imposed by the relevant authorities, e.g. NSW EPA under *the Contaminated Land Management Act*, 1997, *Occupational Health and Safety Act*, 2000, *Working with Asbestos*, WorkCover 2008, and the *Protection of the Environment Operations Act*, 1997 and the associated Regulations.

This EMP has been prepared so that it may be legally enforceable by the planning authority. This EMP may be used to provide public notification via the planning certificate issued under section 10.7 of the *Environmental Planning and Assessment Act 1979* or a covenant registered on the title to the land under section 88B of the *Conveyancing Act 1919*.

It is recommended that notification and enforcement via the above mechanisms be undertaken following the completion of the final EMP.

The EMP applies whilst the fill which is potentially asbestos impacted and retained ACM remain within the areas subject to this EMP. The final EMP should be cross-referenced in the appropriate school and DoE management plans.

9. Revisions to this EMP

Revisions to this EMP may be made by a suitably qualified environmental consultant as required.

The EMP officer must review the EMP on an annual basis to identify areas that require updating and confirm that procedures and management procedures are operating effectively and are being adhered to.

10. Contingency Plan

If asbestos contaminated fill is exposed at any time without the prior preparation and implementation of relevant management procedures or works specific Environmental Control Plan, access to the area must be immediately restricted by the EMP Officer, the affected area delineated and cordoned off through placement of barriers or other appropriate means. The breach should be rectified as soon as possible and in accordance with the provisions as outlined in Section 6 of this EMP and Section 8 of the AMP.

Any breach must be recorded in an individual incident report form (refer to Appendix E) as should the cause of the incident (to prevent reoccurrence) and copies of the incident report kept on file by the EMP Officer.

Following the identification of the incident, a corrective action request should be prepared by the EMP Officer to rectify the incident and signed off following the completion of any rectification works.

11. Conclusions and Recommendations

DP considers that the implementation of the procedures outlined within this EMP are suitable for the ongoing management of fill potentially impacted with ACM fragments at the site and to appropriately manage potential impacts on human health and the environment.

Given that friable asbestos has not previously been identified at the site, the EMP does not include procedures related to the removal of friable asbestos. In the event that friable asbestos is identified during future works, the EMP will require amendment and additional procedures will require implementation.

12. Limitations

Douglas Partners Pty Ltd (DP) has prepared this report for this project at Picton High School, 480 Argyle Street, Picton, NSW in accordance with DP's proposal P092254.08.P.001.Rev0 dated 5 March 2021 and acceptance received from Simon Chow dated 8 April 2021. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of Taylor Construction Group Pty Ltd for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

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

The assessment of atypical safety hazards arising from this advice is restricted to the environmental components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

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

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

Douglas Partners Pty Ltd

Appendix A

Drawings 1 and 2

Survey Plan

Legend

- Site Boundary
- Stages 1 and 2 (As per Survey Provided by Taylors on 13 April 2021)
- ACM Impacted Fill Area
- Existing Building Footprints and Hardstand Areas
- Approximate Location where ACM Retained
- Approximate Location of ACM Find in Fill
- Approximate location of fill which was not excavated and inspected by DP during bulk excavation works

0 20 40 60 80 100 m

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TITLE: **Site Boundary and Areas Requiring Management**
Environmental Management Plan
Stages 1 and 2, Picton High School, 480 Argyle Street, Picton NSW

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MGA

CLIENT: Taylor Construction Group	PROJECT No.: 92254.08	SCALE: As shown	DRAWING No: 1
OFFICE: Macarthur	DRAWN BY: BAH	DATE: 14.04.2021	REVISION: 0

Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Site Boundary and Areas Requiring Management**
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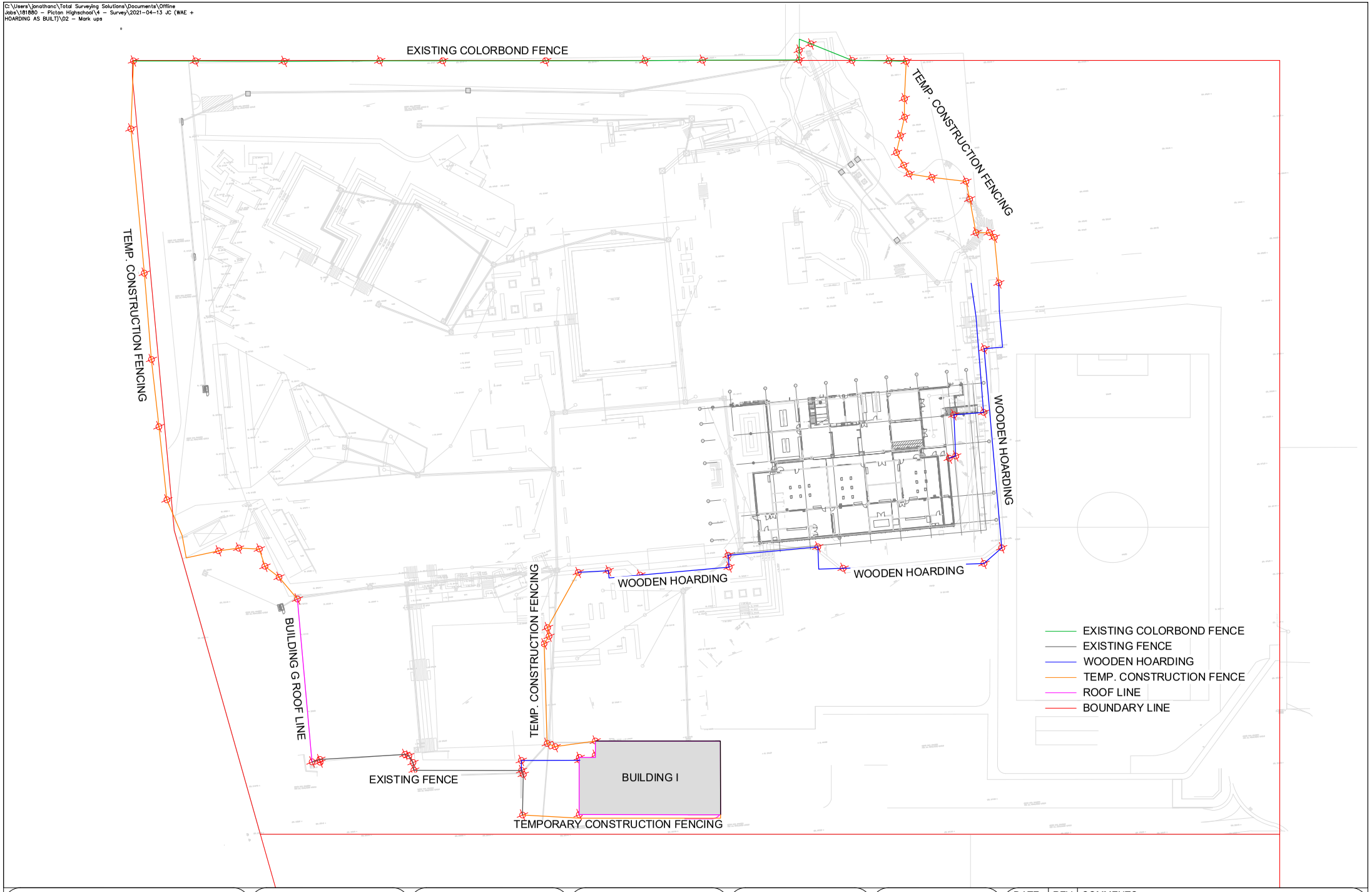
CLIENT: Taylor Construction Group	PROJECT No.: 92254.08	SCALE: As shown	DRAWING No: 2
OFFICE: Macarthur	DRAWN BY: BAH	DATE: 6.04.2021	REVISION: 0

C:\Users\jonathanc\Total Surveying Solutions\Documents\Offline Jobs\181880 - Picton Highschool\4 - Survey\2021-04-13 JC (WAE + HOARDING AS BUILT)\02 - Mark ups



TSS TOTAL SURVEYING SOLUTIONS
ARTARMON | CAMDEN | MANLY VALE

DRAWING TITLE
HOARDING & FENCES AS BUILT

CLIENT: TAYLOR
PROJECT: PICTON H.S ALL SITE
181880

TAYLOR

PLAN No.: 181880.9048
DATE: 13.04.21 SCALE:
DRAWN: Jonathan C.
CHK:
CONT. INT.: Cont

DATUM: AHD
ORIGIN
MGA Y

DATE	REV	COMMENTS
13.04.21	1	Existing hoarding and fence as built

Appendix B

Persons Responsible Register

Douglas Partners Pty Ltd
ABN 75 053 980 117
www.douglaspartners.com.au
18 Waler Crescent
Smeaton Grange NSW 2567
Phone (02) 4647 0075

Person Responsible Register

Picton High School, Picton, NSW

Date	Name	Company / Organisation	Position	Phone Number	Signature

Appendix C

Induction Register and Form

Douglas Partners Pty Ltd
ABN 75 053 980 117
www.douglaspartners.com.au
18 Waler Crescent
Smeaton Grange NSW 2567
Phone (02) 4647 0075

Induction Register

Picton High School, Picton, NSW

Date Inducted	Inductee			Inducted By	
	Inductee Name	Company / Organisation	Company Contact Details	Phone Number	Signature

Appendix D

Contaminated Related Works Activity Register

Douglas Partners Pty Ltd
ABN 75 053 980 117
www.douglaspartners.com.au
18 Waler Crescent
Smeaton Grange NSW 2567
Phone (02) 4647 0075

Contamination Related Works Activity Register

Picton High School, Picton

Date	Contamination Related Works	Location on site	Actions taken to manage impacted fill	Approved by

Appendix E

Complaints and Incidents Register
Environmental Incident Report Form

Douglas Partners Pty Ltd
ABN 75 053 980 117
www.douglaspartners.com.au
18 Waler Crescent
Smeaton Grange NSW 2567
Phone (02) 4647 0075

Complaints and Environmental Incidents Register

Picton High School, Picton, NSW

Date	Complaint / Environmental Incident	Location on Site	Actions Taken to Resolve	Person Involved

ENVIRONMENTAL INCIDENT REPORT FORM

Date:	Time:

PART A			
Type of Incident		*Severity of Incident*	
Hazardous Material	☐	Breach of Development Conditions	☐
Contaminated Water Discharge	☐		
Soil erosion	☐	Breach of Environmental Offences & Penalties Act	☐
Dust emissions	☐		
Noise	☐	Minor pollution event	☐
Other	☐		

PART B	
Description and Cause of Incident:	
Reported By:	Date:

PART C	
Remedial Action Required:	
Approved By:	Date:

Appendix F

Site Inspection Register

Douglas Partners Pty Ltd
ABN 75 053 980 117
www.douglaspartners.com.au
18 Waler Crescent
Smeaton Grange NSW 2567
Phone (02) 4647 0075

Site Inspection Register

Picton High School, Picton, NSW

Date / Inspector	Environmental Observations / Disturbance to Sites Soils or Management Measures	Location on Site	Actions Taken to Resolve	Person Involved

Appendix G

Notes About this Report

About this Report

Douglas Partners

Introduction

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

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

Copyright

Borehole and Test Pit Logs

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

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

Groundwater

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

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

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

Reports

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

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

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

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

About this Report

Site Anomalies

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

Information for Contractual Purposes

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

Site Inspection

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