Attachment A12

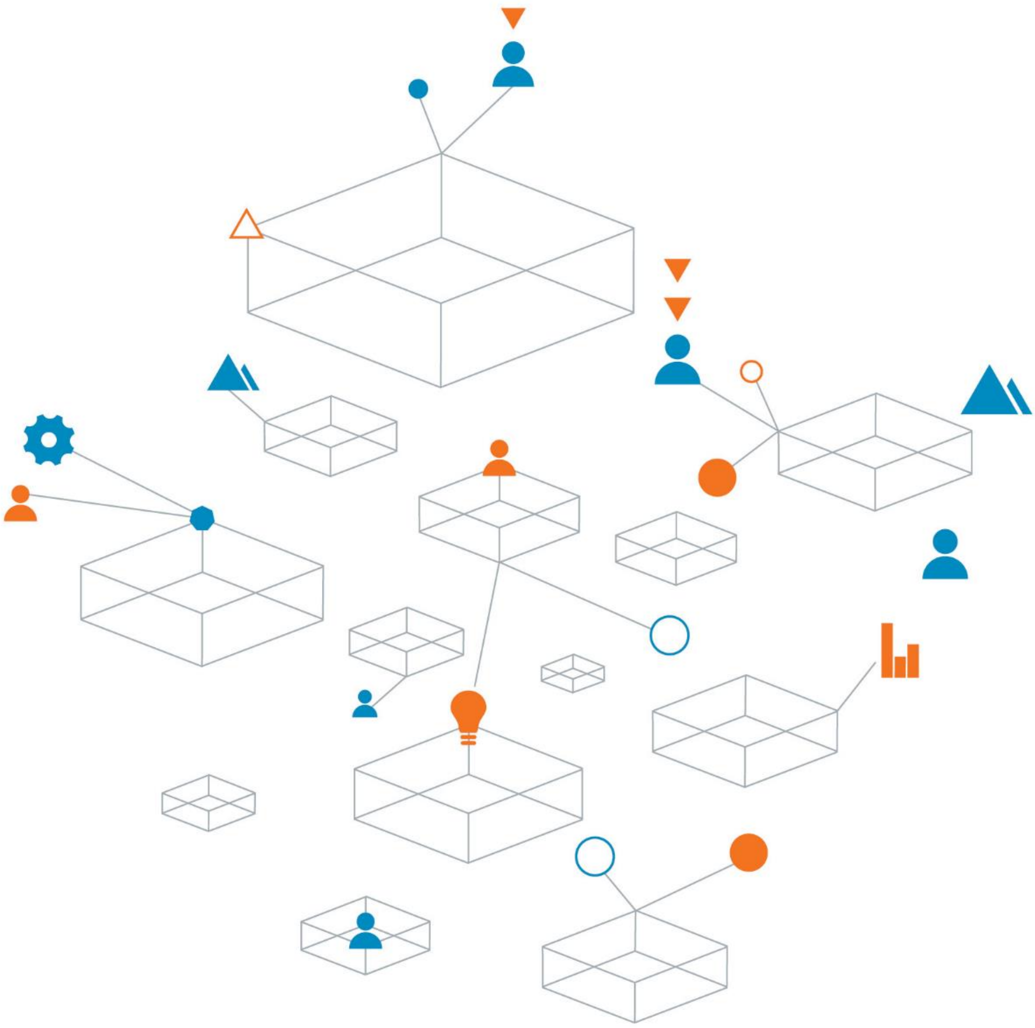
Geotechnical Desk Study

Mirvac Projects Pty Ltd

55 Pitt Street, Sydney NSW
Geotechnical Desk Study

754-SYDEN221350-R02-Rev1

12 December 2019



Trust is the cornerstone of all our projects

Proposed Redevelopment 55 Pitt Street

Prepared for
Mirvac Projects Pty Ltd

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For and on behalf of Coffey

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1 INTRODUCTION

At the request of Mirvac Projects Pty Ltd (Mirvac), Coffey Geotechnics Pty Ltd (Coffey) has carried out a geotechnical desk study for the proposed redevelopment of 37 Pitt Street, 49A-57 Pitt Street, 6-8 Underwood Street, 6 Dalley St (Telstra land) and 8-14 Dalley Street (Ausgrid land), Sydney. The site location is shown in Figure 1.

This geotechnical desk study was prepared to support a Planning Proposal submission for the proposed development. This report was updated to include the Telstra building and supersedes the previous version of the report (Ref: GEOTLCOV25081AA-AF Rev3, dated 29 November 2016).

The site is currently occupied by commercial/retail buildings, a telephone exchange and an electrical substation. There are two existing basement levels at 37 Pitt Street and one existing basement level at 55 Pitt Street.

Mirvac propose to redevelop the site and construct a commercial building with up to three basement levels. The basements would cover the 37 Pitt Street, 49A-57 Pitt Street and 6-8 Underwood Street portions of the development footprint. Within the 6 Dalley St (Telstra land) and 8-14 Dalley Street (Ausgrid land) portions of the site there is no intent to build or demolish any structures on this land. Façade upgrades, minor internal works, roof upgrades and landscaping are the only works proposed on the Telstra land or Ausgrid land.

The objectives of the desk study were to provide an assessment of anticipated subsurface conditions based on existing information, a preliminary geotechnical model, identification and discussion of geotechnical issues and constraints for site redevelopment (such as excavation conditions and support requirements), discussion of groundwater conditions, and further investigation requirements.

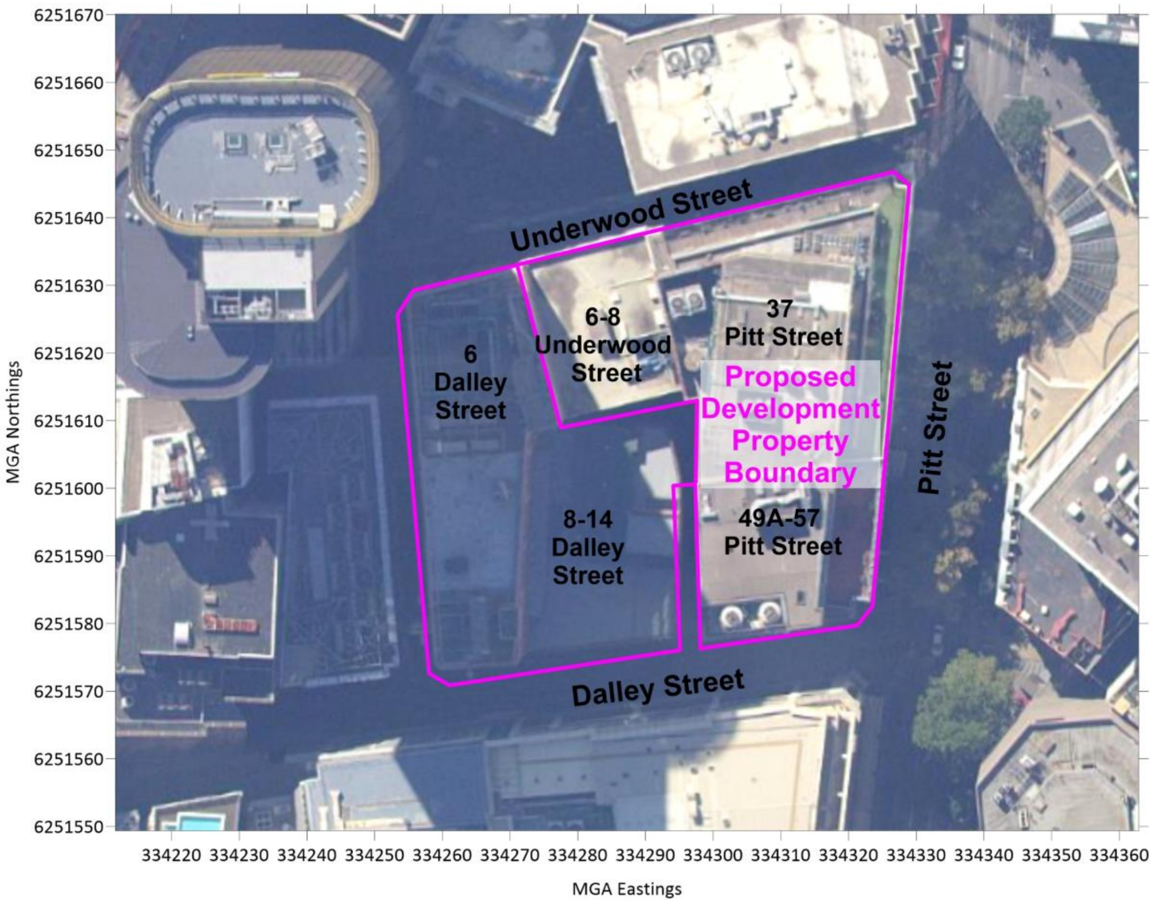

Figure 1: Proposed Pitt Street Development Property Boundary

2 PREVIOUS INVESTIGATIONS IN THE LOCALITY

Coffey has drawn on the following information, collected for previous investigations and engineering works in the locality:

- 190 George Street, 200 George Street and 4 Dalley Street
- 33-35 Pitt Street
- Pitt Street Hotel
- Electricity Substation at 16 Dalley Street
- 6-8 Underwood Street.

3 GEOTECHNICAL MODEL

3.1 Geology

The Sydney 1:100,000 Geological Sheet indicates the site is situated in the vicinity of the boundary between fill, estuarine alluvium and Hawkesbury Sandstone, described on the geological sheet as follows:

- Fill: dredged estuarine sand and mud, demolition rubble, industrial and household waste
- Alluvium/marine deposits: silty to peaty quartz sand silt and clay with common shell layers
- Sandstone: medium to coarse grained with minor shale and laminite lenses.

A plan of sub-vertical structural features in the Sydney CBD by Pells et al (2004) indicates:

- The Pittman LIV Dyke (a near vertical structure, often weathered to clay) crosses the south western portion of the site, trending generally east to west
- The GPO Fault Zone (typically highly weathered sandstone with near vertical parallel shear zones, clay infilled joints, with some seepage) is mapped some 250 m east of the site, trending approximately north-north east to south-south west.

Available borehole information indicates that the alluvium pinches out at the north western boundary of the site. The thickness of alluvium across the site is assessed to range between approximately 0 m and 3 m.

Figure 2 shows the estimated elevation of the top of rock, extent of alluvium and location of the Pittman LIV Dyke.

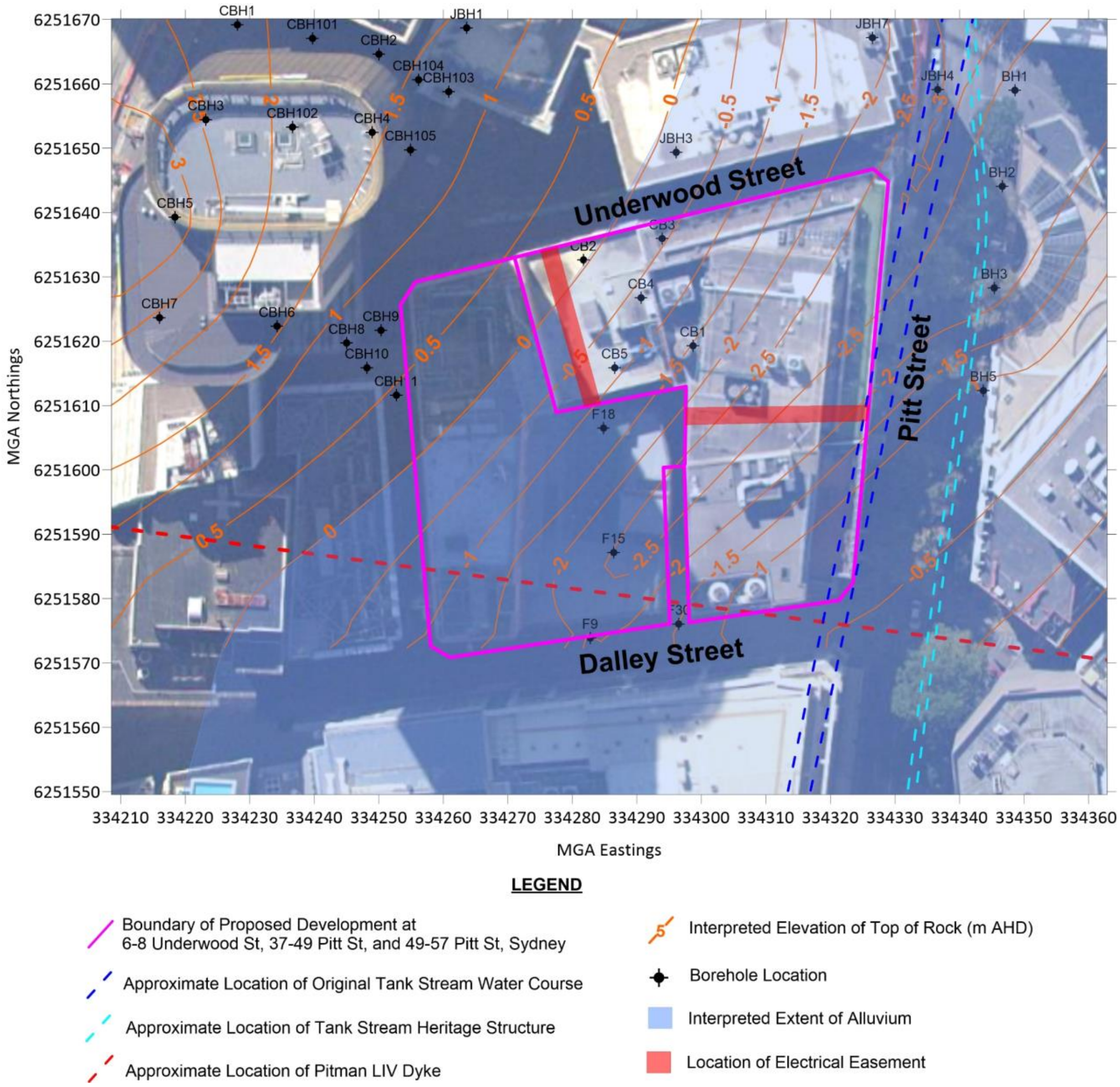

Figure 2: Inferred Bedrock Level in Vicinity of Proposed Development

The inferred stratigraphy at the site, based on information from previous investigations (listed in Section 2) in the vicinity the site, is as follows:

- Fill, overlying
- Alluvium/marine deposits, overlying
- Hawkesbury Sandstone.

Table 1 presents the inferred stratigraphy at the site based on available geotechnical reports and borehole information. The stratigraphic units are defined in terms of their origin and typical rock mass characteristics based on the system presented in Pells (1998) and Pells et al (2004).

Table 1: Inferred Geotechnical Units

Geotechnical Unit	General Description	Estimated Thickness
1. Fill	▪ Fill comprised of variable sand, gravel and boulders, clay and construction materials	Up to 5 m
2. Alluvium/Marine Deposits	▪ Silty and sandy clay ▪ Typically soft to firm ▪ Containing occasional shell beds	Up to 3 m
3a. Sandstone Class IV and Class III	▪ Moderately weathered ▪ Medium to high strength but containing clay seams and defects	Up to 2 m
3b. Sandstone Class II or better	▪ Slightly weathered to fresh ▪ High strength ▪ Moderately to widely spaced defects	Unproven

The Pittman LIV Dyke, which is inferred to pass close to the southern site boundary, is a sub-vertical dolerite intrusion that is typically 3 m wide and extremely weathered to clay materials in its upper portion.

Groundwater levels measured in previous investigations vary between approximately 0.2 m AHD and 1 m AHD in the fill/alluvium. It is likely that a perched water table lies in the soils above a deeper groundwater system within the underlying rock. This is consistent with conditions typical of the Sydney CBD in areas where deep basements are present.

4 GEOTECHNICAL CONSTRAINTS

We consider the development feasible from a geotechnical perspective. We note that the following geotechnical issues may impact on the redevelopment:

- Redevelopment of the site will require retention of the existing basement as excavation progresses. Excavation and construction activities related to excavation and retention of the basement have the potential to impact structures on adjacent properties. These potential impacts are discussed below
- Adverse ground conditions may be encountered during excavation, particularly in the vicinity of the Pittman LIV Dyke. Basement retention design and excavation methodologies must consider ground conditions. This aspect is further discussed below
- Excavations may encounter groundwater and require tanking or drainage systems with regulatory approvals for off-site disposal. Groundwater inflows to the proposed basement will need to be assessed to confirm consistency with NSW Office of Water requirements. Depending on groundwater chemistry, water treatment may be required prior to off-site disposal
- The proposed basement lies in the vicinity of the Tank Stream heritage drainage structure. The potential for the proposed basement to impact on the Tank Stream is discussed below
- Excavation of basements may cause impact on the Tank Stream and/or services. Excavation and construction methodologies will need to consider the potential for these interactions. The potential impacts on the Tank Stream and services are discussed below.

The above issues will need to be considered in the geotechnical and hydrogeological studies required for regulatory approvals and detailed design.

4.1 Basement Wall Retention

4.1.1 Existing Retaining Walls

Based on a survey of the existing basements at 37 Pitt Street and 51 Pitt Street (by Denny Linker & Co, 10 March 2014) provided to Coffey by Mirvac, the existing basement levels lie below the assessed elevation of the top of rock. Existing retaining walls are therefore expected to be present at 37 Pitt Street and 51 Pitt Street.

If the existing retaining walls are to be demolished, support will be necessary during excavation works to retain the fill and alluvium that lies behind the existing walls. Since groundwater is expected to be present within the Unit 1 (Fill) and/or Unit 2 (Alluvium/Marine Deposits), the support will be required to provide groundwater cut-off. This may be achieved by installation of a secant pile wall. Required support may reduce basement space.

Where cantilevered walls are not practicable, lateral stability could be provided by ground anchors (installed progressively as the excavation proceeds). Anchors would need to be installed beneath adjacent properties and would need the permission of adjacent property owners and Council.

4.1.2 Support of Rock Excavation

Vertical excavations without shoring walls should be feasible in rock below the retention system. Some support in the form of shotcreting and rock bolting should be anticipated, particularly in the Unit 3a (Class IV and III Sandstone). Specific support requirements can only be assessed during excavation.

Hawkesbury Sandstone typically contains sub-vertical joints and bedding planes that can form potentially unstable blocks and wedges. However, available information indicates that the site is likely to possess relatively good quality sandstone. As such, support is generally likely to be limited to isolated spot rock bolting of the basement faces in the Unit 3b (Class II or Class I sandstone). However, localised pattern bolting may be required in areas of poorer quality rock.

An experienced geotechnical engineer should be engaged to observe the excavation faces after each two-metre depth of excavation and to assess support requirements based on those observations. Long term support is typically provided by three metre-long double encapsulated rock bolts. Where such support extends beyond the site boundaries, the permission of adjacent landowners will be required to install support such as rock anchors and rock bolts.

4.2 Tank Stream

The Tank Stream was the name given to a fresh watercourse which originally drained a catchment covering the Sydney CBD. The Tank Stream provided an important water source for the early European settlers of Sydney. The primary watercourse ran northwards from the present-day Hyde Park to its termination in Sydney Harbour at the present-day Circular Quay. The natural channel was progressively enclosed with a stone and/or brick drain from the 1840's.

According to Sydney Sewerage Works drawing (OCP 267), dated 18 July 1878, the channel/drainage structure in the vicinity of 37 Pitt Street and 51 Pitt Street originally ran north-south within the existing 37 Pitt Street and 51 Pitt Street building footprints, but was re-routed in the 1870's such that it ran along Pitt

Street. The re-routed drainage structure adjacent comprises a brick oviform drainage channel of approximately 1.7 m in height and 1.6 m wide.

The Sydney Sewerage Works drawing (OCP 267) indicates the presence of tributary drainage structures that run from the oviform brick structure on Pitt Street down Underwood Street and down Dalley Street (formerly Queens Place).

The Tank Stream drainage structure was listed on the NSW State Heritage Register in 1999. Coffey understands that the heritage protection is associated with the operational portion of the drainage structure that runs down Pitt Street, rather than the historical water course or the possible tributaries under Underwood Street and Dalley Street. However, this should be confirmed by Mirvac with the relevant authorities.

In the vicinity of 37 Pitt Street and 51 Pitt Street, the Tank Stream heritage structure lies approximately nine metres from the eastern property boundary.

Excavation and construction activities associated with the proposed development, particularly those associated with the additional area of basement excavation for 37 Pitt Street and 51 Pitt Street, have the potential to impact the Tank Stream heritage structure through ground movements and vibration. However, given that the Tank Stream heritage structure is assessed to lie some 9 m from the eastern property boundary, and potential ground movements and vibrations during construction can be reduced by implementation of suitable retention systems and excavation methods, the potential for ground movements and vibration to impact the Tank Stream heritage structure is considered to be low risk.

We recommend development of an excavation programme and basement retention design that considers potential impacts on the Tank Stream heritage structure.

4.3 Services

Two existing electrical easements run through the proposed development property: (i) 132 kV transmission cables run with a north-south orientation under 6-8 Underwood Street, and (ii) 11 kV transmission cables run with an east-west orientation under the southern portion of 37 Pitt St. The easements are shown in Figure 2.

We understand the cables are contained within approximately 3 m-wide concrete chambers; however, the dimensions and elevation of the chambers require confirmation.

The 11 kV transmission cables are understood to be located within a suspended concrete beam.

It is not known whether the chamber housing the 132 kV cables are founded on soil or rock. Where the chamber is founded on soil or rock of low strength, retention of the soil and/or support of the rock underlying the chamber will be required during excavation. A retention system that reduces potential ground movements in the vicinity of the chamber is desirable.

We recommend assessment of likely ground movements in ground underlying the easement associated with the proposed excavation. This would indicate whether retention of the easement would be required, and would provide input to design of a suitable retention/support system for the easement should it be required.

We further recommend the development of a ground movement monitoring programme to reduce the risk of impacts to the easement during construction.

4.4 Excavation

4.4.1 Excavation Works

Excavations for the basements are expected to penetrate all soil and rock units and are likely to terminate in Unit 3b Sandstone.

Unit 1 and Unit 2 soils should be able to be excavated using an excavator bucket. Some of the lower quality, upper Unit 3a rock may also be excavated with a large excavator fitted with rock teeth.

The lower Unit 3a and the Unit 3b rock is predominantly high strength sandstone and will be relatively difficult to excavate in confined spaces. Ripping is likely to be difficult and will require large excavation plant such as Class 300/400C dozers (Cat D10 or equivalent). Ripping productivity rates in the high strength sandstone will be low and may produce blocky material. If ripping proves to be impracticable, rock saws, impact hammers and milling machines could be used for all bulk and detailed excavation and trimming works.

The use of hydraulic impact hammers for bulk excavation, trimming the sides of excavations, and detailed excavation, will cause vibrations that could damage vibration-sensitive structures and services. Vibrations present a potential risk of damage to adjacent subsurface structures and the electricity transmission chambers. Assessment of the potential impacts of excavation-induced vibration is outside the scope of this report, but should be considered as part of the concept and detailed design.

Adverse ground conditions may be encountered in the vicinity of the Pittman LVI Dyke. The dyke is a sub-vertical dolerite intrusion. Experience from nearby projects that have intersected this dyke indicates that the feature is approximately 3 m wide and completely weathered to clay in its upper part. Sandstone in the vicinity of the dyke may have been altered by the intrusion (through increased fracturing and weathering), potentially reducing its strength.

Rock located in the southern portion of the 51 Pitt Street site may require additional support in the form of shotcreting, and foundation design may need to account for reduced rock stiffness in the area. Figure 3 shows a photograph of shotcrete support over the Pittman LVI Dyke at a location to the west of the proposed development.

We recommend geotechnical investigation to assess the risk posed by the dyke.

Figure 3: Example of Shotcrete Protection of Pittman LIV Dyke at Excavation Face

4.4.2 Excavation-Induced Ground Movements

Ground movements induced by excavation of the proposed basement, particularly for 51 Pitt Street, have the potential to cause damage to surrounding in-ground structures and services.

Within the retained fill/alluvium, the magnitude of adjacent ground movements will depend on the ground conditions, design lateral pressure, shoring system adopted, construction sequence and workmanship. Documented data has shown that for well-constructed shoring, vertical and lateral movements may be in the order of 0.1% to 0.3% of the retained thickness of stiff clay and medium dense sand soils. Numerical analysis should be carried out to assess likely ground movements when designing the appropriate shoring system.

Where it is important to limit adjacent ground movements due to the presence of nearby structures supported on high level footings, the use of a relatively stiff shoring system with bracing and/or tie-back anchors designed to resist higher than active earth pressures may be required. We suggest that such cases be specifically addressed during detailed design when details of adjacent footings and loadings are known.

Horizontal stress relief in the bedrock will also result in ground movement. Based on past excavation experience in sandstone in the Sydney CBD, typical lateral ground movements at the excavation face are of the order of 0.5 mm to 2 mm per metre depth of excavation, depending on rock quality and bedding.

Lateral displacements of retaining walls and rock faces may also result in settlements. For preliminary assessment of impacts, we recommend that potential settlement be assumed to be equal to predicted lateral displacements. Typically, ground movements (lateral displacement and settlement) are greatest at the excavation face and decrease to negligible values at a distance of up to three times the excavation depth.

The potentially damaging effects of stress redistribution in the vicinity of excavations should be assessed as part of the detailed design.

4.5 Groundwater

4.5.1 Existing Basements

We are unaware of the drainage details of the existing basements. However, a sump was observed by Coffey staff in the existing basements during a site visit held on 14 March 2014. It is expected that an under-slab drainage system is in place, and that this system permits drainage of groundwater inflows to the basement sump for pump-out.

Where founded on or within sandstone bedrock, the existing basement retaining walls may act as a cut-off structure to groundwater within the fill and residual soils. However, groundwater emanating from the sandstone may be captured by an existing under-slab drainage system.

Where proposed excavations extend below the toe of existing retaining walls, appropriate treatment of joints or other defects near the base of the walls may be required to reduce the hydraulic connection to groundwater within the retained soil.

Review of groundwater conditions will need to be undertaken following geotechnical and hydrogeological investigations at the site to confirm the above expectations.

4.5.2 Groundwater Control During Excavation

Extensive dewatering of the retained soils is undesirable, as this could lead to consolidation settlement of the soils, and consequently potential damage to adjacent structures. Construction methods and sequencing that provide groundwater cut-off from the soils should be adopted. Where excavations extend below the toe of existing retaining walls, appropriate treatment of joints or other defects near the base of the walls may be required to reduce the hydraulic connection to groundwater within the soils.

Groundwater inflows through the bedrock are not expected to be significant if the rock is relatively free of defects and there is not a strong hydraulic connection to the overlying soils. Minor groundwater inflows during excavation within the bedrock should be able to be managed by a sump and pump drainage system. Should unacceptably high groundwater inflows occur during excavation, targeted grouting may be used to reduce inflows.

We recommend geotechnical and hydrogeological investigations at the site following final concept design of the development. Review of groundwater conditions and the management of groundwater should be undertaken following investigation.

4.5.3 Long-Term Groundwater Inflow to Basement

The proposed basement is expected to draw increased groundwater seepage from the sandstone due to their greater depth.

It is anticipated that groundwater seepage to the proposed basement will be collected from the perimeter walls and floor and directed to an internally located holding tank or pit. Licencing and approvals may be required by Council and NSW Office of Water to collect and release groundwater inflows to the proposed basement.

We recommend a groundwater inflow and quality assessment be undertaken to review requirements at later stages of development.

4.6 Foundations

Bulk excavations for the redevelopment are expected to expose Unit 3 rock.

It is likely that column loads for the proposed redevelopment may be supported using pad, strip or piled footings bearing on Unit 3b sandstone bedrock. For piles, design should be consistent with the limit state design methodology presented in AS2159-2009.

All footing excavations should be observed by a geotechnical engineer to verify that founding conditions are consistent with design assumptions. To justify design parameters, cored boreholes and/or spoon testing should be carried out. It may be necessary to limit allowable parameters if working stress methods are employed or to limit geotechnical strength reduction factors and elastic modulus values for limit state design, unless comprehensive verification assessments are required.

4.7 Monitoring of Effects on Adjacent Structures

A geotechnical monitoring programme should be implemented during the construction phase as a check of design assumptions and to enable excavation support to be installed progressively as required by the revealed conditions. The programme should include, as a minimum, the following components:

- Monitoring of surface survey points located on existing structures, on any retaining walls, and on the ground surface at lateral distances from the excavation
- Regular geotechnical assessments of exposed rock faces at depth intervals no greater than 2 m to assess support requirements
- Vibration monitoring on vibration -sensitive structures located close to the excavation, such as adjacent masonry buildings, services and the Tank Stream.

5 FURTHER INVESTIGATIONS AND ASSESSMENTS

We recommend geotechnical and hydrogeological investigations and assessment to confirm the existing geotechnical model and assess the risk posed by ground conditions.

Site investigations should include the following:

- Drilling of boreholes at the site to a minimum depth of 3 m below bulk excavation level or foundation level to confirm ground conditions
- Test pits may be required on boundaries where adjacent buildings require assessment of underpinning requirements
- Installation of groundwater monitoring wells to assess groundwater levels and response to rainfall
- A pumping test or rising/falling head tests in the wells to assess permeability and permit assessment of groundwater inflows to the proposed basement.

For concept and detailed design, we recommend:

- Allowance for and consideration of Sydney Metro
- Development of a basement retention design, supported by geotechnical input to reduce the geotechnical risks associated with the development
- Assessment of the potential settlement, lateral displacements, and ground vibrations associated with excavation, and their potential impact on adjacent structures and services
- Assessment of potential groundwater inflow to the proposed basement, groundwater quality, and groundwater management for the proposed development. This information will support Council approvals and Water NSW licencing
- We recommend assessment of the likely ground movement in ground underlying the easement associated with proposed excavation. This would indicate whether retention of the easement would be required, and would provide input to design of a suitable retention/support system for the easement should it be required.

During construction, we recommend:

- A geotechnical monitoring programme be implemented as a check of design assumptions and to enable excavation support to be installed progressively as required by the revealed conditions
- All footing excavations be observed by a geotechnical engineer to verify that founding conditions are consistent with design assumptions.

6 LIMITATIONS

The preliminary geotechnical assessment and recommendations presented in this report are based on a desk study with limited borehole data (including boreholes outside the site area). Ground conditions (including rock quality) can vary over relatively short distances. Site-specific investigations for geotechnical and hydrogeological conditions, and construction-stage geotechnical assessments, should be carried out for detailed design.

The attached document entitled “Important Information about Your Coffey Report” forms an integral part of this report and presents additional information about the uses and limitations of this report.

REFERENCES

Pells, P.J.N., G. Mostyn, and B.F. Walker (1998), Foundations on Sandstone and Shale in the Sydney Region, Australian Geomechanics, December 1998, pp17-29.

Pells, P.J.N. (2004), Substance and Mass Properties for the Design of Engineering Structures in the Hawkesbury Sandstone, Australian Geomechanics, 39:3.

Important information about your **Coffey** Report

As a client of Coffey you should know that site subsurface conditions cause more construction problems than any other factor. These notes have been prepared by Coffey to help you interpret and understand the limitations of your report.

Your report is based on project specific criteria

Your report has been developed on the basis of your unique project specific requirements as understood by Coffey and applies only to the site investigated. Project criteria typically include the general nature of the project; its size and configuration; the location of any structures on the site; other site improvements; the presence of underground utilities; and the additional risk imposed by scope-of-service limitations imposed by the client. Your report should not be used if there are any changes to the project without first asking Coffey to assess how factors that changed subsequent to the date of the report affect the report's recommendations. Coffey cannot accept responsibility for problems that may occur due to changed factors if they are not consulted.

Subsurface conditions can change

Subsurface conditions are created by natural processes and the activity of man. For example, water levels can vary with time, fill may be placed on a site and pollutants may migrate with time. Because a report is based on conditions which existed at the time of subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. Consult Coffey to be advised how time may have impacted on the project.

Interpretation of factual data

Site assessment identifies actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from literature and external data source review, sampling and subsequent laboratory testing are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact on the proposed development and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how qualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, owners should retain the services of Coffey through the development stage, to identify variances, conduct additional tests if required, and recommend solutions to problems encountered on site.

Your report will only give preliminary recommendations

Your report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until project implementation has commenced and therefore your report recommendations can only be regarded as preliminary. Only Coffey, who prepared the report, is fully familiar with the background information needed to assess whether or not the report's recommendations are valid and whether or not changes should be considered as the project develops. If another party undertakes the implementation of the recommendations of this report there is a risk that the report will be misinterpreted and Coffey cannot be held responsible for such misinterpretation.

Your report is prepared for specific purposes and persons

To avoid misuse of the information contained in your report it is recommended that you confer with Coffey before passing your report on to another party who may not be familiar with the background and the purpose of the report. Your report should not be applied to any project other than that originally specified at the time the report was issued.

Interpretation by other design professionals

Costly problems can occur when other design professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, retain Coffey to work with other project design professionals who are affected by the report. Have Coffey explain the report implications to design professionals affected by them and then review plans and specifications produced to see how they incorporate the report findings.

Data should not be separated from the report

The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, drawings, etc. are customarily included in our reports and are developed by scientists, engineers or geologists based on their interpretation of field logs (assembled by field personnel) and laboratory evaluation of field samples. These logs etc. should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

Geoenvironmental concerns are not at issue

Your report is not likely to relate any findings, conclusions, or recommendations about the potential for hazardous materials existing at the site unless specifically required to do so by the client. Specialist equipment, techniques, and personnel are used to perform a geoenvironmental assessment. Contamination can create major health, safety and environmental risks. If you have no information about the potential for your site to be contaminated or create an environmental hazard, you are advised to contact Coffey for information relating to geoenvironmental issues.

Rely on Coffey for additional assistance

Coffey is familiar with a variety of techniques and approaches that can be used to help reduce risks for all parties to a project, from design to construction. It is common that not all approaches will be necessarily dealt with in your site assessment report due to concepts proposed at that time. As the project progresses through design towards construction, speak with Coffey to develop alternative approaches to problems that may be of genuine benefit both in time and cost.

Responsibility

Reporting relies on interpretation of factual information based on judgement and opinion and has a level of uncertainty attached to it, which is far less exact than the design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. To help prevent this problem, a number of clauses have been developed for use in contracts, reports and other documents. Responsibility clauses do not transfer appropriate liabilities from Coffey to other parties but are included to identify where Coffey's responsibilities begin and end. Their use is intended to help all parties involved to recognise their individual responsibilities. Read all documents from Coffey closely and do not hesitate to ask any questions you may have.