

Tuesday 17th May 2016

DL3701_S004533

Mr Dominic Chidgey
Assistant Project Manager – Residential
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000

Dear Sir,

Re: Review of Site History and Site Inspection – Altrove Stages 2-6, Lot 4 DP1191977, Schofields, NSW, 2762.

DLA Environmental Services (DLA) was requested by Mr Dominic Chidgey of Stockland's to prepare a review of the site history and carry out a site inspection to identify locations where there is a potential for unidentified contamination at the Site identified as:

Altrove Stages 2-6, Lot 4 DP1191977, Schofields, NSW, 2762 (the Site).

DLA have conducted this Site Inspection as required in the development application consent (DA12-1948) for Site Contamination matters. Contamination Issues conditions in Section 6.4 of the DA consent requires testing to be undertaken for demolished buildings, structures, paved areas and under any stockpiles or rubbish dumping. The conditions also allow for the provision of a Remediation Action Plan as required.

DLA have reviewed all available environmental assessments to determine any potential Areas of Environmental Concern (AECs) and relevant information including historical aerial photographs and recent satellite imagery currently available using NearMaps.com.

The report *Preliminary Contamination, Salinity and Geotechnical Assessment Report Schofields Precinct – North West Growth Centre, Lot 200 in DP 1140580 & Lot B in DP 388652, Bridge Street, Schofields* by GeoEnviro Consultancy Pty Ltd (September 2012) predates the current environmental criteria for Residential A as defined within NEPM 2013. Therefore, a review was conducted to identify any areas of potential environmental concern and also to determine if any changes in the updated

NEPM impacted on the outcomes or conclusions of the report. All samples recorded detection of heavy metals; however the majority of the detections are indicative of natural background concentrations. No samples analysed exceeded the Site acceptance criteria based upon NEPM 2013 Residential A with Garden/Accessible soils.

Aerial photographs for Penrith at 1:25,000 were reviewed from 1955 to 2005. A total of six photos were reviewed at approximately 10 year intervals. More recent satellite imagery available from October 2009 to February 2016 were also reviewed. The imagery from Nearmaps.com in July 2014 identified PAEC 2 which was a temporary construction site believed to be related to sewer works. PAEC 4 was also visible on the July 2014 as the temporary access road was related to the construction works in PAEC 2. The review of aerial photographs of the Site area indicates no observable changes have occurred within Stages 2-6 that indicate that the previous soil chemical results would not be applicable.

The Site was formerly a dairy farm, with no structures located within the area of investigation. The Site consists of rolling hills and gentle slopes which has remained as grassy pasture. There were no contaminating activities which could be identified from past land use within the Stages 2-6 subdivision area.

Based upon the review of the aerial photographs and satellite imagery, DLA conducted an extensive walk over of the Site and photographed any PAEC. During the Site inspection DLA identified four areas of PAC.

- o PAEC 1 included a rusty vehicle within the Site and a recently abandoned vehicle in Eastern Creek adjoining the south-west corner of the Site.
- o PAEC 2 was a former construction compound associated with sewer installation in July 2014 located in the south east corner of the Site.
- o PAEC 3 included the existing drainage line and dams which may contain fill materials, although only concrete blocks were observed near the dam walls.
- o PAEC 4 includes a small part of Stages 2-6 and extends into Stages 7 & 8. This area consists of a former construction road which has been filled and contains traces of brick, concrete and tiles at the surface. The road extended from the north east of the Site to the sewer construction yard identified at PAEC 2.

Refer to **Appendix A** – Photographic Gallery and **Figure 2** – Site Inspection and PAECs – Altrove Stages 2-6.

The whole of Stages 2-6 have been visually inspected for signs of contamination activities with none being found over the whole area. DLA have identified four areas which are considered to have only minor potential for contamination and as no signs of odours or staining which would indicate any contaminants of concern. Traces of building rubble in the road fill materials has the potential to contain other foreign materials. These areas do not require further testing as defined in the DA 12-1948 for Site Contamination and there is no requirement for a Remediation Action Plan.

It is recommended that during future development works that an Unexpected Finds Protocol be used to identify any form finds which could be a source of contamination such as building materials, asbestos containing materials or any other buried materials.

Refer to **Appendix B** – Unexpected Finds Protocol.

It is therefore concluded that the assessed Stages 2-6 is suitable for the intended land use without risk to human health or the environment generally and is compliant with the Residential A with Garden/Accessible Soils land use criteria as defined in NEPM 2013.

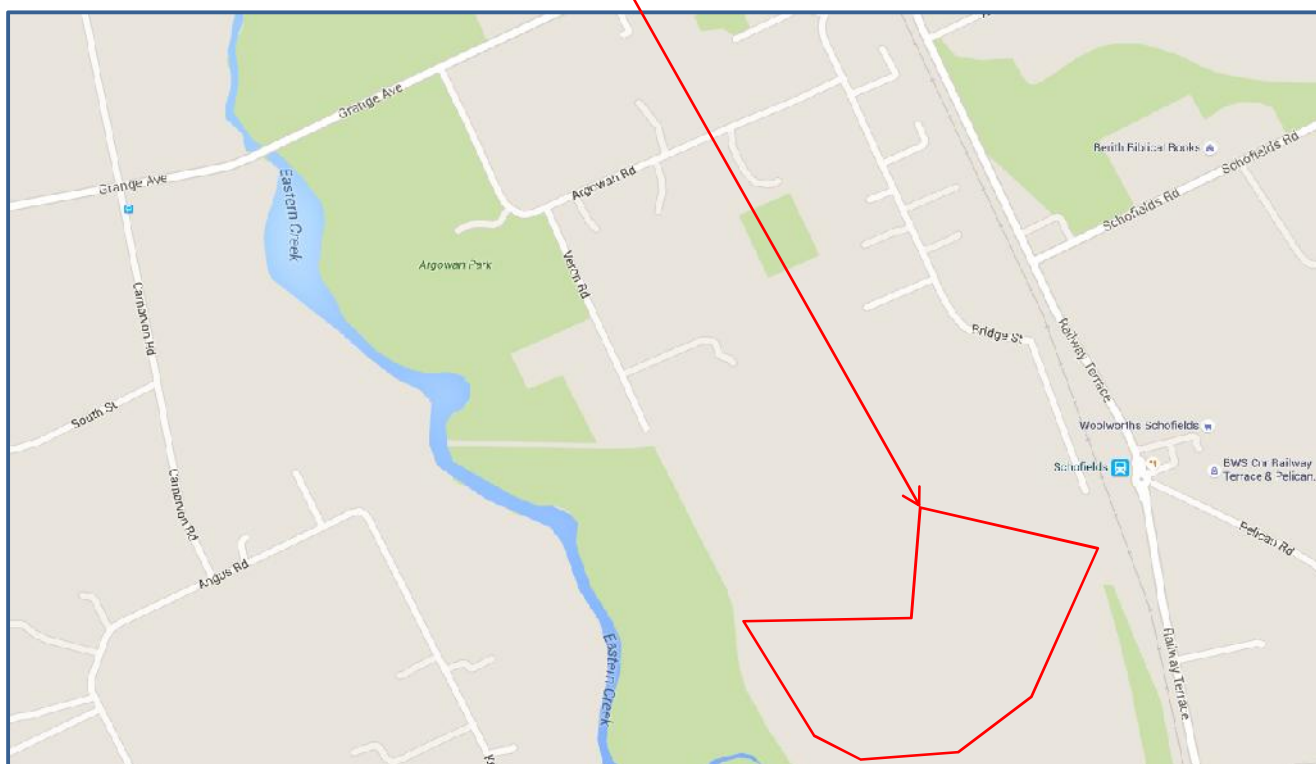
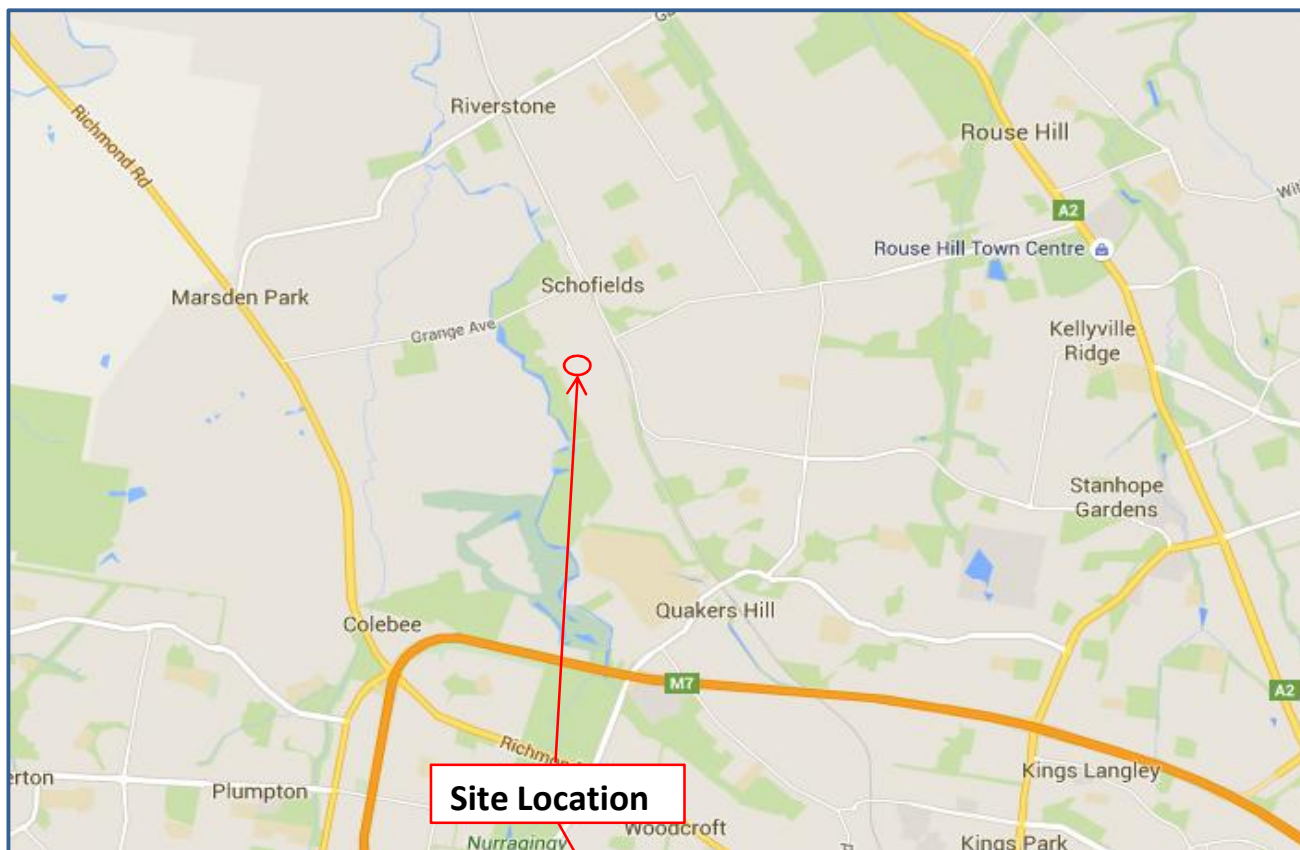
If you have any questions please do not hesitate to contact us.

Yours faithfully,

DLA ENVIRONMENTAL SERVICES



Shane Williams
Environmental Consultant



Unit 3/38 Leighton Place
Hornsby, NSW 2077

DESIGNED:
DLA
COMPILED:
SW
PROJ. No.
DL3701

SITE LOCATION

CLIENT:

Stockland Corporation Ltd

LOCATION:

Altrove Stages 2-6, Schofields, NSW

DRAWING:

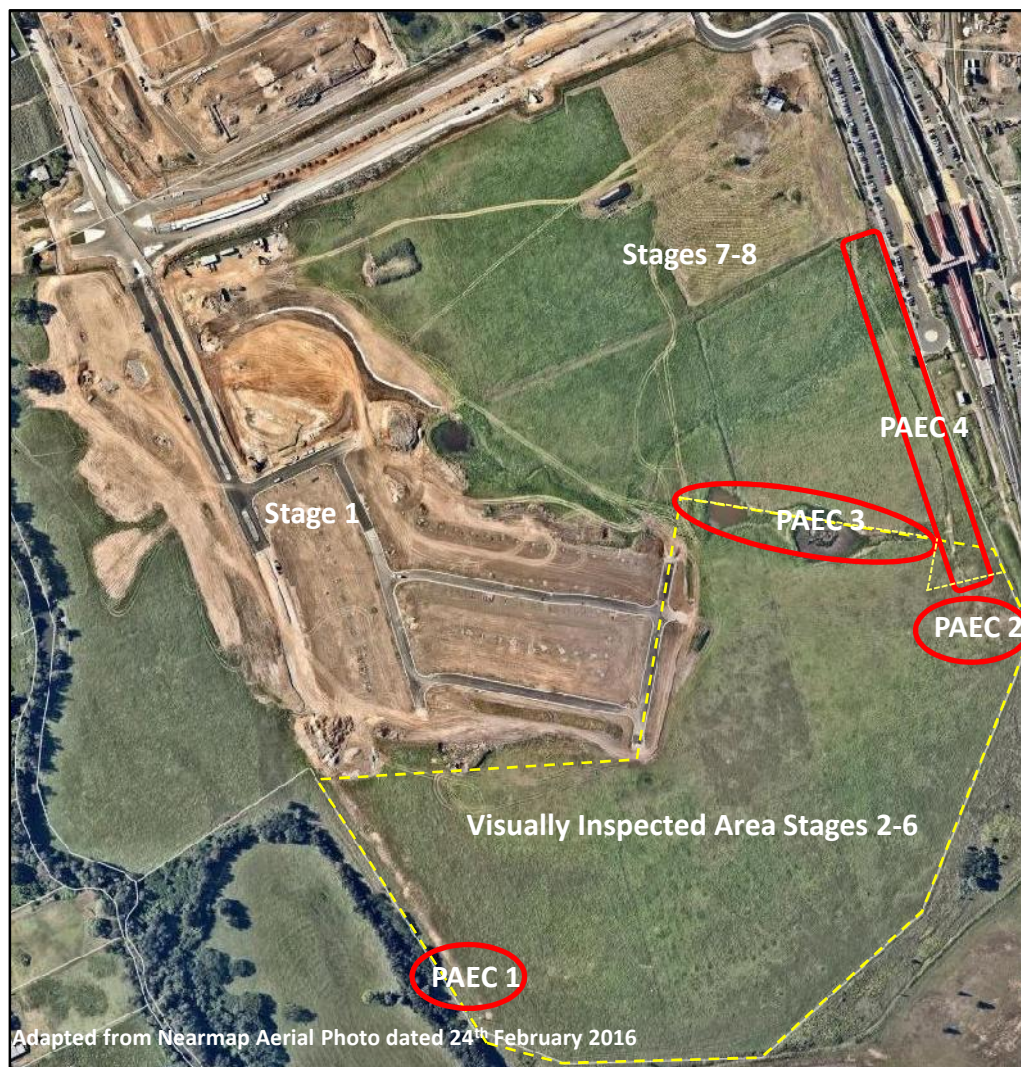
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FIGURE:

1

FIGURE 1 – SITE LOCATION

FIGURE 2 – POTENTIAL AREAS OF ENVIRONMENTAL CONCERN



Legend:

Potential Areas of Environmental Concern

1. Dumped Car bodies (one is off site in the creek)
2. Former Construction Compound and Stockpiles (sewer works)
3. Dam and drainage lines have potential for fill materials (not entirely within Stage 2)
4. Construction road have potential for fill materials (not entirely within Stage 4)

Title:

Site Inspection and PAECs – Altrove Stages 2-6

Client:

Stockland Corporation Ltd

Job No:

DL3701

Figure No:

2

Date:

17.05.16



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Revision:

R0

APPENDIX A– PHOTOGRAPHIC GALLERY



Print 001

PAEC 1 - South west corner car body



Print 002

PAEC 1 - South west corner abandoned car body in creek.



Print 003

PAEC 2 - South east corner former construction yard (July 2014)



Print 004

PAEC 2 - Sewer manhole cover.



Print 005

PAEC 3 – Dam Area potential fill area.



Print 006

PAEC 3 – Dam Area – Concrete blocks at surface behind dam wall.



Print 007

PAEC 4 – Former construction road potential fill area.

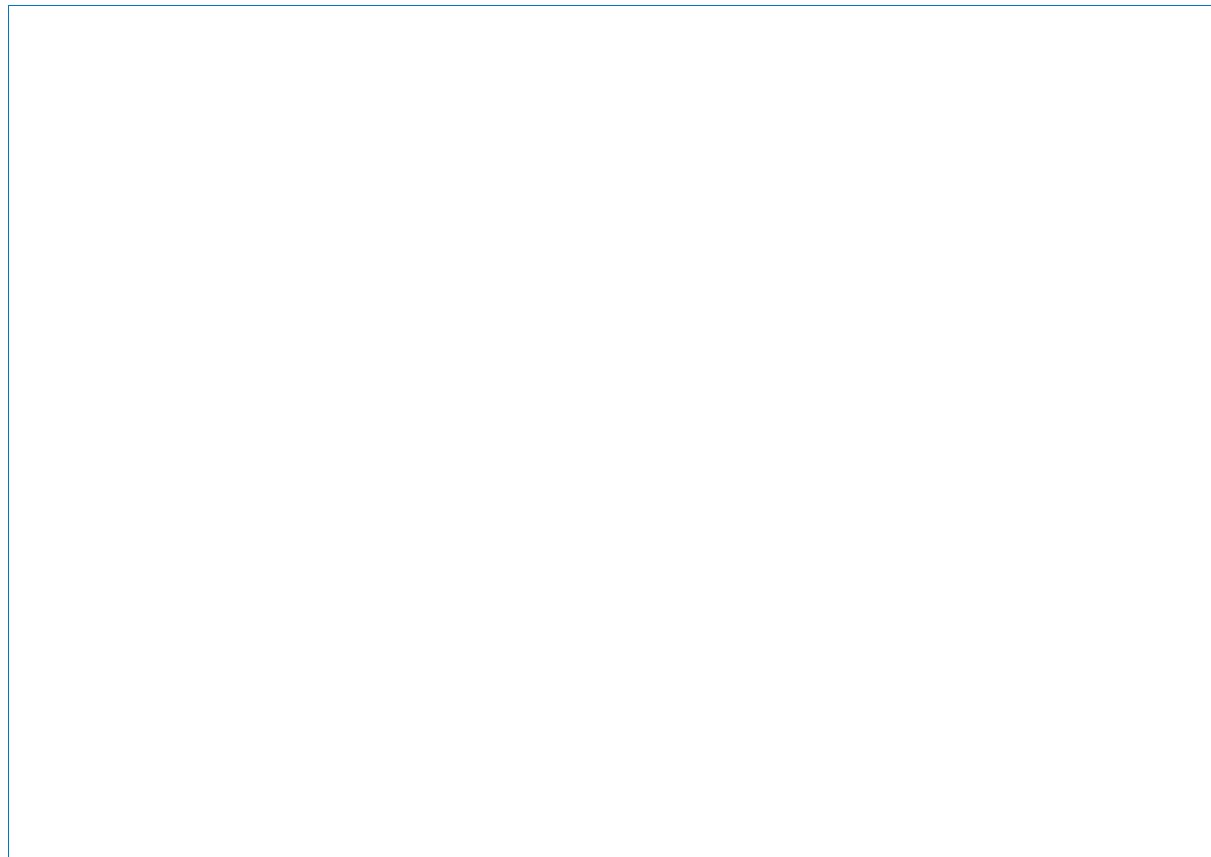


Print 008

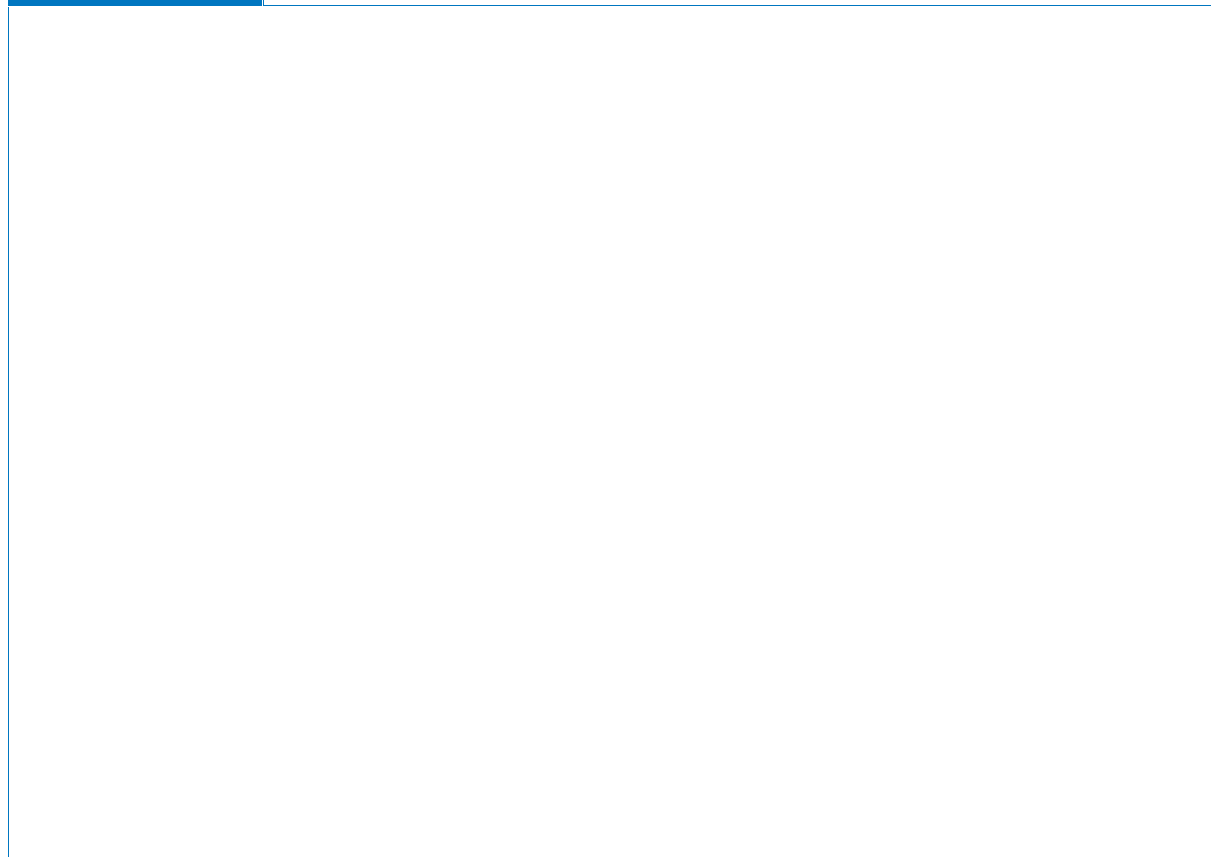
PAEC 4 – Former construction road – traces of brick and tile.

Print 009

Print 010



Print 011



Print 012

APPENDIX B– UNEXPECTED FINDS PROTOCOL

Mr Dominic Chidgey
Assistant Project Manager – Residential
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000

Dear Sir,

Re: Unexpected Finds Protocol (UFP) – Altrove Stages 2-6, Lot 4 DP1191977, Schofields, NSW, 2762.

DLA Environmental Services (DLA) has developed this Unexpected Finds Protocol (UFP) for the property identified as:

ALTROVE STAGES 2-6, LOT 4 DP1191977, SCHOFIELDS (THE SITE).

This UFP has been developed as part of the Site Inspection which identified potential areas of environmental concern and is suitable for implementation during any future Site works primarily associated with excavation and civil activities. It has been prepared to ensure appropriate management of natural soils/fill which may contain undefined contamination potentially encountered during Site works.

1.0 INTRODUCTION

Due to the history of the Site, particularly the former presence of asbestos containing materials in building materials and pipe at the former Dairy Site, and the importation of fill from unknown sources, there is potential for chemical contamination and/or asbestos materials to be present in soils. These materials may require additional assessment or management. It is imperative that the potential for such material to impact Site workers and the remainder of the Site is minimised during remedial and construction works.

Although no evidence of resultant contamination could be found with the exception of the area identified for remediation, it is thought prudent to implement a UFP to cover all possible potential contamination scenarios. Potential contamination on the Site which may exist outside the scope of the past environmental investigations and will be managed through the following UFP.

2.0 TYPICAL FEATURES OF 'UNEXPECTED FINDS'

The main features to look for are:

- Material containing anthropogenic artefacts such as rubble, plastics, metal etc.;
- Material with an obvious unnatural odour, i.e. fuel, solvent, burnt odour;
- Material that is noticeably stained in colour;
- Asbestos or suspected asbestos containing material;
- Material with fibres visible; and,
- Any material that has evidently been dumped at the Site.

3.0 IMPLEMENTATION OF THE PROTOCOL

3.1 General

Prior to the commencement of any future excavation or construction works onsite, an occupational health and safety induction should be attended by all Site staff. The aim and importance of the UFP and how it is to be implemented should be discussed at this time. Responsibility for its implementation will be assigned to the Principal Contractor.

If an unexpected find is encountered during Site works, the following protocol is to be followed.

3.2 Implementation Process

1. Cease disturbance of the affected portion of the site and evacuate the immediate area.
2. Contact the Principal Contractor and the Contractors Environmental Representative (CER).
3. Principal Contractor and CER to conduct an assessment of the location and extent of the unexpected find.
4. High risk areas should be isolated and secured against unintended access.
5. Temporary encapsulation (sealing) of the high risk area to ensure no airborne spread of contamination occurs may be appropriate. This may involve clean soil, plastic sheeting, etc.
6. Dust should be prevented by wetting the soil and drainage controls should be arranged where there is a potential for runoff to occur (runoff should be minimised).
7. Warning signs should be placed in the vicinity.
8. If the Principal Contractor and CER considers that the material warrants further investigation, the area is to be barricaded to provide an exclusion zone.
9. If necessary, environmental controls should be established to minimise the potential for migration of contaminants from the impacted area.
10. Principal Contractor to complete UFP form (refer to **Section 4.0**) and issue to all relevant stakeholders.

11. Further visual assessment and sample collection and analysis undertaken by a qualified environmental consultant. If necessary, samples will be sent to a NATA registered laboratory.
12. Evaluation of analytical data with respect to specific health screening levels to be undertaken. Contaminated soil incident report amended with final classification of soils, including whether the soils are suitable for the proposed land use, need to be remediated or disposed of offsite to a suitably licensed facility. If soils are suitable to remain on-site and/or the area is found to be clean, a work instruction will be provided by the CER to this effect. A waste classification letter must be provided prior to any offsite disposal.
13. If the material is subsequently found to contain asbestos, an appropriately licensed contractor will be employed to remove it.
14. Affected areas will be reopened for earthworks following a clearance of the location and issuance of a report by CER.

3.3 Notes

1. Any suspected asbestos containing should be left in place and not disturbed. The CER will organise appropriate environmental professionals for further investigation purposes.
2. It is essential that material of differing compositions not be mixed.
3. All sampling for validation, waste classification or characterisation purposes will be carried out in accordance with the following documents:
 - *Contaminated Sites: Sampling Design Guidelines* (NSW EPA, 1995);
 - *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1)* (NEPC, 2013);
 - *Contaminated Sites: Guidelines for Assessing Service Station Sites* (NSW EPA, 1994);
 - *Waste Classification Guidelines* (NSW EPA, 2014).
4. Any unexpected finds encountered should be listed on a UFP register, which should include the action taken and the status of the unexpected find. A suitable register is included in **Section 5.0**.

5. Once an unexpected find has been identified and a UFP form completed the Principal Contractor and CER should liaise with the client as to the appropriate means of managing the situation. This should include discussions around the handling, treatment and disposal of material, OH&S considerations and how the affected area will be validated and reopened for works.
6. Prior to closing out an unexpected find it will be important to ensure the appropriate documentation is obtained, such as: photographs, the UFP form, waste classification letter(s) and a validation report or letter.
7. A UFP form should be completed on each day of the remedial works as part of the daily site records. This will ensure that the process is being undertaken even if no unexpected finds are encountered. The form should include the name, company and the position of the person undertaking the field observations.

4.0 UNEXPECTED FINDS PROTOCOL FORM

To be completed by the Site Controller/Environmental Representative

SITE: _____

PERSONNEL ON-SITE: _____

DATE: _____

DAILY SUMMARY:

1. Suspect material encountered during daily activities: YES ☐ NO ☐
(if YES, complete 2 to 5)

2. CER contacted: YES ☐ NO ☐

3. UFP Reference Number _____
(label occurrences sequentially 1, 2, 3, etc.).

DESCRIPTION OF MATERIAL ENCOUNTERED:

4. Asbestos or suspected ACM present: YES ☐ NO ☐

5. Brief written description of material:

6. Material isolated: YES ☐ NO ☐

7. Location of contaminated material (incl. field sketch/map if required):

8. Photographs taken: YES ☐ NO ☐

NAME: _____ **SIGNATURE:** _____

5.0 UNEXPECTED FINDS REGISTER

UNEXPECTED FINDS REGISTER						
UFP No.	Date Found	Suspect Material	Description	Recorded on UFP Form	Action Taken	Status
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		