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Integrated Practical Solutions

Asbestos Management Plan

Proposed PLC Hotel Development
1 Eels Place, Parramatta, NSW

Prepared for
Parramatta Leagues Club

Project 94523.00
December 2018

Douglas Partners
Geotechnics / Environment / Groundwater

Document History

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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.

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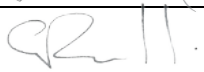
Reviewer	 pp for TW	13 December 2018

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Table of Contents

Page

Asbestos Management Plan
Proposed PLC Hotel Development
1 Eels Place, Parramatta, NSW

1. Introduction

1.1 Scope

Douglas Partners Pty Ltd (DP) was engaged by APP Corporation Pty Ltd (APP) on behalf of the Parramatta Leagues Club (PLC), to prepare an Asbestos Management Plan (AMP) for a proposed hotel development at 1 Eels Place, Parramatta (the site).

This AMP is based on the following investigations previously conducted by DP and Environmental Investigation Services (EIS) where asbestos-impacted soil was reported:

- EIS - Report to Parramatta Leagues Club, Preliminary Environmental Site Assessment for a Proposed Multistorey Car Park at Parramatta Leagues Club, O'Connell Street, Parramatta, NSW, REF: E28152KHrpt, 18 March 2015 (EIS 2015a);
- EIS - *Report to Parramatta Leagues Club, Stage 2 Environmental Site Assessment for a Proposed Multistorey Car Park at Parramatta Leagues Club, O'Connell Street, Parramatta, NSW*, REF: E28152KHrpt2, 9 July 2015 (EIS, 2015b); and
- DP - Report on *Detailed Site Investigation Proposed PLC Hotel Development, 1 Eels Place, Parramatta*, NSW, DP Ref: 94523.00,R.002.Rev0, dated 30 November 2018 (DP, 2018).

Limitations apply to this report as outlined in Section 7. In particular:

- This AMP excludes consideration of all contaminants apart from asbestos; and
- This AMP has been developed for the removal of asbestos-impacted fill and does not consider ongoing management of asbestos contamination at the site.

Notes about this report are also provided in Appendix A. A remediation action plan[1] (RAP) and environmental, construction and site management plan[2] (ECSMP) is being prepared concurrently with this AMP. When applicable, references to the RAP and ECSMP are provided in this report.

[1] DP *Draft Remediation Action Plan, Proposed PLC Hotel Development, 1 Eels Place, Parramatta*, Project 94523.00.R.003
[2] DP *Draft Construction Environmental Management Plan, Proposed PLC Hotel Development, 1 Eels Place, Parramatta*, Project 94523.00.R.005

1.2 Site Identification

The site is identified as part Land Crown Plan 80-3000. The street address is 1 Eels Place, Parramatta. The site is shown on Drawing 1, Appendix B.

The site is irregular in shape, covers an area of approximately 0.3 hectares, and is located on reasonably level ground with surface levels on the site format approximately 12 m relative to Australia Height Datum (AHD).

At the time of previous investigations, the site comprised a car park constructed of asphaltic concrete pavement and was bounded by Parramatta Leagues Club (PLC) to the northeast, PLC multi-story carpark to the northwest, Ross Street Gatehouse to the south east, Parramatta Stadium to the south and open space to the southwest.

The site plan shown on Drawing 1 (Appendix B) is taken from DP (2018) and shows the approximate location and layout of the proposed hotel development as well as the approximate locations of former test pits and asbestos locations

1.3 Proposed Development

Following a review of client supplied return brief for the proposed development[3], it is understood that the proposed development will involve the construction of a 17 storey hotel building with a single level basement. The building footprint extends beyond the basement footprint on its western side. Additional fill material will be required on the western side to build up existing ground surface levels to the underside of the floor slab.

From information provided, the basement floor level is at RL 10.0 m AHD, lower ground floor is at RL 12.35 m AHD and upper ground floor at RL 13.8 m AHD. Based on these levels bulk excavation to depths in the order of 3.5 m is proposed. The basement footprint is not expected to extend to the site boundaries. The basement will include car parking, storage, locker rooms and laundry facilities.

The layout of the development including the proposed hotel footprint and lower floor footprint is shown on Drawing 1 (Appendix B).

The development is further understood to include the upgrade of existing areas surrounding the proposed hotel building to integrate with existing infrastructure.

A large Eucalyptus tree located adjacent to the eastern boundary is to be retained for the proposed development.

Light poles are located in the car park and a number are located on the southern nature strip bordering the carpark. Decommissioning and removal of the light poles is required prior to excavations due to underground services. Stormwater pipes located on site and generally expected to at depths of 0.5 m to 1.0 m below existing levels. The presence of the stormwater is/is not expected to impact on the proposed development except where stormwater lines are to be diverted, relocated or decommissioned.

[3] Hassell, Parramatta Leagues Club, Hotel Development, Return Brief, Rev2, dated June 2018

1.4 Status of Asbestos

1.4.1 EIS (2015a) – Preliminary Site Investigation

EIS previously conducted a preliminary environmental site assessment for an area to the northwest of the site which included the recently constructed multi-story car park. The EIS (2015a) investigation boundary encroached onto the northwest of the site.

EIS (2015a) included a brief historical review, a site inspection and sampling and analysis from five boreholes, two of which (BH4 and BH5) were located in the current site boundary.

The key findings of EIS (2015a) were as follows:

- Fill extended to a depth of approximately 0.5 m in the current site;
- Fill in BH1 (outside the current site boundary) contained traces of ash in fill and asbestos was detected at between 2.5 m and 2.8 m below ground level (bgl) in the form of fibre cement fragments. The fill was considered likely to be backfill associated with the nearby sewer;
- No asbestos was reported in the two boreholes in the current site boundary

1.4.2 EIS (2015b) – Stage 2 Environmental Assessment

A stage two environmental site assessment was carried out on a larger area covering the EIS (2015a) site to the northwest and the current site, and included the drilling of boreholes, sampling and analysis.

This investigation included the drilling of 18 boreholes, seven of which (BH101, BH111 and BH114 to BH118) were located in the current site boundary (refer Drawing 1 – Appendix B).

The following discusses the findings of EIS (2015b) relevant to this AMP:

- Pavement/asphaltic concrete was reported up to 0.1 m bgl;
- Fill was reported beneath pavement in all boreholes and generally extended to depths of between 0.2 m and 0.5 m bgl;
- Natural soils were encountered to depths of between approximately 5.0 m and 5.8 m bgl;
- Asbestos in the form of loose fibre bundles and bonded asbestos cement was detected in a fill sample from BH101 and BH104. BH101 was located within the current site area. The fragment at BH101 (weighing 3.22 g) was reported in fill 0.3 - 0.5 m bgl adjacent to a sewer and was reported to be potentially friable.

1.4.3 DP (2018) – Detailed Site Investigation

DP (2018) comprised a detailed site investigation (DSI) undertaken to supplement the EIS (2015a and 2015b) contamination investigations and included a desktop study and intrusive investigations in three boreholes (BH201, BH202 and BH2013). Test locations are shown on Drawing 1 in Appendix B. The report findings are summarised as follows:

- The site's land use appeared to comprise open space associated with Parramatta Park until the 1960s when site began to be used as a car park, and appeared to be utilised as a car park until present day;
- Soil fill or a ground disturbance was noted across much of the surface of the site in the 1970s;

- Asphalt appeared to have been laid at the site over at least two occasions, potentially introducing coal tar to the site;
- Former structures were observed in the south of the site in the 1960s which were demolished in the 1970s;
- Fill comprising grey silty clay or gravelly sand filling with traces of gravel and sand was reported in all three boreholes to depths ranging 0.4 m to 0.5 m bgl;
- The underlying material comprised residual soils described as typically very stiff or hard silty brown, orange and red mottled grey silty clay with traces of gravel. In BH203, light brown clayey silt was encountered below the filling to a depth of 0.8 m and sandy clay was encountered below a depth of 5.5 m;
- No signs of contamination, such as asbestos, staining or odours were reported;
- Soil samples were tested for a suite of common contaminants including asbestos;
- Results reported trace asbestos in the form of AF/FA in a surface fill sample from BH202. Asbestos reported below the assessment criteria;
- The conceptual site model (CSM) identified fill across the surface of the site underlying the asphalt concrete, potentially hazardous building materials (from previously demolished structures) and reported that all fill at the site had the potential to contain asbestos; and
- The fill at the site waste classified as Special (Asbestos) Waste – General Solid Waste (non-putrescible) and the natural soils, which are acidic, had been preliminarily classified as General Solid Waste.

It was recommended that a remediation action plan (RAP) was prepared with reference to NSW OEH, *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites* (OEH, 2011). The RAP was recommended to include:

- Assessment and management of the extent of asbestos impacted filling;
- Assessment and management of filling to remain on site;
- Assessment and management of acidic soils; and
- An unexpected finds protocol to manage contamination encountered during the works.

1.4.4 Summation

Based on information contained in EIS (2015b) and DP (2018), it is assumed that FA/AF is potentially present throughout the fill materials at the site.

It is understood that all fill materials are to be disposed of off-site. However it is possible that some fill may be required to remain on site due to the presence of the Eucalyptus tree in the south east. If fill is present in this area to depths that cannot be fully excavated, further analysis of soils and potential capping may be required. Considering the proposed development, excavations are not proposed to be filled with the exception of the western side of the site which requires the importation of suitable, verified material to grade the site to the design level.

1.5 Purpose

The purpose of this AMP is to:

- Assist the PLC to minimise the risks of human exposure and environmental contamination associated with the proposed development; and
- Assist the PLC to comply with relevant regulatory requirements pertaining to the management of asbestos at the site (refer to Section 2) prior to development of the site.

1.6 Application

This AMP should be interpreted in a manner that fulfils the purpose of the AMP as stated above and secures and promotes health and safety. Should there be any discrepancy between the provisions of this AMP, legislative requirements (refer Section 2) or relevant codes or standards then the more stringent requirements shall apply.

2. Regulatory Framework

In New South Wales (NSW), occupational health and safety is regulated under the NSW Work Health and Safety (WHS) Act 2011 (WHS Act) and the NSW WHS Regulation 2017 (WHS Regulation).

The WHS Act and the WHS Regulation place a broad range of responsibilities on key stakeholders to promote and secure the safety and health of persons in the workplace. The WHS Regulation also outlines an array of requirements pertaining to the identification, assessment and control of asbestos and asbestos - containing material (ACM) in the workplace.

In addition to the WHS Act and WHS Regulation there are a range of Codes of Practice and Guidance Notes, Australian Standards and other guidelines relating to the management of asbestos and ACM in the workplace.

SafeWork NSW has issued the following codes of practice:

- *Code of Practice: How to Safely Remove Asbestos*, September 2016 (SafeWork, 2016a);
- *Code of Practice: How to Manage and Control Asbestos in the Workplace*, September 2016 (SafeWork, 2016b); and
- NOHSC *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition* [NOHSC:3003 (2005)].

These codes and guidance note detail the requirements for the identification, assessment and management of ACM in the workplace, including the specific controls required for asbestos and ACM removal. Electronic copies of these documents are available on the SafeWork NSW website (www.safework.nsw.gov.au).

Asbestos waste is regulated under the Protection of the Environment Operations (POEO) Act 1997 and POEO (Waste) Regulation 2014, which are administered by the Environment Protection Authority (EPA).

Wastes, including those containing asbestos, must be classified for disposal in accordance with the NSW EPA *Waste Classification Guidelines, Part 1: Classifying Waste,* November 2014.

The Dangerous Goods (Road and Rail Transport) Regulation 2014 adopts uniform national requirements for the transport of dangerous goods (e.g. asbestos) including the requirements of the Australian Dangerous Goods (ADG) Code.

Asbestos transporters and facilities receiving asbestos waste must report the movement of asbestos waste to the EPA. Entities involved with the transport or disposal of asbestos waste in NSW, or arranging the transport of asbestos waste in NSW, must use the EPA's online tool, WasteLocate.

3. Responsibilities

A summary of the responsibilities of key duty holders relating to management and control of ACM at the workplace is provided in Table 1 below. These responsibilities are provided as a guide only, and are not intended to be an exhaustive list of all responsibilities that may be applicable including under the regulatory framework (refer to Section 2).

Table 1: Summary of responsibilities of key duty holders

Responsibilities under WHS Law	
Duty Holder	**Responsibilities**
Person conducting a business or undertaking (PCBU) (e.g. site owner, construction contractor)	**Control risk of exposure** • ensure, so far as is reasonably practicable, that exposure of a person at the workplace to airborne asbestos is eliminated, If this is not reasonably practicable, the exposure must be minimised so far as is reasonably practicable. • ensure the exposure standard for asbestos is not exceeded at the workplace. **Health monitoring** • ensure health monitoring is provided to a worker who is carrying out licensed asbestos removal work, other ongoing asbestos removal work or asbestos-related work where there is risk of exposure when carrying out that work. • ensure the health monitoring is carried out under the supervision of a registered medical practitioner and information as specified in the WHS Regulations is provided to that medical practitioner. • pay all expenses for health monitoring, obtain report and keep records of all health monitoring. **Training and use of equipment** • ensure that information, training and instruction provided to a worker is suitable and adequate and that it is provided in a way that is readily understandable by any person to whom it is provided. • ensure that, if a worker is either carrying out asbestos-related work or may be involved in asbestos removal work, they are trained in the identification and safe handling of asbestos and ACM and the suitable control measures. **Controlling the use of equipment** • must not use, or direct or allow a worker to use, certain equipment on asbestos and ACM. **Asbestos-related work** • if there is uncertainty as to whether work is asbestos related work, assume asbestos is present or arrange for an analysis of a sample to be undertaken to determine if asbestos or ACM is present. • give information as specified in Regulation 480 of the WHS Regulations to a person who is likely to be engaged to carry out asbestos-related work. • ensure the asbestos-related work area is separated from other work areas at the workplace, signs are used to indicate where the asbestos-related work is being carried out and barricades are used to delineate the asbestos related work area. • ensure a competent person carries out air monitoring of the work area if there is uncertainty as to whether the exposure standard is likely to be exceeded.

Responsibilities under WHS Law	
Duty Holder	**Responsibilities**
PCBU with management or control of a workplace (e.g. site owner, construction contractor)	**Identifying ACM** • ensure, so far as is reasonably practicable, that all asbestos or ACM at the workplace is identified by a competent person or assume its presence. • may identify asbestos or ACM by arranging a sample of the material to be analysed. **Indicating presence and location** • ensure the presence and location of asbestos or ACM identified (or assumed to be identified) at the workplace is clearly indicated (by a label if reasonably practicable). **Asbestos register** • ensure an asbestos register is prepared, maintained, reviewed and kept at the workplace. It must be readily available to workers, their health and safety representatives and other persons. • ensure, when management or control of the workplace is relinquished, a copy of the asbestos register is given to the person assuming management or control. **Asbestos management plan** • where asbestos has been identified at the workplace, ensure an asbestos management plan is prepared, maintained and reviewed. It must be accessible to workers, their health and safety representatives and certain persons conducting a business or undertaking.
Responsibilities Under Environmental Law	
Duty Holder	**Responsibilities**
Waste generators and waste facilities	Classify their waste carefully in accordance with the NSW EPA Waste Classification Guidelines
A person that transports asbestos waste	Must ensure that: • any part of any vehicle in which the person transports the waste is covered, and leak-proof, during the transportation; • if the waste consists of bonded asbestos material — it is securely packaged during the transportation; • if the waste consists of friable asbestos material — it is kept in a sealed container during transportation; and • if the waste consists of asbestos-contaminated soils — it is wetted down..

Responsibilities Under Environmental Law	
Duty Holder	**Responsibilities**
Transporter(s), occupier(s) of a waste facility	The following requirements apply (with minor exceptions) to the transport of asbestos waste solely within in NSW unless it is less than 100 kilograms of asbestos waste, or of less than 10 square metres of asbestos waste that is asbestos sheeting, in any single load: • The transporter of a load of asbestos waste must cause the following information to be given to the EPA (in the prescribed form and manner) before the transportation of the load commences: o the address of the site at which the asbestos waste has been generated (by its removal from the site), if known to the transporter, o the name, address and contact details of the premises from which the load is proposed to be transported, o the date on which it is proposed that the transportation commence, o the name, address and contact details of the premises to which the waste is proposed to be transported, o the approximate weight (in kilograms) of each class of asbestos waste in the load (rounded to the nearest kilogram and, if the amount to be rounded is 0.5 kilogram, rounded up), o any other information specified in the Asbestos and Waste Tyres Guidelines. • If the premises to which the load is delivered (the receiving premises) are not the same as the premises to which the waste is proposed to be transported (see previous points above) the transporter causing the delivery must ensure that the EPA is given the name, address and contact details of the receiving premises (in the prescribed form and manner) within 24 hours after the delivery. • The transporter of a load of asbestos waste must ensure that the occupier of any premises to which the transporter causes the load to be delivered is given (1) the unique consignment code issued by the EPA in relation to that load and (2) any other information specified in the 'Asbestos and Waste Tyres Guidelines' (in the prescribed form and manner) no later than on delivery. • The occupier of a waste facility to which a load of asbestos waste is delivered must cause the EPA to be given the following information (in the prescribed form and manner) within 3 days after the delivery: o the date and time of delivery, o the approximate weight (in kilograms) of each class of asbestos waste in the load (rounded to the nearest kilogram and, if the amount to be rounded is 0.5 kilogram, rounded up), o any other information specified in the Asbestos and Waste Tyres Guidelines. **Note:** Different requirements apply to the transportation of asbestos waste to/from NSW to/from a participating State, or through NSW from one participating State to another, under Part 4 of the NSW POEO (Waste) Regulation 2014.

Responsibilities Under Environmental Law	
Duty Holder	**Responsibilities**
A person disposing of asbestos waste	• A person disposing of asbestos waste off the site at which it is generated must do so at a landfill site that can lawfully receive the waste. • When a person delivers asbestos waste to a landfill site, the person must inform the occupier of the landfill site that the waste contains asbestos. • When a person unloads or disposes of asbestos waste at a landfill site, the person must prevent any dust being generated from the waste and any dust in the waste from being stirred up. • The occupier of a landfill site must ensure that asbestos waste disposed of at the site is covered with virgin excavated natural material or (if expressly authorised by an environment protection licence held by the occupier) other material: o initially (at the time of disposal), to a depth of at least 0.15 metre; o at the end of each day's operation, to a depth of at least 0.5 metre; and o finally, to a depth of at least 1 metre (in the case of bonded asbestos material or asbestos-contaminated soils) or 3 metres (in the case of friable asbestos material) beneath the final land surface of the landfill site.
Persons in general	• A person must not cause or permit asbestos waste in any form to be re-used or recycled.

4. Consultation, Training, and Provision of Information

4.1 Consultation

PCBU's have a duty to consult with workers regarding WHS. In particular, the WHS Act requires that consultation with workers be undertaken when risks to health and safety arising from work are assessed, when decisions are made about the measures to be taken to eliminate or control risks, and when proposing changes that may affect the health or safety of workers. Requirements to consult are also outlined in SafeWork (2016b).

Consultation may involve:

- Election of health and safety representatives to communicate issues between workers and management;
- Formation of a Health and Safety Committee to ensure that relevant health and safety issues are identified and managed in an appropriate manner;
- Discussion of relevant issues at work group meetings, project team meetings and tool box talks; and
- Duty holder meetings.

Reference should be made to the *Code of Practice: Work Health and Safety Consultation, Cooperation and Coordination* for further guidance on suitable consultation methods.

4.2 Training

All workers must receive suitable and adequate training. Records of all training must be kept and be readily accessible.

4.2.1 Workers Carrying Out Licenced Asbestos Removal Work

Workers carrying out licenced asbestos removal work must hold certification in relation to the specified Vocational Education and Training (VET) course for asbestos removal relevant to the class of licensed asbestos removal work they are to carry out. For example:

- Class B Training is CPCCDE3014A – Remove non-friable asbestos;
- Class A Training is CPCCDE3015A – Remove friable asbestos; and
- Supervisor Training is CPCCBC4051A – Supervise asbestos removal.

The licensed asbestos removalist must also provide appropriate, site and task specific, training to a worker carrying out licensed asbestos removal work to ensure that the work is carried out in accordance with the Asbestos Removal Control Plan (ARCP).

4.2.2 Workers Carrying Out Asbestos Removal Work or Asbestos Related Work

Workers who may be involved in asbestos removal work or the carrying out of asbestos-related work must be trained in the identification, safe handling and suitable control measures for asbestos and ACM. The training may include the following topics:

- Purpose of the training;
- Health risks of asbestos;
- Types, uses and likely presence of asbestos in the workplace;
- Persons conducting a business or undertaking and the worker's roles and responsibilities under the asbestos management plan;
- Where the asbestos register or equivalent is located, how it can be accessed and how to understand the information contained in it;
- Processes and safe work procedures to be followed to prevent exposure, including exposure from any accidental release of airborne asbestos;
- Where applicable, the correct use of Personal Protective Equipment (PPE) including respiratory protective equipment (RPE);
- The implementation of control measures and safe work methods to eliminate or minimise the risks associated with asbestos to limit the exposure to workers and other persons;
- Exposure standards and control levels for asbestos; and
- Purpose of any exposure monitoring or health monitoring that may occur.

4.3 Provision of Information

Suitable and adequate information must be provided to workers in a manner that is readily understandable. Examples of methods that may be used to provide information are outlined below in Sections 4.3.1 to 4.3.3. A copy of this asbestos management plan should also be kept readily accessible at the workplace.

4.3.1 Site Inductions

Information on the specific ACM present at the site, and the control measures in place to manage the risks arising from these materials, should be included in the site induction process. As a guide, the topics covered during the site induction should include:

- The hazards posed by ACM;
- The type and location of ACM identified on site;
- Appropriate asbestos control measures and management practices;
- Relevant details of any asbestos work currently being undertaken at the site (if applicable);
- Procedures for reporting unexpected asbestos finds or inadvertent asbestos disturbance;

- Provision of the site asbestos register and management plan (which may form part of the overall environmental management plan for the site); and
- Details of the designated person(s) to contact for further information.

4.3.2 Permit to Work System

A Permit-to-Work System may be implemented to identify the presence and location of any identified asbestos or ACM to workers before they commence work, and/or as an additional control prior to undertaking asbestos removal work.

4.3.3 Warning Labels and Signs

The WHS Regulation requires that where practical, ACM be labelled and/or signs posted to prevent accidental disturbance of the ACM.

The number, location and condition of signs should be reviewed by a competent person on a regular basis to ensure adequate warning is maintained in relevant locations. Warning signs should be consistent with the examples provided in SafeWork (2016b) (refer to Figure 1 below) and comply with AS 1319 *Safety Signs for the Occupational Environment*.

Figure 1: Examples of warning signs and labels contained in SafeWork (2016b)

5. Controls

5.1 Hierarchy of Controls

Various control measures may be implemented to manage the risks posed by ACM in the workplace. Control measures should reflect the following 'Hierarchy of Controls' outlined in SafeWork (2016b) which are listed in order of preference:

- Elimination (e.g. asbestos removal);
- Substitution, isolation and engineering controls (e.g. enclosure, encapsulation or sealing);
- Administrative controls (e.g. safe work practices); and
- PPE.

5.2 Summary of Site Specific Controls

The interim controls previously identified should be continued for the duration of the asbestos removal process. It is highly recommended that this include airborne asbestos monitoring during excavation and bulk material handling given that the work site is located adjacent to public and private recreational space, and commercial land use areas.

Further, it is understood that the asbestos impacted fill requiring excavation for the proposed development is to be disposed of off-site. Primary requirements and controls for this activity include:

- The fill has been assigned a preliminary classified in the DSI as Special (Asbestos) Waste – General Solid Waste (non-putrescible) in accordance with the NSW EPA *Waste Classification Guidelines, Part 1: Classifying Waste*;
- Installation and use of suitable decontamination facilities at the site for personnel, plant, equipment and vehicles during the removal of asbestos contaminated materials;
- Use of appropriate PPE, including respiratory protective equipment (RPE), in the designated asbestos contaminated/removal area (refer Section 5.5);
- Considering the presence of friable asbestos, excavation, loading transport and off-site disposal of asbestos contaminated materials to be conducted by a Class A licenced asbestos removalist in accordance with this AMP;
- Excavation and handling of asbestos contaminated materials to proceed in a careful manner, and using wet methods, that minimises the risk of generating airborne dust;
- The asphaltic concrete overlies fill which may be impacted with asbestos. Following excavation, asphaltic concrete is to be set aside in a suitable location for cleaning of soils and clearance/validation prior to re-use, recycling or disposal[4];
- The asphaltic concrete is stored in such a manner as to maximise safe access for the purposes of clearance/validation inspection and testing. If adequate safe access cannot be achieved during the clearance/validation process then the asphalt will be repositioned for inspection or assumed to be impacted with asbestos and disposed as asbestos waste;

[4] Following validation, the asphaltic concrete is to be assessed for re-use or disposal in accordance with the CEMP

- All asbestos contaminated materials are to be disposed at waste disposal facility that is licenced to receive asbestos waste;
- Measures should be enforced as required to eliminate or at least minimise the potential for cross contamination, from the overlying asbestos-impacted fill to the underlying natural clays, such as full-time supervision during excavations;
- In addition plant movements within areas of active remediation should be restricted and monitored to ensure vehicles do not unnecessarily pass over validated surfaces or through contaminated areas. Traversing plant across validated surfaces and areas beyond the site boundaries should also be avoided;
- Trucks receiving asbestos waste are to be double-lined with 200 micron thick plastic sheeting and the waste sealed and covered prior to transport;
- The asbestos waste is to be tracked using the NSW EPA WasteLocate tracking system;
- Disposal dockets issued at the landfill are to be retained;
- The final excavation is to undergo validation as per the RAP, which includes sample collection and analysis to ensure that either (i) all fill has been removed, or (ii) any fill remaining on site is suitable for the proposed land use. Validation is to be undertaken *prior* to backfilling (if undertaken);
- Should fill remain in place that is unable to be removed, capping may be required. A suitable marker layer should be installed across any areas of impacted fill remaining on site, prior to capping with hardstand or a minimum thickness of 0.1 m of verified soil (i.e. virgin excavated natural material (VENM). A Class A geotextile fabric (such as Polyfabric Australia's Terrastop A1 Marker Layer material or equivalent) should be placed between the fill and capping layer to demark the presence of asbestos;
- The footprints of any stockpiled materials, decontamination facilities, asbestos waste storage/loading areas and any other potentially contaminated area/material are to undergo clearance inspection and validated in accordance with the RAP upon their removal/decommissioning; and
- Materials imported to backfill the excavation (if required) are to be validated to verify that they are suitable for the proposed use prior to their installation.

Controls are further outlined in Sections 5.3 to 5.9 below.

5.3 Dust Suppression

Suitable controls must be implemented as required to ensure that airborne dust is not generated. Dust suppression measures may include application of a low-pressure water spray to maintain the materials in a damp condition, use of water carts along vehicle access routes, covering materials with heavy duty plastic sheeting, limiting stockpile heights, careful handling/placement of materials (e.g. not dropping materials from excessive height), installation of temporary screens as a wind break, ceasing work during adverse weather (e.g. windy or dry conditions) and/or other relevant control measures. The extent and nature of dust suppression controls is to be sufficient to prevent generation of airborne dust.

5.4 Licensed Asbestos Removal Work (Friable)

Requirements for Licensed Asbestos Removal Work (friable) are outlined in Sections 5.4.1 to 5.4.3 below. These requirements are provided as general guidance only. Reference should be made to the regulatory framework (Section 2) for a detailed account of the requirements that apply to licensed asbestos removal work.

5.4.1 Pre-Work Requirements

The Licenced Asbestos Removalist is to be licensed to conduct the asbestos removal in accordance with the WHS Regulation.

The Licenced Asbestos Removalist must prepare an Asbestos Removal Control Plan (ARCP) in accordance with SafeWork (2016a) and Safe Work Method Statement(s) for the work. The ARCP/SWMS are to include assessment of all relevant hazards.

The Licenced Asbestos Removalist must make all notifications to, and obtain all permits from, SafeWork NSW and any other relevant parties prior to the commencement of work. A copy of the notification(s) and permit(s) is to be provided to the Principal and also displayed in a prominent position during the asbestos removal project.

All personnel employed by the Licenced Asbestos Removalist are to be appropriately trained in accordance with the requirements of the WHS Regulation and SafeWork NSW (refer section 4.2.1).

The project specific validation activities outlined in Section 5.8 of this report are to be considered and an appropriate plan of action developed to ensure that these requirements are addressed during installation. In particular, any bulk material to be imported to site to backfill excavations is to be validated in accordance with the requirements of the RAP and Section 5.8.3 of this report.

It is required that airborne asbestos monitoring also be undertaken by a licensed asbestos assessor for the duration of the asbestos work as outlined in Section 5.6 of this report.

5.4.2 Site Establishment

The Licenced Asbestos Removalist shall:

- Ensure access to the asbestos removal area (including load-out areas) is suitably restricted;
- Ensure that at all times that an enclosure area is provided separating the asbestos removal work (including load-out area) from any unprotected receptors (e.g. other non-protected workers and the general public);
- Install appropriate warning signage in accordance with SafeWork (2016a);
- Install appropriate decontamination facilities for personnel and plant/equipment in accordance with SafeWork (2016a);
- Install appropriate controls (e.g. wash bay, wheel wash and/or shaker grid) are installed for decontamination of vehicles leaving the site with bulk asbestos containing waste;

- Ensure that appropriate controls are in place to minimise airborne dust and erosion/sedimentation and to capture and control water runoff as required; and
- Ensure non-essential personnel vacate the asbestos removal area.

5.4.3 Removal Procedure

As noted in the RAP, the lateral extent of fill at the site has not been delineated. Subsequent to the removal of asphalt and prior to the excavation of fill, investigations in the form of strip-trenching and test pitting to determine the extent of asbestos fill is recommended.

The Licenced Asbestos Removalist shall ensure:

- Personnel involved in the removal of asbestos wear, as a minimum, a suitable respirator, disposable coveralls, and gloves (refer section 5.5);
- The materials containing asbestos are wet down with a fine water mist prior to removal and throughout the removal process. High-pressure water shall not be used;
    - Care is taken to avoid generating free water/water runoff and, if required, appropriate controls are installed to capture and contain water runoff.
- Excavation, loading and transport of materials in undertaken in a careful manner that minimises disturbance and the generation of airborne dust;
- All fill at the site is removed. Fill is reported to range between 0.2 m and 0.5 m in depth and is described as brown and grey silty clay or gravelly sand filling with traces of gravel and sand. The underlying materials are expected to comprise typically very stiff or hard, red brown silty clay with traces of gravel and light brown clayey silt;
- As noted in Section 1.3, removal of all fill may not be possible due to an exclusion zone surrounding the Eucalyptus tree. Advice from Parramatta City Council should be sought by PLC or the regarding the extent of the exclusion zone, a tree permit may be required to excavate fill within the set exclusion zone;
- Asbestos contaminated fill is placed in a waste skip, vehicle tray or similar container in good condition that is double-lined with 200 µm thick plastic sheeting;
- Any miscellaneous asbestos cement fragments that may be identified are double sealed in 200 µm thick asbestos waste bags for disposal. Waste bags should be filled no more than half full. Sealing should be achieved using heavy duty adhesive tape;
- Once the skip/vehicle tray is full, its contents are completely sealed within the plastic sheeting;
- If asbestos waste cannot be disposed of immediately, the storage time on site is minimised to the extent reasonably practicable and the skip (or other receptacle) used for storing the asbestos waste is secured (e.g. with a lockable lid or by placing the receptacle in a secure area) to prevent unauthorised access;
- All workers undertake personal decontamination in the decontamination facilities provided immediately prior to leaving the asbestos removal area;
- Any items (e.g. tools, equipment) taken into the asbestos work area are thoroughly decontaminated (e.g. by vacuum to remove residual dust and or wet-wiping). All vacuum bags, HEPA filters and rags used for wet-wiping are to be disposed of as asbestos waste;

- All plant or vehicles that enter the asbestos work area are thoroughly decontaminated (e.g. by manual methods, low pressure washing and/or shaker grid) prior to leaving the asbestos work area;
- Vacuum cleaners comply with Class H requirements in AS60335.2.69 *Industrial vacuum cleaners* or its equivalent and are fitted with HEPA filters that conform to the requirements of AS4260-1997 *High efficiency particulate air (HEPA) filters – Classification, construction and performance* or its equivalent. Standard domestic or industrial vacuum cleaners are not suitable;
- At the completion of asbestos removal all used PPE is double bagged in 200 µm thick asbestos waste bags for disposal. Waste bags should be filled no more than half full and sealed using heavy duty adhesive tape;
- Vehicles loaded with bulk asbestos waste are appropriately decontaminated and visually inspected for contamination prior to leaving the loading area;
- Transportation and final disposal of asbestos waste is carried out by the Licenced Asbestos Removalist in a manner that prevents the liberation of asbestos dust into the atmosphere. Vehicles licensed for the transportation of asbestos waste shall only be used;
- Asbestos waste and other waste are disposed of in the appropriate manner at an approved waste disposal facility legally able (licensed) to accept the waste. Permission to tip the asbestos waste is to be obtained from the appropriate authority prior to the commencement of work;
- Appropriate procedures are developed and implemented for containment of the plastic lining to the skips/trucks upon emptying of the waste at the disposal site;
- Copies of all waste disposal dockets are provided to the Environmental Consultant or/and PLC;
- In areas where asbestos impacted fill is to remain on site, any asbestos cement fragments identified on the surfaces of the excavation during installation of the marker layer are removed and double bagged in 200 micron thick asbestos waste bags that are then sealed and disposed of as asbestos waste; and
- Upon completion of off-site disposal of all relevant asbestos waste, validation is undertaken of the excavation and associated areas in accordance with the RAP by an independent Competent Person (e.g. DP).

5.5 Personal Protective Equipment

All personnel are required to adopt the site specific requirements relating to PPE. Site specific PPE requirements typically include:

- Disposable coveralls that resist tearing and the penetration of asbestos fibres (e.g. coveralls rated type 5, category 3 (prEN ISO 13982–1) or equivalent);
- A disposable half-face particulate respirator (P1 or P2) or a half-face particulate filter (cartridge) respirator (P1 or P2) that complies with AS/NZS 1716:2012 *Respiratory protective devices* and is used in accordance with AS/NZS 1715:2009 *Selection, use and maintenance of respiratory protective equipment*;

- Gumboots that can be readily decontaminated by washing/wiping. Alternately, boot covers made of the same material as the abovementioned coveralls may be used or workers may retain a separate pair work boots in the asbestos removal area that are disposed of as asbestos waste upon completion of asbestos removal work;
- High visibility safety vest/clothing;
- Long sleeved shirts and long pants;
- Steel capped safety boots;
- Safety glasses; and
- Protective gloves.

Care should be taken to ensure PPE compatibility and that a suitable degree of worker comfort is maintained.

5.6 Air Monitoring

Air quality monitoring (AQM) is a mandatory regulatory requirement for friable asbestos removal.

Air monitoring should be undertaken by a Licenced Asbestos Assessor (LAA)) who is independent from the person responsible for the asbestos removal work. Monitoring is to be in accordance with the regulatory framework (refer to Section 2) and generally includes:

- Background monitoring prior to asbestos removal to establish background asbestos concentrations;
- Control monitoring during asbestos removal works to assess the adequacy of the control measures used in preventing human exposure and environmental contamination; and
- Clearance monitoring at the completion of asbestos removal to assess the adequacy of the removal works undertaken and suitability of the area for re-occupation.

Airborne asbestos monitoring must be performed in accordance with the NOHSC *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC:3003(2005)]. All samples must be analysed by a National Association of Testing Authorities (NATA) accredited laboratory that is accredited for the relevant test method.

The action levels outlined in Table 2 should be used for the purposes of determining the effectiveness of the control measures adopted during asbestos removal.

Table 2: Action Levels

Action Level	Control	Action
< 0.01 f/mL	No new control measures necessary	Continue with control measures
≥ 0.01 and ≤ 0.02 f/mL	Review	Review control measures
	Investigate	Investigate the cause
	Implement	Implement controls to eliminate or minimise exposure and prevent further release
> 0.02 f/mL	Stop removal work	Stop removal work
	Notify regulator	Notify the relevant regulator by phone followed by fax or written statement that work has ceased and the results of the AQM
	Investigate the cause	Conduct a thorough visual inspection of the enclosure (if used) and associated equipment in consultation with all workers involved with the removal work
	Implement controls to eliminate or minimise exposure and prevent further release	Extend the isolated/barricaded area around the removal area/enclosure as far as reasonably practicable (until fibre levels are at or below 0.01 fibres/ml, wet wipe and vacuum the surrounding area, seal any identified leaks (e.g. with expandable foam or tape) and smoke test the enclosure until it is satisfactorily sealed).
	Do not recommence removal until further monitoring is conducted	Do not recommence until fibre levels are at or below 0.01 fibres/mL.

5.7 Clearance Certification

Under the WHS Regulation if a person commissions licensed asbestos removal work at a workplace the person must ensure that, when the licensed asbestos removal work is completed, a clearance inspection of the asbestos removal area is carried out. In the case of friable asbestos, the clearance inspection must be undertaken by LAA.

For the purposes of the proposed works it is envisaged that, as a minimum, a clearance inspection will be required at the completion of asbestos removal work. This inspection would include the asbestos work area (including material storage/loadout and decontamination areas) and the final excavation (prior to installation of a marker layer where required). Additional clearance inspection may be required based on the staging and progress of the works etc.

Clearance certification is generally based on a visual inspection will also include:

- Material sampling and analysis; and/or
- Airborne asbestos monitoring.

The requirements for any material sampling and analysis and AQM should be determined by a LAA conducting the clearance inspection in accordance with the regulatory framework (refer to Section 2).

All samples analysed for asbestos are to be analysed by a NATA-accredited laboratory that is accredited for the relevant test method.

Following the final clearance inspection, and receipt of suitable analysis and AQM results, a clearance certificate must be issued by a LAA who conducted the clearance inspection.

The asbestos work area must not be re-occupied until the written clearance certificate is issued. Any protective measures, such as barrier(s) and signage between the asbestos work area and adjoining areas, should remain intact until issue of the written clearance certificate.

5.8 Validation

The following project-specific validation activities should be undertaken to help ensure that, at the completion excavation of fill, the site is suitable for the proposed development. These validation activities are aligned with environmental requirements pertaining to the management of contaminated sites and are in addition to the WHS requirements associated with asbestos removal work.

5.8.1 Excavated Asphaltic Concrete

Asphaltic concrete up to 0.1 m in thickness was reported across the site. It is possible that the asphalt may be impacted with asbestos from underlying soils, therefore asphalt at the site must be assumed to be impacted with asbestos.

As noted in Section 5.2, following excavation, asphaltic concrete is to be set aside in a suitable location for cleaning of soils and clearance/validation prior to re-use, recycling or disposal. Following validation, the material is to be assessed for disposal or reuse as stipulated in the ECSMP.

The asphaltic concrete is to be stored in such a manner as to maximise safe access for the purposes of clearance/validation inspection. If adequate safe access cannot be achieved during the clearance/validation process then the asphalt will be repositioned for inspection or assumed to be impacted with asbestos and disposed as asbestos waste.

Validation of the asphaltic concrete involves the following:

- Removal of all soil from the asphalt by cleaning (washing with water) in a designated area by the asbestos removalist. High water pressure should be avoided. Care should also be taken so that water run-off during the cleaning process does not leave the site as it will be assumed to be contaminated with asbestos. Controls may be required to capture and contain water runoff; and
- Visual inspection of the surface of the excavated asphalt by a suitable qualified and experienced Occupational Hygienist. The material is considered validated once the Occupational Hygienist is satisfied that all soil has been removed and any potential loose fibres have been washed from the asphalt. Testing of materials may need to be carried out if any potential hazardous materials are identified by the Occupational Hygienist.

5.8.2 Excavation Areas

Following the removal of fill, the base and sides of the excavation are to be validated prior to the removal of natural soils. Validation is conducted by the LAA in the form of a clearance with reference to Section 5.2 above and the RAP.

The footprints of any stockpiled materials, decontamination facilities, asbestos waste storage/loading areas and any other potentially contaminated area/material are also to undergo a visual clearance inspection by the LAA upon their removal/decommissioning. Multiple clearance events may be required prior to the site being considered validated.

Validation/Clearance comprises of the following:

- AQM during clearance conducted by the LAA;
- Visual inspection of the surface of the excavation footprint by the LAA;
- Collection of validation samples a the following rates:
    - Base of excavation – approximately one sample per nominal 10 m x 10 m grid;
    - Side of excavations - one sample per 10 linear metre and 1 m depth intervals; and
    - Analysis of validation samples for asbestos.
- Each validation sample comprises one 10 L and one 500 mL sample and are to be collected in accordance with Section 4.1.7 of Western Australian Department of Health Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia 2009. Refer to the RAP for sample collection and handling requirements. Metal exceedances in soil were also identified in DP (2018), analysis of metals is to be conducted concurrently with asbestos sampling. Refer to the RAP for greater detail.

The site is considered validated of asbestos following results of AQM conducted during clearances, all 10 L and 500 mL samples reporting no asbestos, no asbestos is observed on the ground surface during inspection and issue of the final clearance certificate by the LAA.

If fill continues beyond the site boundaries, validation samples should be collected from the side walls at those locations.

5.8.3 Remaining Fill

If any fill is to remain in place, such as in the tree exclusion zone, it must be tested to determine if it is suitable. Considering the age of the tree, it is possible that fill does not extend into the protection zone, or is confined to the surface, however, this can only be determined through further investigation following the removal of the asphalt.

Sample analysis of remaining soils will be conducted with reference to DoH (2009) (and the RAP for any Chemicals of Potential Concern) at a rate of one sample per 25 m^3. If sample results indicate that asbestos is present in the soils the area will need to be capped as per the following:

- Placement of a Class A geotextile fabric (such as Polyfabric Australia's Terrastop A1 Marker Layer material or equivalent); and
- Placement of a minimum of 100 mm of VENM or impermeable material (such as hardstand).

A long term Environmental Management Plan (EMP), prepared by the EC will be required for the ongoing management of asbestos in soils at the site.

5.8.4 Imported Materials

As outlined in the RAP all materials imported to site will need to be legally and environmentally suitable for importation. This is likely to mean the use of Virgin Excavated Natural Material (VENM), Excavated Natural Material (ENM), a material recycled under a Resource Recovery Order/Exemption, or other approved engineered/manufactured product. Imported material also needs to be suitable for its proposed purpose from an engineering/geotechnical perspective as relevant however such requirements are beyond the scope of this AMP. Refer to the RAP for importation requirements.

5.8.5 Natural Materials

Natural soils at the site have been identified as acidic, and therefore would not meet the criteria to classify as VENM. Therefore, natural soils at the site require treatment prior to reuse or disposal. The procedures related to treatment and management of acidic soils are provided in the RAP. The underlying bedrock, however, that is not impacted by chemical residues would be classifiable as VENM or Excavated Natural Material (ENM). Testing requirements for VENM materials for off-site disposal are provided in the RAP.

5.9 Waste Classification

The fill at the site was classified in DP (2018) as Special (Asbestos) Waste – General Solid Waste (non-putrescible). All waste not already classified must be classified for disposal by the EC in accordance with the RAP and NSW EPA *Waste Classification Guidelines, Part 1: Classifying Waste*, November 2014. This includes water that may accumulate in excavations.

5.10 Investigation of Unexpected Finds

If any unexpected finds are encountered the following procedure will be implemented:

- Work in the area shall cease and access to the area will be suitably restricted;
- Details of the find will be reported to the EC or LAA who will conduct an assessment of the unexpected find. The scope of the assessment will take into consideration current and proposed activities in the area;
- The EC or LAA will determine the requirements for any material sampling/analysis, AQM or further investigative excavation work;
- Any samples analysed as part of the assessment are to be analysed by a NATA-accredited laboratory that holds accreditation for the relevant test method;
- A report will be prepared that outlines the results of the EC or LAA's assessment and provides suitable management recommendations. Procedures for remediation will be included where necessary.

5.11 Review of Asbestos Management Plan

This AMP must be reviewed on a regular basis to ensure that it remains adequate for managing the asbestos identified at the site. For example, review of this AMP may be necessary if there is a substantive change in the scope or nature of the proposed development or due to unexpected finds at the site.

This AMP should also be reviewed if there is a review is request by a health and safety representative.

6. Recommendations

In the event that fill materials extend beyond the site boundary, it is likely that excavation in these areas is likely to encounter asbestos contamination and should only be undertaken in controlled conditions.

Any EMP developed for ongoing management of remaining asbestos at the site (if applicable) should aim to provide procedures for the ongoing management of asbestos at the site, ensure compliance with relevant regulations and demonstrate that the risk of asbestos exposure and environmental contamination is at an acceptable level.

7. Conclusion

The excavation and installation work associated with the proposed stormwater pipe at the site should be conducted in accordance with the requirements outlined in this AMP and the RAP. Application of this AMP will assist the PLC to:

- Minimise the risks of human exposure and environmental contamination associated with installation of the development; and
- Assist the PLC to comply with relevant regulatory requirements pertaining to the management of asbestos-impacted soils (refer to Section 2) prior to the proposed development.

8. Limitations

Douglas Partners Pty Ltd (DP) has prepared this plan for this project at 1 Eels Place, Parramatta in accordance with DP's proposal NWS180079 dated 11 October 2018 and acceptance received from Mr Thomas Gould of APP Corporation Ltd on behalf of Parramatta Leagues Club Pty Ltd dated 19 October 2018. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of Parramatta Leagues Club 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 previous investigations. 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.

This report must be read in conjunction with all of the attached notes 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.

The contents of this report do not constitute formal design components such as are required, by the Health and Safety Legislation and Regulations, to be included in a Safety Report specifying the hazards likely to be encountered during construction and the controls required to mitigate risk. This design process requires risk assessment to be undertaken, with such assessment being dependent upon factors relating to likelihood of occurrence and consequences of damage to property and to life. This, in turn, requires project data and analysis presently beyond the knowledge and project role respectively of DP. DP may be able, however, to assist the client in carrying out a risk assessment of potential hazards contained in the Comments section of this report, as an extension to the current scope of works, if so requested, and provided that suitable additional information is made available to DP. Any such risk assessment would, however, be necessarily restricted to the environmental components set out in this report and to their application by the project designers to project design, construction, maintenance and demolition.

Douglas Partners Pty Ltd

Appendix A

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

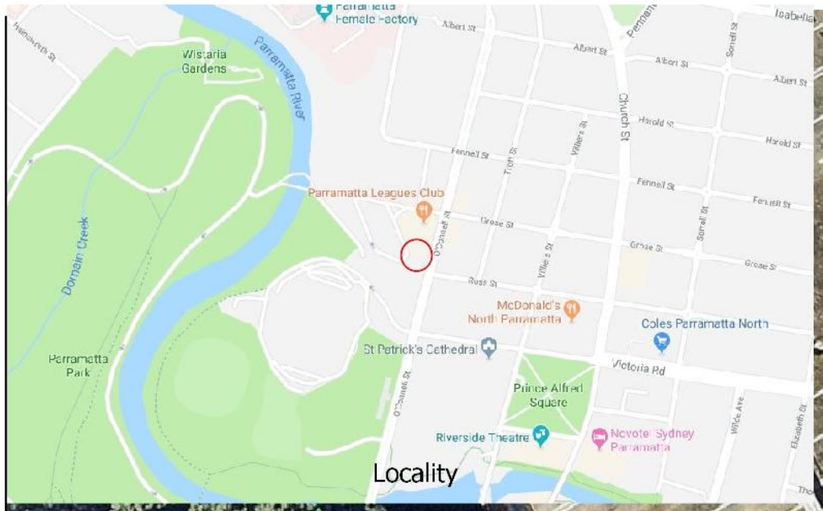
Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate 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.

Appendix B

Drawing 1



Legend

- Approximate Site Boundary
- EIS (2015) Site Boundary
- DP (2018) Bore Hole Locations
- EIS (2015a and 2015b) Test Locations
- Proposed Hotel Footprint
- Proposed Lower Ground Floor Level

Douglas Partners
Geotechnics | Environment | Groundwater

CLIENT: APP Corporation Pty Ltd	
OFFICE: Macarthur	DRAWN BY: CKM
SCALE: 1:25,000	DATE: 4.12.18

TITLE: **Site Locality, Boundary and Test Locations**
Asbestos Management Plan
1 Eels Place, Parramatta

N
MGA

PROJ No: 94523.00.R.003	
DRAWING No: 1	
REVISION: A	