Appendix J

Contamination assessment

Douglas Partners
Geotechnics • Environment • Groundwater

Integrated Practical Solutions

REPORT
on
PHASE 2 CONTAMINATION ASSESSMENT

BELMORE PARK
CORNER OF HAY AND PITT STREETS
HAYMARKET

Prepared for
ENERGY AUSTRALIA

Project 36569.03
August 2008

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EXECUTIVE SUMMARY

This report details the methodology and results of a Phase 2 Contamination Assessment undertaken by Douglas Partners Pty Ltd (DP), at the corner of Hay and Pitt Streets, Haymarket (hereon in referred to as 'the site'). This report also includes a Preliminary Acid Sulphate Soil (ASS) Assessment and Preliminary *in situ* Waste Classification.

The investigation was commissioned by Energy Australia for DA purposes. At the time of the investigation, the site was operating as an open ground level car park. It is understood the construction of a ten level commercial building containing a substation within two basement levels is proposed.

The investigation included a review of available site history information and soil and groundwater sampling and analytical programme targeting a range of common contaminants. The report presents the findings of the investigation and provides comments relating to the likely degree and extent of soil and groundwater contamination and the suitability of the site for the proposed development i.e. continued commercial/ industrial use. This report also provides a preliminary acid sulphate soils (ASS) assessment and a preliminary *in situ* waste classification.

A review of historical information indicated that the site has been used for various commercial purposes from as early as 1788 when it was used for the manufacture of bricks. Since then it has been occupied by cattle and hay markets (approx 1830s), Belmore markets (approx 1860s), ''Hotel Sydney'' (approx 1918-1960). It is likely the site has been used as a car park since about 1994 until present. WorkCover records indicated that no dangerous goods had been registered for storage at the site.

Based on the ASS screening results, the samples tested were not likely to be ASS.

Based on the laboratory results, the filling encountered in the test bores is classifiable as GENERAL SOLID WASTE (in accordance with the DECC *Waste Classification Guidelines*, April 2008), provided that the material is not cross-contaminated with other material with the exception of sample 108/0.8-1.0.

The filling material was further evaluated to determine if the waste is putrescible or non-putrescible. On the basis that the filling material comprises general soil or roadbase, it is considered that the material is not capable of significant biological transformation and should be classified as GENERAL SOLID WASTE (NON-PUTRESCIBLE) with the exception of filling in the vicinity of Test Bore 108.

The filling material (except filling in the vicinity of Bore 108) should be disposed of to an appropriately licensed landfill as General Solid Waste (non-putrescible).

The bitumen and concrete materials are also classifiable as GENERAL SOLID WASTE (NON-PUTRESCIBLE) under the guidelines.

Further *ex situ* waste classification of the filling is recommended. It should be noted that building rubble was encountered in the test bores, thus, there is a potential for asbestos to be present in the filling.

Overall, it is recommended that upon excavation, filling material be stockpiled (one stockpile for filling in the vicinity of Test Bore 108 and a separate stockpile for filling over the rest of the site) for examination by a qualified Environmental Consultant (particularly for metal fragments and asbestos impacted material) to verify the a preliminary *in situ* waste classification.

A lead exceedance was detected in the natural material sample tested (103/2.2-2.5). However, it is possible that the natural sample was adversely impacted by the overlying filling in the test bore. The soild flight auger drilling method used may have introduced filling material into the natural sample, particularly due to the nature of the sandstone and gravel filling. It is recommended that the VENM be examined upon excavation to evaluate its VENM status.

DP recommend further groundwater sampling at Bore 103 during the construction stage to further verify the second round of results for TPH and BTEX.

On the basis of the investigation findings, DP considers the potential for contamination associated with the soil and groundwater at the site to be low and considers the site suitable

for the proposed development (given that most of the filling is to be removed for the basement excavation), provided that groundwater is sampled from Bore 103 during the construction stage and verifies the second round of groundwater results (TPH and BTEX detected below the adopted screening criteria).

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REPORT ON PHASE 2 CONTAMINATION ASSESSMENT
CORNER OF HAY AND PITT STREETS, HAYMARKET

1. INTRODUCTION

This report details the methodology and results of a Phase 2 Contamination Assessment undertaken by Douglas Partners Pty Ltd (DP), at the corner of Hay and Pitt Streets, Haymarket (hereon in referred to as 'the site'). This report also includes a Preliminary Acid Sulphate Soil (ASS) Assessment and Preliminary *in situ* Waste Classification.

The investigation was commissioned by Energy Australia for DA purposes. At the time of the investigation, the site was operating as an open ground level car park. It is understood the construction of a ten level commercial building containing a substation within two basement levels is proposed.

The investigation included a review of available site history information and soil and groundwater sampling and analytical programme targeting a range of common contaminants. The report presents the findings of the investigation and provides comments relating to the likely degree and extent of soil and groundwater contamination and the suitability of the site for the proposed development i.e. continued commercial/ industrial use. This report also provides a preliminary acid sulphate soils (ASS) assessment and preliminary an *in situ* waste classification.

2. SCOPE OF WORKS

The scope of works for the assessment was as follows:

- Undertake a site history information search including a review of ASS Risk map, a historical title deeds search, a review of historical aerial photographs, a search of the Contaminated Land Register for Notices issued under the *Contaminated Land Management Act* 1997, a review of WorkCover Dangerous Goods records, Council records (including Section 149 (2) Certificates) and client supplied information.
- Review available site information with reference to local geology and Department of Water and Energy groundwater bores.
- Conduct an underground services check prior to drilling using the Dial-Before-You-Dig service and an electromagnetic sweep.
- Drill four test bores to a maximum depth of 16.25 m, or prior refusal (101, 102, 103 and 105) using a bobcat-mounted drill rig.
- Drill one test bore to a depth of 30.0 m (104) for geotechnical purposes and collect environmental samples from 0.0 m to 2.0 m.
- Drill four test bores to a maximum depth of 3.0 m to determine the depth of filling across the site (106, 107, 108 and 109) using a bobcat mounted drill rig.
- Install piezometers in three bores to monitor groundwater (101, 103 and 104).
- Collect soil/filling samples from the bores at broadly regular intervals, at changes in the strata or upon signs of contamination.
- Collect additional 10% replicate samples for QA/QC purposes.
- Screen all samples collected with a photoionisation detector (PID) to assess the presence of volatile organic compounds.
- Collect samples of soil/filling from three bores (101, 103 and 105) at 0.5 m intervals to a depth of 3.0 m and screen for ASS.
- Conduct laboratory analysis on ten selected soil samples at a NATA accredited analytical laboratory for a combination of the following potential contaminants:
  - Heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn);
  - Total recoverable hydrocarbons (TRH);

- Monocyclic aromatic hydrocarbons (benzene, toluene, ethylbenzene and xylene – BTEX);
- Cyanide;
- Polycyclic aromatic hydrocarbons (PAH);
- Phenols;
- Polychlorinated biphenyls (PCB);
- Organochlorine pesticides (OCP);
- Asbestos in soil;
- TCLP (for heavy metals and/or PAH) – 7 samples; and
- One replicate sample for heavy metals and PAH.

- Conduct one round of groundwater sampling from the peizometers installed (test bore 103 was sampled a second time due to the analytical results of the first round of testing).
- Conduct laboratory analysis on three groundwater samples (plus one replicate) at a NATA accredited analytical laboratory for a combination of the following potential contaminants:
  - Heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn);
  - Total recoverable hydrocarbons (TRH);
  - Monocyclic aromatic hydrocarbons (benzene, toluene, ethylbenzene and xylene – BTEX);
  - Polycyclic aromatic hydrocarbons (PAH);
  - Hardness and
  - The replicate sample as analysed for TPH/BTEX and heavy metals.
- Store remaining soil samples not analysed for a period of one month pending the need for further analysis.
- Preparation of a Phase 2 Contamination Assessment report (including a preliminary ASS assessment and preliminary *in situ* waste classification) including results of the fieldwork and analysis, indicating contamination issues at the site. The report will also evaluate the suitability of the site for continued commercial/ industrial land use and any recommendations for further work.

3. SITE DESCRIPTION

3.1 Site Identification

The site covers an area of approximately 3429 m^2 (0.343 ha) and is located on the south-western corner of Pitt and Hay Streets, Haymarket and forms a broadly rectangular shaped land parcel.

The site is identified as:

- Lot 1 in Deposited Plan 844119 (western strip along Pitt Street); and
- Lot 2 in Deposited Plan 1109323 (the bulk of the site occupied by a car park at present.

A site and locality map is shown in Drawing 1 in Appendix A.

3.2 Site Description

The site is bound by three roads and further beyond by multistorey commercial / residential building:

- North: occupied by Campbell Street and commercial/residential properties beyond;
- East: occupied by a commercial building;
- South: occupied by Hay Street and Belmore Park beyond; and
- West: occupied by Pitt Street and commercial buildings.

The site and surrounding area generally falls towards the south-south-west.

At the time of the investigation, the site was operating as an open car park. The surface was entirely covered with asphalt with a few large trees. All the trees appeared to be in good health. No buildings were present on the site apart from a small booth located near the entry to the car park (south-east corner).

4. GEOLOGY

Reference to the Sydney 1:100 000 Series Geological Sheet indicates the site is underlain by silty to peaty quartz sand, silt and clay with Ferruginous and humic cementation in places and common shell layers. The site is also close to (on the eastern boundary) an area underlain by black to dark grey shale and laminite. The test bores confirmed the presence of natural sandy clay underlying filling.

5. ACID SULPHATE SOILS

A review of digital data supplied by NSW Department of Environment and Climate Change (DECC) based on 1:25,000 ASS Risk Mapping, 1994-1998 indicated that the site is located within an area of no risk of occurrence for ASS. It is understood that two basement levels are to be excavated as part of the proposed development. ASS samples were collected and tested as part of the assessment.

6. SITE HISTORY

6.1 Site History

A site historical information review was conducted, comprising a historical title deeds search, a review of historical aerial photographs, a search of the Contaminated Land Register for Notices issued under the *Contaminated Land Management Act 1997*, search of the WorkCover Dangerous Goods records database, a groundwater bore search of the Department of Water and Energy database as well as a review of information supplied by the client. The full site history search information is presented in Appendix C.

6.2 Title Deeds

A historical title deeds search was undertaken to obtain ownership or occupancy information on the property, including company names and the occupations of individuals. The title information can assist in the identification of previous land uses and can therefore assist in establishing whether there were potentially contaminating activities occurring at the site. The cadastre is included in Appendix C. The title deed search results are summarised in Tables 1 and 2. In establishing the possible use of the site, information has also been drawn from other sources such as aerial photographs and client supplied information.

Table 1 - Historical Title Deed Record for Lot 2 in DP 1109323 (Bulk of site)

Date	Owner/Occupier	Possible site use
1931 (Earlier?)	Council of City of Sydney	commercial
10/01/1994	MKH Properties Pty Limited	
16/03/2007	# Energy Australia	

Current Registered Proprietor

Table 2 - Historical Title Deed Record for Lot 1 in DP 844119 (Western strip along Pitt Street)

Date	Owner/Occupier	Possible site use
04/03/1994	Council of City of Sydney	commercial
23/12/1996	CNC Properties Pty Limited	
23/02/2007	# Energy Australia	

Current Registered Proprietor

According to the title deeds, the site was vested in the Council of the City of Sydney. Based on the title deeds, it appears the site was in Council ownership prior to 1931, although the date is unknown. Earlier, the site was in use as cattle markets in the 1800s (refer to Section 6.8 of this report). From 1918 to 1960, the site was occupied by the 'Hotel Sydney' (supported by aerial photographs (refer to Section 6.3) and client supplied information (refer to Section 6.8)). It is likely the site was developed into a car park in approximately 1994 (when ownership changed) (Table 1). Aerial photographs and client supplied information support the title deeds records.

The title deed search results for the site are included in Appendix C.

6.3 Aerial Photographs

Aerial photographs from 1930, 1951, 1970, 1986, 1994 and 2005 were obtained from the NSW Department of Lands Office. The aerial photographs are presented in Appendix C. These aerial photos were reviewed to assess the likely past uses of the site. The findings are summarised below.

1930 – The site appears to be occupied by a large commercial building of several storeys. The building may also occupy the land to the east, or the two buildings are located adjacent to each other, although, it is difficult to determine due to the poor quality of the photograph. The site is surrounded by three roads to the north, west and south. Belmore Park and further Central Station occupy the land further to the south. Commercial/ possibly residential buildings occupy the land in the other directions, although, the details of the buildings are difficult to ascertain due to the poor quality of the photograph.

1951 – The site and surrounding area do not appear to have changed since the 1930 photograph, although as the photograph is of better quality, the building on the land and the site to the east do appear to be one single building, as the frontage is shared along Hay Street.

1970 – The building occupying the site and the land to the east is no longer present. It appears that the building has been demolished and the ground has been disturbed, however, due to the poor quality of the photograph, it is difficult to ascertain the site conditions. The surrounding area does not appear to have substantially changed since the 1951 photograph (occupied by commercial/possibly residential buildings).

1986 – The site does not appear to be occupied by buildings, however, the surface may be covered with bitumen, however, it is difficult to ascertain the site situation due to the poor quality of the photograph. The neighbouring site to the east appears to be occupied by a large multistorey commercial building. The surrounding area does not appear to have changed since the 1970 photograph with the exception of the replacement of some of the commercial/possibly residential buildings with buildings of an increased number of storeys.

1994 – The site and surrounding area do not appear to have changed since the 1986 photograph, however, due to the poor quality of the photograph, it is difficult to ascertain the site conditions.

2005 - The surrounding area does not appear to have changed since the 1994 photograph. The site appears in its current form, bitumen covered open car park with a number of large trees present. The site immediately to the east also appears in its current form (occupied by one large multistorey commercial building).

6.4 Council Records

The subject site is located within the City of Sydney Council. The council of the City of Sydney informed DP, by telephone on 27th of June 2008, that the site is currently owned by Energy Australia, and as a result, the council does not hold any records for the site.

6.5 WorkCover NSW Dangerous Goods Database

A search of the NSW WorkCover dangerous goods database did not locate any records for the site, indicating that there were no registered dangerous goods storage depots at the subject site. WorkCover search documentation is attached in Appendix C.

6.6 Regulatory Notices Search

A search of Notices on the DECC website on 27 June 2008 indicated that there are currently no Notices and/or Licences under the *Protection of the Environment Operations Act* (1997) that pertain directly to the subject site. No Notices or Orders to investigate or remediate the site are reported to have been issued for the site under the *Contaminated Land Management Act, 1997*.

6.7 Groundwater Bore Search

A groundwater bore search of the Department of Water and Energy website database (previously held by the Department of Natural Resources) was conducted on 27 June 2008. Thirty three groundwater bores were located within in a 1.5 km radius of the site. Work summaries were obtained for the three closest bores (located approximately 1 km from the site) and are provided in Appendix C. There was no information available for the fourth closest bore. Of the three with information available, two were used for recreational (groundwater) purposes and the other was a monitoring bore.

The drillers logs for the three registered bores with information available indicated that topsoil or bitumen was encountered to a depth of 1.5 m bgl, sand between 0.5 and 13.10 m bgl, clay between 11.88 and 13.10 m (indicated as the water supply) and decomposed sandstone between 10.30 and 13.50 m bgl. No information was given on the depth to groundwater. Given the distance of these bores to the site, the sub surface information may not be relevant to the site.

The groundwater bore map and work summaries are attached in Appendix C.

6.8 Information supplied by client (Energy Australia)

The client supplied DP with a report prepared in May 2008 entitled *Energy Australia, 5749 Belmore Park Substation Project, Heritage Impact Statement* and a *Plan showing the property status of adjoining proposed Belmore Park Zone Substation Hay Street Haymarket.* The report included a section on the history of the site and has been summarised below.

1788 (European Settlement) – site was within 'Brickfield Village', an area of intensive clay quarrying and the manufacture of bricks. The extent of the quarrying and brick manufacturing activities is uncertain.

1830 – The Sydney Cattle Markets was transferred to the area. The subject site was in the middle of the area.

From 1833 – The corn and hay markets (hence the name 'Haymarket') were operating west of the site, on the block between George and Pitt Streets.

1860s – The Cattle markets were moved to Glebe Island.

1869 – 'Belmore Markets' was constructed between Pitt and Castlereagh Streets (including the subject site). The markets were owned and operated by the City Council and was the principal supplier of fresh produce for the city.

1910 – 'Belmore Markets' were demolished and new markets were constructed west of George Street.

Around 1918 – 'Hotel Sydney was built on the western half of the site. Adelphi Theatre (later renamed Tivoli Theatre) was built on the neighbouring site. 'Hotel Sydney' was a five-storey building covering the subject site. The hotel opened for business in 1918. The hotel and theatre can be seen in the 1930 and 1951 aerial photographs (Section 6.2 of this report).

1960s – 'Hotel Sydney' was demolished.

The subject site was Crown land until 1865 when it was dedicated as the Belmore Markets and came under the control of The Corporation of Sydney. In 1906, the area occupied by the 'Belmore Markets' became part of the road reserve. Most of the road reserve has now been incorporated into the property block (refer to Sections 3.2 and 6.2).

The site has operated as a car park for quite some time. Council restrictions on building height for the subject site in the 1990s, in relation to shadows on the neighbouring Belmore Park may have contributed to its long term use as a car park.

The *Plan showing the property status of adjoining proposed Belmore Park Zone Substation Hay Street Haymarket* indicated that the neighbouring site immediately to the east is owned by MKH Properties Pty Limited. From the title deeds, MKH Properties Pty Limited also owned part of the site (Lot 2 in DP 1109323) (bulk of the site) between 1994 and 2007. The site was operating as an open car park during the period. The properties directly to the north of the site are currently owned by Property and hotel groups. Belmore Park (south of

the site) is Crown land and the sites west (occupied by the Manning building) are owned by ''Private Owners''.

The plan and heritage report are attached in Appendix C.

7. POTENTIAL CONTAMINANTS

The potential soil contaminants on the subject site are likely to be associated with the former commercial land uses and the presence of fill on the site from unknown sources.
On this basis, a broad range of commonly found contaminants were included in the analytical suite as follows:

- Heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn);
- Cyanide;
- Polycyclic Aromatic Hydrocarbons (PAH);
- Total Petroleum Hydrocarbons (TPH);
- Monocyclic Aromatic Hydrocarbons (Benzene, Toluene, Ethylbenzene and Xylene – BTEX);
- Polychlorinated Biphenyls (PCB);
- Phenols;
- Organochlorine Pesticides (OCP); and
- Asbestos.

8. FIELD WORK

8.1 Data Quality Objectives

The scope of work has been devised broadly in accordance with the seven step data quality objective process, as defined in the Australian Standard "Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 1: Non-volatile and semi-volatile compounds (AS 4482.1 – 2005)." The seven step DQO process is as follows:

1) State the Problem

2) Identify the Decision

3) Identify Inputs to the Decision

4) Define the Boundary of the Assessment

5) Develop a Decision Rule

6) Specify Acceptable Limits on Decision Errors

7) Optimise the Design for Obtaining Data

8.1.1 State the Problem

The site has been historically used for commercial/ industrial purposes. The purpose of the assessment is to provide preliminary data to define the status of the site with respect to contamination and to assess whether:

- Soil contamination presents an unacceptable risk to current/future users of the Site under a commercial/industrial land use; and
- Groundwater presents a significant risk of harm (SROH) as defined by the *Contaminated Land Management Act 1997* (NSW) to human health or the environment.

8.1.2 Identify the Decision

In assessing the analytical data for soil against guideline levels for human health, the site conditions can be stated to meet the site assessment criteria if:

- The 95% Upper Confidence Limit (UCL) of the average concentrations for a data set of samples of like material complies with the adopted criteria;
- Individual concentrations of analytes (non-volatile) are less than 250% of the adopted guideline value; and
- The standard deviation of the population is <50% of the guideline.

8.1.3 Identify Inputs to the Decision

The primary inputs in assessing the presence of contamination in soil and groundwater are as follows:

- Published guidelines appropriate to the proposed future land use (commercial) and published guidelines for protection of the environment;
- Field investigation techniques to assess contamination as per DP's standard field procedures; and
- Field observations and analytical results.

8.1.4 Define the Boundary of the Assessment

The boundaries of the assessment were the site boundary of Lot 1 in Deposited Plan 844119 and Lot 2 in Deposited Plan 1109323.

8.1.5 Develop a Decision Rule

The decision rule is the comparison of the analytical results against the relevant guidelines and background concentrations, where relevant.

8.1.6 Specify Acceptable Limits on Decision Errors

The assessment was based on a sampling programme to identify potential contamination across the site.

Specific acceptable limits for this project would generally be in accordance with the appropriate guidelines from NEPM (1999) and NSW EPA for the collection of environmental samples. Specific limits associated with sample handling and laboratory Quality Assurance and Quality Control are detailed in Appendix F.

8.1.7 Optimise the Design for Obtaining Data

The sampling programme for the site was that of a Phase 2 Contamination Assessment. The sampling density meets that recommended in *Sampling Design Guidelines* (2006) for characterisation of a site of 0.343 ha. Sampling density is detailed in Section 8.2.

To optimise the sample selection process, all soil samples collected were logged and screened using photo-ionisation detector (PID). The interpretation of the sample logs and PID values allowed for better assessment of investigation samples to determine the analytical programme and the need, if any, for further investigation.

8.2 Sampling Rationale

Soil samples were collected from nine bores over the 0.343 ha site. The NSW EPA publication *Contaminated Sites Sampling Design Guidelines* (2006) which specifies, in Table A, that the minimum sampling density (for a Phase 2 investigation) on 0.343 ha requires nine locations. Based on site observations and the site history review, the sampling locations were placed over the accessible portions of the site with a view to provide appropriate site coverage.

Soil samples were collected at broadly regular intervals or based on field observations, including changes in strata and signs of contamination. Sampling locations are indicated on Drawing 1 in Appendix A.

8.3 Sampling Procedures

8.3.1 Soil Sampling

All sample locations were cleared for services using Dial-before-you-dig information and an electromagnetic sweep by an accredited service locator.

All sampling data was recorded on DP Test Bore Reports with essential information included in the chain-of-custody sheets. The general sampling procedure is summarised below:

- collect soil samples directly from the auger using disposable nitrile gloves;
- transfer samples into laboratory-prepared glass jars, capping immediately and ensuring that the headspace within the sample jar is minimised;
- collect a split replicate at each location into a zip lock plastic bag;
- collect 10% replicate samples for QA/QC purposes;
- label sample containers with individual and unique identification, including project number, sample location and sample depth; and
- place the glass jars, with teflon lined lid, into a cooled, insulated and sealed container for transport to the laboratory.

A photoionisation detector (PID) was used to screen the headspace vapour of the replicate samples placed in the sealed zip-lock bag. The PID provides an indication of the likely presence of volatile organic compounds in the soil. The PID had a 10.6eV lamp and was calibrated with isobutylene gas at 100 ppm prior to measurement.

Envirolab Services, a laboratory accredited by the National Association Testing Authorities (NATA), was employed to conduct the sample analysis. The laboratory is required to carry out routine in-house QC procedures.

In the DP laboratory, samples obtained from Test Bores 101, 103 and 105 were screened for pH and peroxide pH to check for signs of potential acid sulphate producing soils.

The following methodology was adopted for pH pre-screening:

pH measurement

- placement of 10 mL of soil in small glass container;
- addition of 25 mL of water followed by thorough mixing; and
- measurement of pH using a calibrated Ionode IJ46 pH probe.

Peroxide pH measurement

- placement of 10 mL of soil in small glass container;
- addition of a few drops of pH-adjusted 30% hydrogen peroxide solution;
- observation of sample for effervescence, colour change or odour;
- addition of 25 mL of water followed by thorough mixing; and
- measurement of pH using a calibrated Ionode IJ46 pH probe.

Sampling and testing equipment were decontaminated with Decon 90 and rinsed with distilled water between samples.

8.3.2 Piezometer Installation and Groundwater Sampling Methods

Three groundwater monitoring piezometers were installed in Bores 101, 103 and 104 to a maximum depth of 29.6 m using a bobcat-mounted drill rig. Construction details for the piezometers are presented on the Test Bore Reports, Appendix D.

The piezometers were constructed using 50 mm diameter acid washed class 18 PVC casing and machine slotted well screen. Joints were screw threaded, thereby avoiding the use of glues and solvents which may contaminate the groundwater. The piezometers were completed with a gravel pack extending to 0.2 m above the well screen, a bentonite plug of 0.5 m thickness and backfilled with drill returns to the surface. The piezometers were sealed with a lockable cap and finished with a gatic cover flush with the surface.

No free groundwater was observed during augering of the boreholes (i.e. within depths of surface to 3.0 m bgl).

8.4 Analytical Rationale

The analytical scheme (Table 3) was designed to assess the potential for contamination which may have arisen from current and past use of the site. A total of ten selected soil samples (plus one QA/QC replicate) were analysed for various combinations of the contaminants of concern.

Table 3 – Analytical Scheme for Soil Samples

Sample ID (Location / Depth)	Filling / Natural	Heavy Metals	TPH/ BTEX	PAH	PCB/ OCP	Asbestos	Phenols	Cyanide	pH
101/2.7-3.0	F	✓	✓	✓	✓	✓	✓	✓	✓
102/0.7-1.0	F	✓	✓	✓	✓	✓	✓	✓	✓
103/0.2-0.4	F	✓	✓	✓	✓	✓	✓	✓	✓
103/2.2-2.5	N	✓	✓	✓	✓	✓	✓	✓	✓
104/0.7-1.0	F	✓	✓	✓	✓	✓	✓	✓	✓
105/0.3-0.5	F	✓	✓	✓	✓	✓	✓	✓	✓
106/0.2-0.5	F	✓	✓	✓	✓	✓	✓	✓	✓
107/1.2-1.5	F	✓	✓	✓	✓	✓	✓	✓	✓
BD1/240608[1]		✓		✓					
108/0.8-1.0	F	✓	✓	✓	✓	✓	✓	✓	✓
109/0.05-0.2	F	✓	✓	✓	✓	✓	✓	✓	✓

1 replicate sample of 107/1.2-1.5.

8.5 Acid Sulphate Soil Programme

Reference to digital data supplied by NSW DECC based on 1:25,000 ASS Risk Mapping, 1994-1998 indicated that the site is located within an area of no risk of occurrence for acid sulphate soils. However, as the proposed development involves the excavation of two basement levels, it is considered that testing was needed to confirm the risk mapping data.

The results of acid sulphate soil testing is summarised in Section 10.3 below. Detailed laboratory test results are included in Appendix E.

9. SITE ASSESSMENT CRITERIA

9.1 Soils

Given the site use is to remain commercial; the exposure scenario for the assessment of contaminants in soils would be that of a commercial or industrial development. DP therefore considered the health-based investigation levels for a commercial or industrial land use should be appropriate for this assessment.

Soil contaminant threshold concentrations for commercial/industrial land use, have been sourced from:

- the NSW EPA *Guidelines for the NSW Site Auditor Scheme* (2006), Column 4 - Health-Based Investigation Levels.
- *Guidelines for Assessing Service Station Sites (1994)*, Table 3 for TPH and BTEX (based on a sensitive land use).

The adopted threshold concentrations are given in Table 4 for the contaminants of concern.

Soil/ filling material is considered to meet the SAC if:

i) The 95% UCL of the average concentrations for a data set of samples of like material complies with the adopted criteria. (Note that where **all** results comply with the HIL concentration, the 95% UCL has not been calculated);

ii) Any individual analyte concentration in the soil is not considered to present a potential risk. For some analytes (non-volatile), 250% of the HIL value is adopted for the absolute maximum upper limit concentration for individual samples as given in Table 4, however, the 95% UCL of the average concentrations must comply; and

iii) The standard deviation is less than 50% of the SAC thresholds.

Providing that the 95% Upper Confidence Limit (UCL) of average concentrations is within the SAC (health-based), and no concentrations of the contaminants are at hotspot level, minor exceedances of the SAC may be considered to pose an insignificant human health risk under the proposed land-use. Having said this, odour and aesthetic issues are also considered.

Table 4 – Site Assessment Criteria for Soil

Contaminant	Adopted Criteria (SAC)	Source
TPH $C_6 – C_9$ $C_{10} – C_{36}$	 65 mg/kg 1000 mg/kg	NSW EPA[1] Contaminated Sites *Guidelines for Assessing Service Station Sites* (1994) threshold concentrations for sensitive land use-soils.
BTEX Benzene Toluene Ethylbenzene Xylene	 1 mg/kg 1.4 mg/kg 3.1 mg/kg 14 mg/kg	
Metals Arsenic (total) Cadmium Chromium Copper Lead Mercury Nickel Zinc	**HIL** 500 mg/kg 100 mg/kg 60,000 mg/kg 5000 mg/Kg 1,500 mg/Kg 75 mg/Kg 3,000 mg/Kg 35,000 mg/kg	NSW EPA Contaminated Sites *Guidelines for the NSW Site Auditor Scheme* (2nd Edition) (2006) Appendix II Soil Investigation Levels for Urban Redevelopment Sites in NSW Heath-based investigation levels outlined in Column 4 for Commercial/Industrial land use.
Cyanide Complex free	 2,500 mg/kg 1,250 mg/kg	
Total Phenols	42,500 mg/kg	
PAH Total Benzo(a)Pyrene	 100 mg/kg 5 mg/kg	
PCB	20 mg/kg	
OCP Aldrin + dieldrin chlordane DDT (including DDD, DDE, DDT) Heptachlor	 50 mg/kg 250 mg/kg 1000 mg/kg 50 mg/kg	
Asbestos	No asbestos present in soil at the surface	Correspondence from NSW EPA Director of Contaminated Sites to Accredited Site Auditors

9.2 Acid Sulphate Soils Assessment

The action criteria for acid sulphate soils are sourced from the Acid Sulphate Soils Management Advisory Committee (ASSMAC) *Acid Sulphate Soils Assessment Guidelines* (1998). With respect to the soils observed at the site, the results should not exceed the action criteria for sands to sandy loams (coarse texture). The Action Criteria are listed in Table 5.

[1] NSW EPA is now part of the NSW Department of Environment and Climate Change (DECC).

Table 5 - ASSMAC Action Criteria

Screening Criteria		Threshold[3]
Laboratory Results pH^	pH_f	<4[1]
	pH_{fox}	<3.5[2]
	Change	<1[2]
Acid Trail (mol H+/tone	TPA	18
	TSA	18
Sulphur trail (%)	S_{pos}	0.03

Notes:
TPA Total Potential Acidity
TSA Total Sulphidic Acidity (TPA-TAA)
S_{POS} Peroxide oxidisable sulphur
S_{nas} Net acid soluble sulphur
1. for Actual Acid Sulphate Soil
2. Indicative value only, for Potential Acid Sulphate Soil
3. ASSMAC Action Criteria for disturbance of greater than 1000 tonnes of material
^ pH_f non-oxidised pH
pH_{fox} oxidised pH
Change $pH_{fox} – pH_f$
ND Not Defined

9.3 Waste Classification

With regard to the filling material, the preliminary *in situ* waste classification assessment was conducted with reference to the NSW DECC *Waste Classification Guidelines* (April 2008). According to the new guidelines, waste material is to be assessed by the following Six Step process, viz.

Table 6 - Six Step Process Used for Waste Classification

Steps	Description
1	Is the waste Special Waste?
2	Is the waste Liquid Waste?
3	Has the waste been pre-classified?
4	Is the waste Hazardous Waste?
5	Chemical Assessment in accordance with the specified total and leachable contaminant concentration thresholds
6	Is the waste putrescibles?

In particular, with regard to Step 6, the Guideline states that a final test may be needed to determine whether the waste is putrescible, and a number of evaluation methods have been outlined. Nevertheless, DECC clarified, through telephone discussions, that a determination of whether the putrescibles waste test has to be conducted can be made based on the observed characteristics of the material.

With regard to the natural soils, in view of the absence of guidelines endorsed by DECC on virgin excavated natural material (VENM), the following guidelines were referenced:

- *Guideline 1*: Environmental Soil Quality Guideline 'Background Ranges', as given in the Schedule B(1) NEPC *Guidelines on the Investigation Levels for Soil and Groundwater* (1999);

The following guidelines were also used as ''screening references'':

- *Guideline 2*: The lower of the Health-based [soil] investigation levels for residential sites with accessible soils as specified in NSW EPA *Guidelines for the NSW Site Auditors Scheme (1998)*; and
- *Guideline 3*: With respect to TPH and BTEX, threshold concentrations [in soil] for sensitive land use from NSW EPA's *Guidelines for Assessing Service Station Sites,* 1994 (no comprehensive TRH or BTEX health-based criteria are available in *Guidelines for the NSW Site Auditors Scheme*).

9.4 Groundwater

The Cooks River and, ultimately, Botany Bay is considered likely to be the receiving body for groundwater sourced from the site. On this basis, the groundwater investigation levels (GILs) were selected for the protection of a freshwater ecosystem (a more conservative approach) in line with DECC guidance.

The guidelines selected as reference for groundwater in this assessment were:

- *Guidelines for Fresh and Marine Water Quality*' (2000) Australia and New Zealand Environment and Conservation Council (ANZECC). The trigger values for the protection of 95% species for a fresh water ecosystem were used where available. In the absence

of the 95% level of protection trigger values the moderate and low reliability trigger values and interim indicative values were also referenced as screening criteria.

The adopted GIL and their source documents are provided in Table 7.

Table 7 – Groundwater Investigation Levels (GIL)

Contaminant	Adopted Criteria (GIL)	Rationale
Metals Arsenic (V) Cadmium Chromium (VI) Copper Lead Mercury Nickel Zinc	 13 µg/L 0.2 µg/L 1.0 µg/L 1.4 µg/L 3.4 µg/L 0.6 µg/L 11 µg/L 8 µg/L	ANZECC (2000) *Australian Water Quality Guidelines for the protection of 95% of freshwater species* have been adjusted for hardness for sample GW101/090708 according to Table 3.4.4 in Table 9.
TPH $C_6 – C_9$ $>C_9$	 150 µg/L 600 µg/L	Due to the absence of high reliability NSW EPA or ANZECC guidelines for TPH the Airport (Environment Protection) Regulations (1997), Schedule 2 Water Pollution Accepted Limits: Table 1.03 – Accepted limits of contamination was adopted as a screening criteria
BTEX Benzene Toluene Ethylbenzene Xylene	 950 µg/L 180 µg/L 140 µg/L 350 µg/L	ANZECC (2000) *Australian Water Quality Guidelines for the protection of 95% of freshwater species*
PAH Total Benzo(a)Pyrene Naphthalene phenanthrene	 Not specified Not specified 16 µg/L 2 µg/L	ANZECC (2000) *Australian Water Quality Guidelines for the protection of 95% of freshwater species* It is noted that ANZECC only publishes a low reliability value for phenanthrene. For reference purposes *Dutch Intervention Levels, Ministry of Housing, Spatial Planning and Environment, 2000* for phenanthrene in groundwater are 5 µg/L
OCP Chlordane DDT Endosulfan Endrin Heptachlor	 0.08 ug/L 0.01 ug/L 0.2 ug/L 0.02 ug/L 0.09 ug/L	ANZECC (2000) *Australian Water Quality Guidelines for the protection of 95% of freshwater species*
PCB Total Aroclor 1242 Aroclor 1254	 Not specified 0.6 ug/L 0.03 ug/L	
Total Phenols	320 ug/L	

10. RESULTS OF SOIL INVESTIGATION

10.1 Field Observations: Soil

Details of the sub-surface conditions encountered during the course of the investigation are included in the Test Bore Report Sheets, Appendix D. The bore locations are shown on Drawing 1, Appendix A.

Bitumen was encountered in all of the test bores between the surface and 0.1 m bgl. Concrete was encountered in test bores 101 and 107 directly underlying the bitumen between 0.03 and 0.23 m bgl. Road base gravel was encountered in test bores 102, 103, 104, 105 and 106 between 0.03 and 0.45 m bgl.

Sand, sandstone or clay filling, of varying colours, with inclusions of sandstone fragments, concrete gravel, charcoal, metal fragments, brick fragments was encountered in all test bores except test bore 106 at depths from 0.05 to 3.0 m bgl.

Test bore 106 encountered filing comprised of large boulders and brick fragments that appeared to be within a large void between 1.5 and 2.0 m bgl, where the test bore was discontinued due to the conditions. Refer to Photograph 4, Appendix B.

Natural sandy clay was encountered in all test bores with the exception of 106 and 108 between 1.1 and 6.7 m bgl.

Natural sandstone underlies the natural sandy clay and was encountered in test bores 101 to 105 between 4.5 and 30.0 m. It should be noted that test bores 106 to 109 were discontinued in filling or sandy clay, as their purpose was only to determine the extent of filling on the site.

10.2 Field Observations: Groundwater

Table 8 – Groundwater Levels

Bore	Groundwater Levels Recorded Prior Well Development		Groundwater Levels Measured in Monitoring Wells	
	Date of well Development	Water Level (m bgl)	Date of Measurement/sampling	Water Level (m bgl)
101	08/07/08	7.09	09/07/08 (24 hr after development)	7.10
103	08/07/08	8.20	09/07/08 (24 hr after well development)	8.20
104	08/07/08	20.22	09/07/08 (24 hr after well development)	20.19
101	28/07/08	7.08	Not sampled	-
103	28/07/08	8.17	28/07/08 (1 hr after well development)	8.28
104	28/07/08	dry	Not sampled	-

Note: bgl below ground level

It should be noted that only two groundwater samples (GW101/090708 and GW103/090708) were able to be collected during the first round of groundwater sampling (8-9/7/08) as only very limited quantity (less than 200mm of high turbidity) of groundwater was encountered in Bore 104. The volume was found to be insufficient for sampling.

A second round of testing (28/07/08) involved sampling from test bore 103 a second time; due to the results of the initial testing (refer to Section 11.4). A second attempt was made at sampling form test bore 104 also, although it was found to be dry at the second round of testing.

The groundwater found in test bore 103 exhibited a slight organic odour during both rounds of sample collection.

10.3 Acid Sulphate Soil Testing Results

The results of acid sulphate soil tests are summarised below in Table 9. Detailed laboratory report sheets are included in Appendix E.

Table 9 – Results of DP Laboratory pH Screening

Sample ID	pH	pH(Ox)		pHf - pHox	Strength of reaction*
	0 hr	0.5 hr	1 hr		
101/0.3-0.5	9.90	9.10	9.21	0.69	1
101/0.8-1.0#	7.93	5.75	5.67	2.26	1
101/102-1.5	7.42	7.62	7.81	0.39	1
101/108-2.0	9.25	8.60	8.54	0.71	1F
101/2.3-2.5	9.84	10.02	10.04	0.20	1F
101/2.7-3.0	11.87	12.32	12.36	0.49	1F
103/0.2-0.4	13.06	13.05	13.10	0.04	2F
103/0.4-0.5	12.08	12.47	12.47	0.39	1
103/0.7-1.0	9.96	9.09	9.02	0.94	2F
103/1.2-1.5	10.05	9.72	9.78	0.27	1
103/1.7-2.0	9.19	7.63	7.52	1.67	1
103/2.2-2.5	7.30	7.63	7.65	0.35	1
105/0.3-0.5	9.72	9.11	9.15	0.57	2F
105/0.8-1.0	8.99	7.71	7.66	1.33	1
105/1.3-1.5	8.45	6.58	6.42	2.03	1
105/1.8-2.0	7.09	5.31	5.19	1.90	1
105/2.2-2.5	6.01	5.36	5.22	0.79	1

Notes:

* Strength of reaction key:

1 Denotes no or slight effervescence
2 Denotes moderate effervescence
3 Denotes vigorous effervescence
4 Denotes very vigorous effervescence, gas evolution and heat
F after reaction number indicates a bubbly/frothy reaction
Sample having the most substantial pH drop.

Based on the screening results (Table 9), the samples tested were deemed not likely to be ASS.

10.4 Total Photoionisable Compounds (TOPIC) Results

The replicate soil samples collected in plastic bags were allowed to equilibrate under ambient temperatures before screening for Total Photoionisable Compounds (TOPIC) using

a calibrated Photoionisation Detector (PID). Results of sample screening are shown in the Test Bore Reports in Appendix D. The PID readings were all less than 3 ppm indicating no signs of volatile hydrocarbon contamination.

10.5 Laboratory Results

The results of laboratory analysis of the soil and groundwater samples are summarised in Tables 10 and 11, with NATA Reports provided in Appendix E.

Table 10 - Results of Soil Analysis
(All results in mg/kg unless otherwise stated)

Sample ID	Natural / Filling	Heavy Metals									PAH				TPH		Benzene	Toluene	Ethylbenzene	Total Xylene	Total PCB	OCP[6]	Total Phenols	Total Cyanide	pH	Asbestos
		As	Cd	Cr[1]	Cu	Total Pb	TCLP Pb[7]	Hg	Ni	Zn	Total B(a)P[4]	TCLP B(a)P[7]	Total +ve PAH	TCLP +ve PAH[7]	C6-C9	C10-C36										
101/2.7-3.0	F	4.7	1.2	21	100	150	0.05	<0.1	11	120	0.9	<PQL	7.2	<PQL	<25	<100	<0.5	<0.5	<1	<3	<PQL	<PQL	<PQL	<PQL	11.9	Non detected
102/0.7-1.0	F	7.5	<1	15	9.9	47	-	<0.1	3.9	20	<PQL	<PQL	1	<PQL	<25	<100	<0.5	<0.5	<1	<3	<PQL	<PQL	<PQL	<PQL	7.4	Non detected
103/0.2-0.4	F	<4	<1	9.2	8.3	29	-	<0.1	1.3	17	0.1	-	0.5	-	<25	<100	<0.5	<0.5	<1	<3	<PQL	<PQL	<PQL	<PQL	7.9	Non detected
103/2.2-2.5	N	6.5	<1	19	17	**640**	1.3	<0.1	5.7	290	0.7	<PQL	**5.2**	<PQL	<25	<100	<0.5	<0.5	<1	<3	<PQL	<PQL	<PQL	<PQL	11.1	Non detected
104/0.7-1.0	F	7.3	<1	16	12.0	92	-	<0.1	6.9	57	<PQL	-	<PQL	-	<25	<100	<0.5	<0.5	<1	<3	<PQL	<PQL	<PQL	<PQL	6.3	Non detected
105/0.3-0.5	F	4.4	<1	12	24	290	1.8	<0.1	9.9	290	0.5	<PQL	4.2	<PQL	<25	<100	<0.5	<0.5	<1	<3	<PQL	<PQL	<PQL	<PQL	9.4	Non detected
106/0.2-0.5	F	<4	<1	8.7	23	140	1.0	<0.1	23	200	0.1	<PQL	0.9	<PQL	<25	<100	<0.5	<0.5	<1	<3	<PQL	<PQL	<PQL	<PQL	9.2	Non detected
107/1.2-1.5	F	<4	<1	11	15	160	0.13	<0.1	4.1	4.1	0.2	<PQL	1.5	<PQL	<25	<100	<0.5	<0.5	<1	<3	<PQL	<PQL	<PQL	<PQL	8.9	Non detected
BD1/240608		<4	<1	8.5	10	80	-	<0.1	3.0	31	0.1	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-
108/0.8-1.0	F	5.7	<1	9.5	13	540	**6.8**	<0.1	3.5	400	1.4	<PQL	8.7	<PQL	<25	<100	<0.5	<0.5	<1	<3	<PQL	<PQL	<PQL	<PQL	8.8	Non detected
109/0.05-0.2	F	5.0	<1	7.7	21	58	-	<0.1	6.3	70	0.1	-	0.8	-	<25	<100	<0.5	<0.5	<1	<3	<PQL	<PQL	<PQL	<PQL	9.1	Non detected
95% ProUCL		-	-	-	-	-	**7.928**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Site Assessment Criteria																										
SAC		500	100	60000	5000	1500	N/A	75	3000	35000	5	N/A	100	N/A	65	1000	1	1.4	3.1	14	20	50/250/1000/50	42500	1250	N/A	N/A
Waste Classification Threshold Criteria (without TCLP)[2]																										
General Solid Waste (CT1)		100	20	100	N/A	100	N/A	4	40	N/A	N/A	N/A	0.8	N/A	N/A	N/A	10	288	600	1000	N/A	N/A	N/A	320	N/A	N/A
Restricted Solid Waste (CT2)		400	80	400	N/A	400	N/A	16	160	N/A	N/A	N/A	3.2	N/A	N/A	N/A	40	1152	2400	4000	N/A	N/A	N/A	1280	N/A	N/A
Waste Classification Threshold Criteria (with TCLP)[2]																										
General Solid Waste (CT1)		500	100	1900	N/A	1500	5	50	1050	N/A	10	0.04	200	N/A	650	10000	18	518	1080	1800	<50	<50	N/A	5900	N/A	N/A
Restricted Solid Waste (CT2)		2000	400	7600	N/A	6000	20	200	4200	N/A	23	0.16	800	N/A	2600	40000	72	2073	4320	7200	<50	<50	N/A	23600	N/A	N/A
VENM Aplicable																										
Background ranges																										
NEPC		1-50	1	5-1000	2-100	2-100	N/A	0.03	5-500	10-300	-	N/A	-	N/A	-	-	-	-	-	-	-	-	-	-		-
Health-based (HIL) and provisional phytotoxicity-based (PPIL) investigation levels																										
HIL		100	20	12000	1000	300	N/A	15	600	7000	20	N/A	1	N/A	65[3]	1000[3]	1[3]	1.4[3]	3.1[3]	14[3]	-	-	-	250		-
PPIL		20	3	400	100	600	N/A	1	60	200	-	N/A	-	N/A	-	-	-	-	-	-	-	-	-	-		-

Notes:

1	All Chromium are assumed to exist in the stable Cr(III) oxidation state, as Cr(VI) will be too reactive and unstable in normal environmental conditions
2	NSW DECC *Waste Classification Guidelines* (Table 2) [April 2008]
3	NSW EPA Contaminated Sites *Guidelines for Assessing Service Station Sites* (1994) threshold concentrations for sensitive land use-soils
4	benzo(a)pyrene
5	field replicate sample of sample listed directly above
6	In the order Aldrin + dieldrin, Chlordane, DDT +DDD + DDE, Heptachlor
7	TCLP in mg/L
NEPC	NEPC (1999). National Environmental Protection (Assessment of Site Contamination) Measure *Schedule B(1) Guidelines on the Investigation Levels for Soil and Groundwater, Background Ranges*
HIL/PPIL	NSW EPA Contaminated Sites *Guidelines for the NSW Site Auditor Scheme* (2nd Edition) (2006) Soil Investigation Levels for Urban Redevelopment Sites in NSW Heath-based investigation levels for residential with gardens (HIL Column 1) and Provisional Phytotoxicity Based Investigation Levels (PPIL)
NA	No asbestos present on the ground surface (Correspondence from NSW EPA Director of Contaminated Sites to Accredited Site Auditors)
Bold	exceeds criteria
N/A	Not applicable
-	not analysed

Table 11 - Results of Groundwater Analysis
(All results in µg/L unless otherwise stated)

Sample ID	Date sampled	Heavy Metals (Filtered)								PAH[2]		TPH		Benzene	Toluene	Ethylbenzene	Total Xylene	OCP [4]	PCB	Total Phenols	Hardness (mgCaCO$_3$/L)
		As	Cd	Cr[1]	Cu	Pb	Hg	Ni	Zn	B(a)P	total	C6-C9	C10-C36								
DP RESULTS (DECEMBER 2007)																					
GW101/090708	9/07/2008	<1	0.1	<1	1.8	5.2	<0.5	5.6	42	<1	<2	14	110	<1	1.6	<1	7.6	<PQL	<PQL	<0.05	63
GW103/090708		1.2	<0.1	<1	<1	<1	<0.5	6.5	**19**	<1	<2	**470**	<100	97	68	67	213	<PQL	<PQL	<0.05	39
GW/BD1/090708 [3]		1.2	<0.1	<1	<1	<1	<0.5	6.5	19	-	-	<10	-	<1	<1	<1	<3	-	-	-	-
GW103/280708	28/07/2008	-	-	-	-	-	-	-	-	-	-	<10	-	<1	<1	<1	<3	-	-	-	-
GIL [5]		13	0.54	2.5	3.5	13.6	0.6	27.5	20	ND		150	600	950	180	140	350	0.08/0.01/0.2/0.02/0.09	0.6/0.03	320	ND
GIL [6]			0.2	1.0	1.4	3.4		11	8.0												

Notes:

1	All Chromium are assumed to exist in the stable Cr(III) oxidation state, as Cr(VI) is too reactive and unstable under the normal environment
2	where results less than practical quantitative limit (PQL), quoted as less than PQL for most individual compounds
3	field replicate sample of sample listed directly above
4	In the order Chlordane, DDT, Endosulfan, Endrin, Heptachlor
5	For water of moderate hardness (GW101/090708) adjusted
6	For water of soft hardness (GW103/090708) unadjusted
-	not analysed/ not applicable
ND	not defined
BOLD	Exceeds GIL

11. ASSESSMENT OF LABORATORY RESULTS

11.1 Chemical Contaminants in Soil

Soil samples were assessed for a suite of potential contaminants of concern including heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn), TPH, BTEX, PAH, PCB, OCP, cyanide and phenols.

The elevated lead level and zinc levels in Sample 108/0.8-1.0 can be attributed to the metal fragments found in the filling in Bore 108 between 1.15 m and 3.0 m.

The laboratory results (Table 10) indicated that all contaminant concentrations in the soil samples analysed were generally low and were within the adopted SAC for commercial/ industrial land use.

11.2 Asbestos

Ten soil samples were analysed for asbestos. Asbestos was not detected in these samples. It should be noted that test bores are not effective in the identification of asbestos in soils. As construction debris (brick and concrete fragments) were noted in five of the nine bores, there is a potential for asbestos to be present in the filling.

11.3 Acid Sulphate Soil

Based on the screening results (Table 9), the samples tested were not likely to be ASS. It is considered that SPOCAS is not required.

11.4 Groundwater Results

Groundwater laboratory results (Table 10) indicated that contaminant concentrations were within the SAC or below the laboratory's practical quantification limits with the exception of zinc in both samples and GW103/090708 for which the following C_6-C_9 was detected at a

level of 470 ug/L compared to the adopted screen of 150 ug/L]. It is noted that the duplicate of sample GW103/0900708 (GW/BD1/090708) was found to be clean.

It is noted that heavy metals such as zinc are commonly detected at levels above the ANZECC (2000) guidelines in groundwater from urban areas, and can be sourced from leakage of pressurised water supply services and / or road runoff. To this end it is noted that all detected levels of zinc were well within the Australian Drinking Water Guideline (1996) of 3000ug/L.

Furthermore, there are no significant levels of zinc in the soil on the site to act as source of groundwater contamination. It is therefore likely the identified concentrations probably represent local background concentrations.

Discussions with the laboratory (Envirolab Services) indicated that the GW103/090708 C_6-C_9 fraction [470ug/L compared with the adopted screen of 150 ug/L] is attributable to the BTEX detected in the sample. It is noted that the BTEX detected was within the GILs. TPH was not detected in the two soil samples tested from this bore (103/0.2-0.4 and 103/2.2-2.5) or any of the soil samples tested from the other bores. There did not appear to be source of BTEX on the site. The bore was located on the north-western corner of the site, close to Pitt Street. The duplicate of GW103/090708 was found to be clean also.

A second round of development, purging and sampling for TPH (C_6-C_9) and BTEX was conducted from test bore 103. The analytical results (Table 11) for the second round of sampling were all below laboratory practical quantification limits.

Therefore, as a BTEX source could not be identified, the duplicate sample did not detect TPH or BTEX and TPH (C_6-C_9) and BTEX was not detected in the soil at the site, the first round of sampling from bore 103 is considered to be non-representative.

11.5 Waste Classification

Filling Material

Filling material on the site appears to have originated from various sources.

Based on the laboratory results, the filling encountered in the test bores is classifiable as GENERAL SOLID WASTE (in accordance with the DECC *Waste Classification Guidelines*, April 2008), provided that the material is not cross-contaminated with other material with the exception of sample 108/0.8-1.0.

At this stage, the light brown to red brown sand filling with crushed sandstone encountered at test bore 108 at approximately 0.8 – 1.0 m depth is classifiable as RESTRICTED SOLID WASTE (in accordance with the DECC *Waste Classification Guidelines*, April 2008) due to the leachable concentration of lead (6.8 mg/kg).
This result is most likely due to the metal fragments encountered in the bore between 0.5 m and 1.15 m.

The filling material was further evaluated to determine if the waste is putrescible or non-putrescible. On the basis that the filling material comprises general soil or roadbase, it is considered that the material is not capable of significant biological transformation and should be classified as GENERAL SOLID WASTE (NON-PUTRESCIBLE) with the exception of filling in the vicinity of Test Bore 108.

The filling material (except filling in the vicinity of Bore 108) should be disposed of to an appropriately licensed landfill as General Solid Waste (non-putrescible).

The bitumen and concrete materials are also classifiable as GENERAL SOLID WASTE (NON-PUTRESCIBLE) under the guidelines.

However, this is only a preliminary *in situ* waste classification. Further *ex situ* waste classification of the filling is recommended. It should be noted that building rubble was encountered in the test bores, thus, there is a potential for asbestos to be present in the filling.

Overall, it is recommended that upon excavation, filling material be stockpiled (one stockpile for filling in the vicinity of Test Bore 108 and a separate stockpile for filling over the rest of the site) for examination by a qualified Environmental Consultant to verify the a preliminary *in situ* waste classification.

Natural Material

The natural material encountered on the site comprises sandy clay and sandstone.

The levels of potential contaminants detected in the natural material sample analysed (Sample 103/2.2-2.5) were within the published background levels with following exceptions:

- Total lead detected (640 mg/L compared to the PPIL of 600 mg/L); and
- Total PAH detected (5.2 mg/L compared to the HIL of 1.0 mg/L).

The PAH level detected is most likely to be the background level.

The lead exceedance of the provisional phytotoxicity-based investigation levels (PPIL) (applies to plants) is only marginal. However, it is possible that the natural sample was adversely impacted by the overlying filling in the test bore. The soild flight auger drilling method used may have introduced filling material into the natural sample, particularly due to the nature of the sandstone and gravel filling. It is recommended that the VENM be examined upon excavation to evaluate its VENM status.

General

It is understood from DECC that, at the current stage, the operating licences of landfills may not have been revised/updated to reflect the new waste classification system. DECC, nevertheless, indicated that landfills with a current licence may continue to operate and receive waste types that are allowed under their current licences. In this regard, it is prudent to verify with the receiving landfill regarding the acceptability of the waste prior to its delivery.

It is noted that the above waste classification does not cover material on the site other than those specified above.

The current preliminary waste assessment was conducted broadly according to the 6 step process in the DECC *Waste Classification Guidelines* (2008). It should be noted that the *in situ* assessment is preliminary in nature. If at any time during excavation any signs of concern or contamination are noted (e.g. odours, staining) the affected material must be stockpiled separately for further validation by a qualified environmental consultant.

Please note that the validity of this assessment/classification is 12 months from the date of this report.

Note that appropriate prior arrangement with the receiving site/relevant authorities should be obtained prior to the disposal/reuse of any material off-site. Please contact either of the undersigned with any queries.

12. OVERALL CONCLUSIONS AND RECOMMENDATIONS

A review of historical information indicated that the site has been used for various commercial purposes from as early as 1788 when it was used for the manufacture of bricks. Since then it has been occupied by cattle and hay markets (approx 1830s), Belmore markets (approx 1860s), ''Hotel Sydney'' (approx 1918-1960). It is likely the site has been used as a car park since about 1994 until present. WorkCover records indicated that no dangerous goods had been registered for storage at the site.

The contaminant concentrations in the soil were below laboratory practical detection limits and within the health-based SAC for commercial/ industrial land use. Asbestos was not detected in the samples tested.

Based on the ASS screening results, the samples tested were not likely to be ASS.

Based on the laboratory results, the filling encountered in the test bores is classifiable as GENERAL SOLID WASTE (in accordance with the DECC *Waste Classification Guidelines*, April 2008), provided that the material is not cross-contaminated with other material with the exception of sample 108/0.8-1.0.

The filling material was further evaluated to determine if the waste is putrescible or non-putrescible. On the basis that the filling material comprises general soil or roadbase, it is considered that the material is not capable of significant biological transformation and should be classified as GENERAL SOLID WASTE (NON-PUTRESCIBLE) with the exception of filling in the vicinity of Test Bore 108.

The filling material (except filling in the vicinity of Bore 108) should be disposed of to an appropriately licensed landfill as General Solid Waste (non-putrescible).

The bitumen and concrete materials are also classifiable as GENERAL SOLID WASTE (NON-PUTRESCIBLE) under the guidelines.

Further *ex situ* waste classification of the filling is recommended. It should be noted that building rubble was encountered in the test bores, thus, there is a potential for asbestos to be present in the filling.

Overall, it is recommended that upon excavation, filling material be stockpiled (one stockpile for filling in the vicinity of Test Bore 108 and a separate stockpile for filling over the rest of the site) for examination by a qualified Environmental Consultant (particularly for metal fragments and asbestos impacted material) to verify the a preliminary *in situ* waste classification.

A lead exceedance was detected in the natural material sample tested (103/2.2-2.5). However, it is possible that the natural sample was adversely impacted by the overlying filling in the test bore. The soild flight auger drilling method used may have introduced filling material into the natural sample, particularly due to the nature of the sandstone and gravel filling. It is recommended that the VENM be examined upon excavation to evaluate its VENM status.

DP recommend further groundwater sampling at Bore 103 during the construction stage to further verify the second round of results for TPH and BTEX.

On the basis of the investigation findings, DP considers the potential for contamination associated with the soil and groundwater at the site to be low and considers the site suitable for the proposed development (given that most of the filling is to be removed for the basement excavation), provided that groundwater is sampled from Bore 103 during the construction stage and verifies the second round of groundwater results (TPH and BTEX detected below the adopted screening criteria).

13. LIMITATIONS OF THIS REPORT

The scope of the site assessment activities and consulting services undertaken by DP were limited to those detailed in the proposal dated 4 June 2008 and accepted by Mr Santo Ragusa of Energy Australia.

DP's assessment is necessarily based upon the result of a limited site investigation and the restricted programme of surface and subsurface sampling, screening and chemical testing which was set out in the proposal. DP cannot provide unqualified warranties with regards to site contamination nor does DP assume any liability for site conditions not observed or accessible during the time of the investigations.

Despite all reasonable care and diligence, the ground conditions encountered and concentrations of contaminants measured may not be representative of conditions between the locations sampled and investigated. In addition, site characteristics may change over time due to activities such as spillages of contaminating substances. These changes may occur subsequent to DP's investigations and assessment.

This report, its associated documentation and the information herein have been prepared solely for the use of Energy Australia. Any reliance assumed by third parties on this report shall be at such parties' own risk.

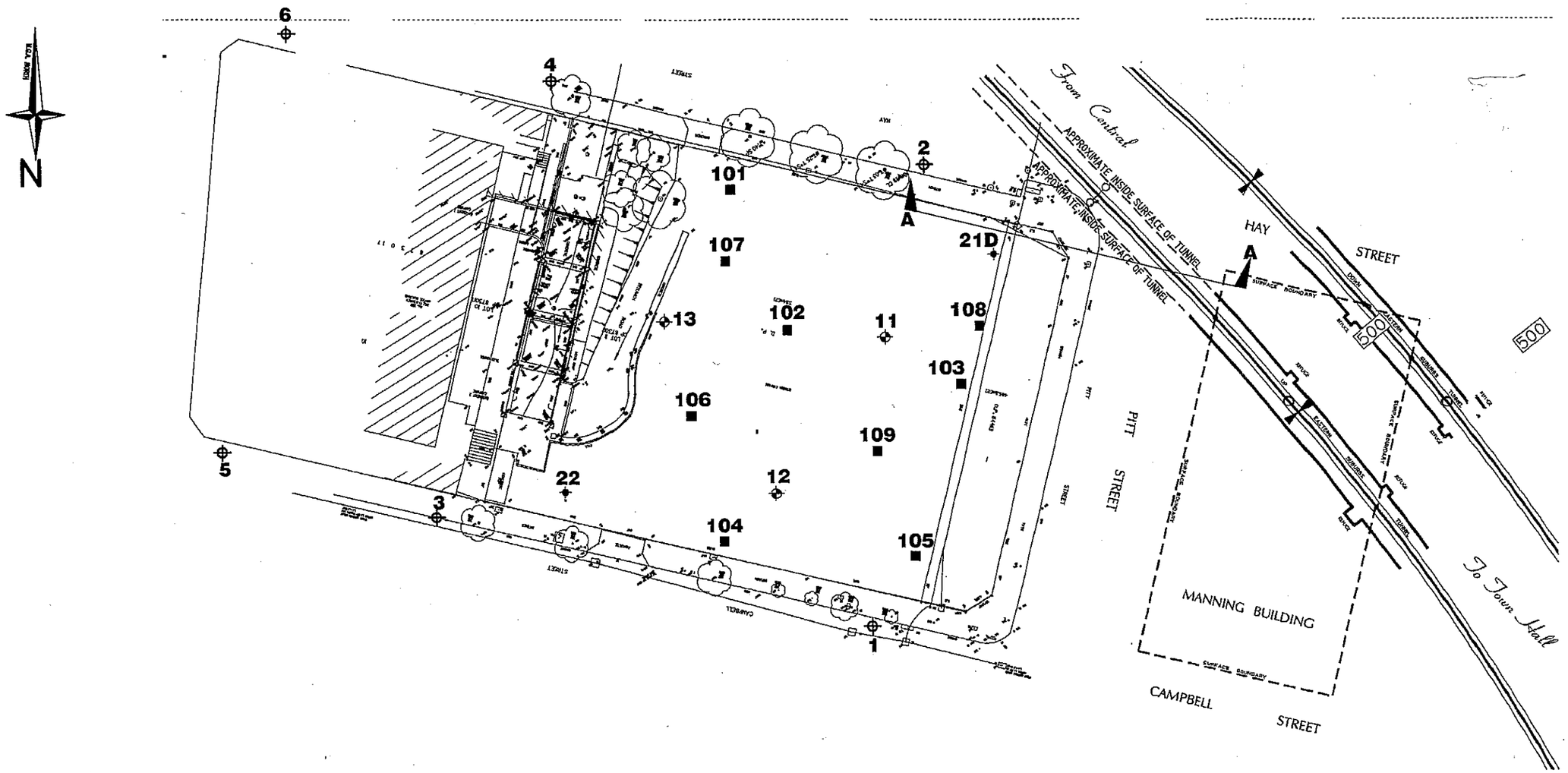
DOUGLAS PARTNERS PTY LTD

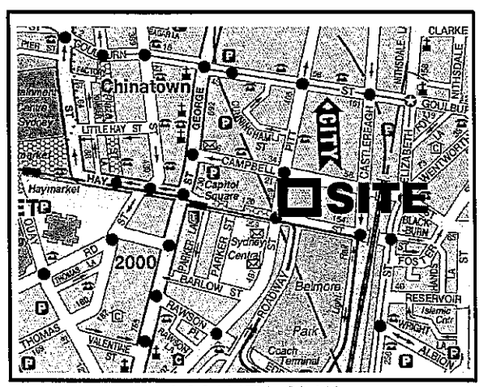
Reviewed by

Jessica Derrien
Environmental Scientist

Ronnie Tong
Principal

APPENDIX A
Site Drawing





LOCALITY PLAN

Douglas Partners
Geotechnics · Environment · Groundwater

CLIENT: Energy Australia		OFFICE: SYDNEY	TITLE: Location of Test Bores Proposed Belmore Park Zone Substation Central Square, Cnr.Pitt, Campbell & Hay Streets SYDNEY
PROJECT No: 36569.03		DRAWN BY: PSCH	DRAWING No: 1
DATE: 17.7.2008	SCALE: As shown	APPROVED BY:	

P:\36569.03 HAYMARKET BELMORE PARK SUBSTATION, Geotechnical and Environmental Investigation GSYDrawings\36569.03-1.dwg, 7/17/2008 10:07:54 AM

APPENDIX B
Site Photographs

PHOTO 1: Site toward the south. Note Belmore Park and Central Railway Station in the background.

PHOTO 2: Site toward the east. Note the large commercial building on the neighbouring lot.

PHOTO 3: Site toward the west. Note the neighbouring commercial buildings.

PHOTO 4: Conditions encountered in Bore 106. Large boulders were visible within a void at approximately 1.5 m bgl

APPENDIX C
Site History Information
Results of DNR Search

ACN: 093 398 611
ABN: 61 093 412 474

Peter S. Hopley Pty Limited
Legal Searchers

1 Boronia Avenue
Mount Annan , NSW , 2567
Mobile: 0412 199 304
Fax 9233 4590 (Attn Box 29)

SUMMARY AS TO OWNERS.

Property: - Campbell Street, Sydney

Description: Lot 1 D.P. 844119 and Lot 2 D.P. 1109323

As regards Lot 2 D.P. 1109323

An investigation of the various records available for our inspection disclosed that these parcels of land were vested in the Council of the City of Sydney pursuant to the Sydney Corporation (Amendment) Act, 1908 and then subsequently by the Local government (Areas) Act, 1948.

Based on our investigations it would appear that his land was in Council ownership from prior to 1931. Date unknown

This site was also in use as Cattle Markets in the 1800's

1931 (? Earlier)	Council of the City of Sydney	1/830511
10.01.1994	MKH Properties Pty Limited	2/1109323
16.03.2007	# Energy Australia	2/1109323

 # Current Registered Proprietor

email: grolly1@bigpond.net.au

16/7/08

ACN: 093 398 611
ABN: 61 093 412 474

Peter S. Hopley Pty Limited
Legal Searchers

1 Boronia Avenue
Mount Annan , NSW , 2567
Mobile: 0412 199 304
Fax 9233 4590 (Attn Box 29)

As regards Lot 1 D.P. 844119

An investigation of the various records available for our inspection disclosed that these parcels of land were vested in the Council of the City of Sydney pursuant to the Sydney Corporation (Amendment) Act, 1908

This parcel was also formerly part of Pitt Street which was revoked by notification in Government Gazette dated 04.03.1994 Folio 1087.

04.03.1994	Council of the City of Sydney	1/844119
23.12.1996	CNC Properties Pty Limited	1/844119
23.02.2007	# Energy Australia	1/844119

 # Current Registered Proprietor

email: grolly1@bigpond.net.au

16/7/08

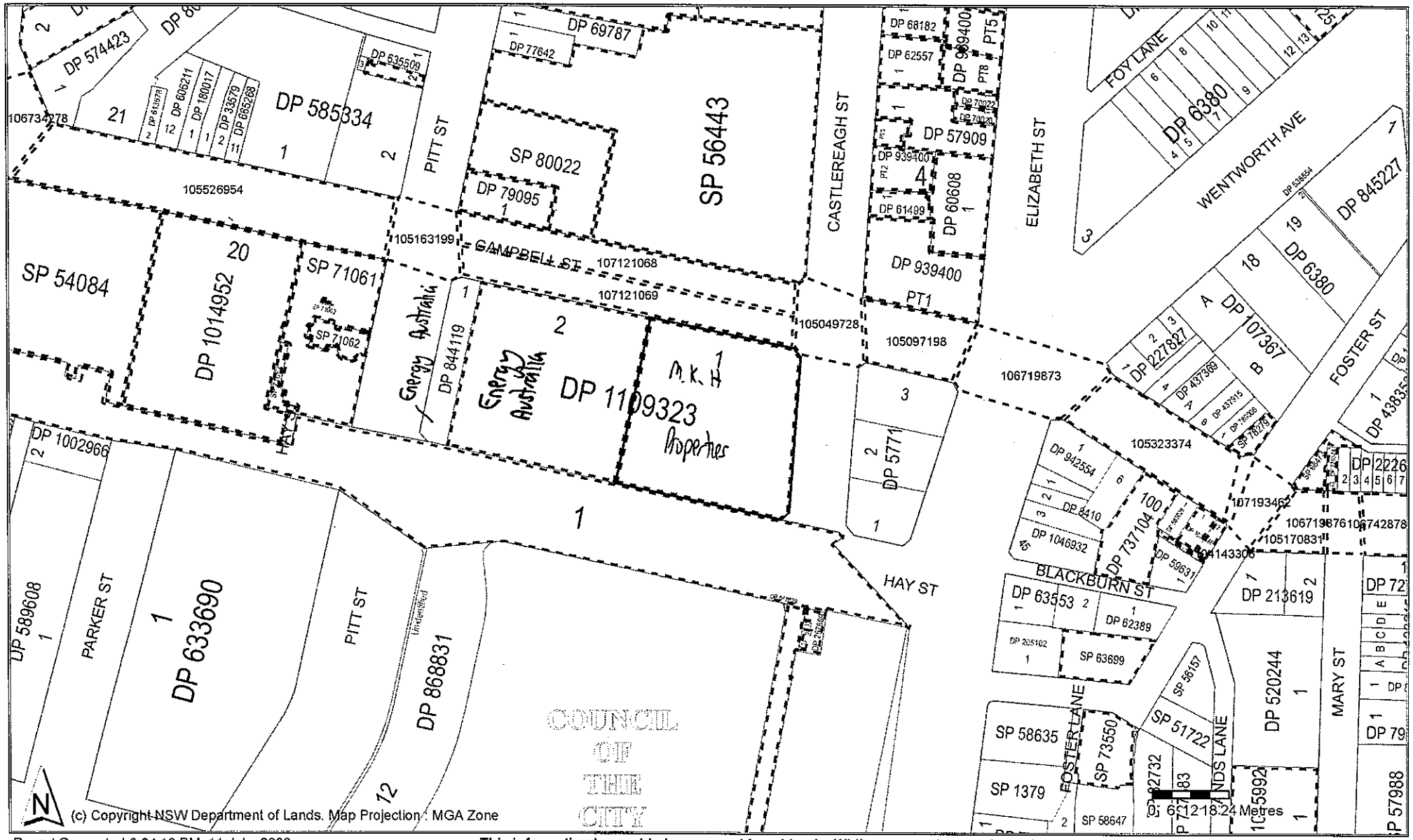
Department of Lands
Reliable from the ground up

Cadastral Records Enquiry Report

Ref : surv:scim-grollm

Requested Parcel : Lot 1 DP 1109323 **Identified Parcel :** Lot 1 DP 1109323

Locality : HAYMARKET **LGA :** SYDNEY **Parish :** ST LAWRENCE **County :** CUMBERLAND



Report Generated 6:24:12 PM, 11 July, 2008

This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.

PLAN FORM 2

Plan Drawing only to appear in this space

SIGNATURES, AND SEALS ONLY

Dated at Sydney this 15 Day of February 2007
Executed by Australia and New Zealand Banking Group Limited (ACN 005 357 522) signed by its Attorney Luke Dao Chuan Lee who certifies that he is Manager Property & Construction Finance pursuant to Power of Attorney Registered No. 564 Book 4388

Signed in the presence of ________ (Signature)

Kelvin Chan (Print Name)

Bank Officer (Title)

MKH Properties Pty Limited ACN 061 310 073 by its duly authorised Attorney Christopher Jude Thompson pursuant to Power of Attorney dated 31 January 2007 Registered Book 4508 No. 848

C.J.

Department of Land and Water Conservation Approval

I .... (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the landshown hereon have been given.

Signature: ....

Date: ....

File Number: ....

Office: ....

Subdivision Certificate

I certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed subdivision set out herein

*(insert 'subdivision' or 'new road')

* Authorised Person/~~General Manager/Accredited Certifier~~

Consent Authority: City of Sydney

Date of endorsement: 14 February 2007

~~Accreditation no:~~

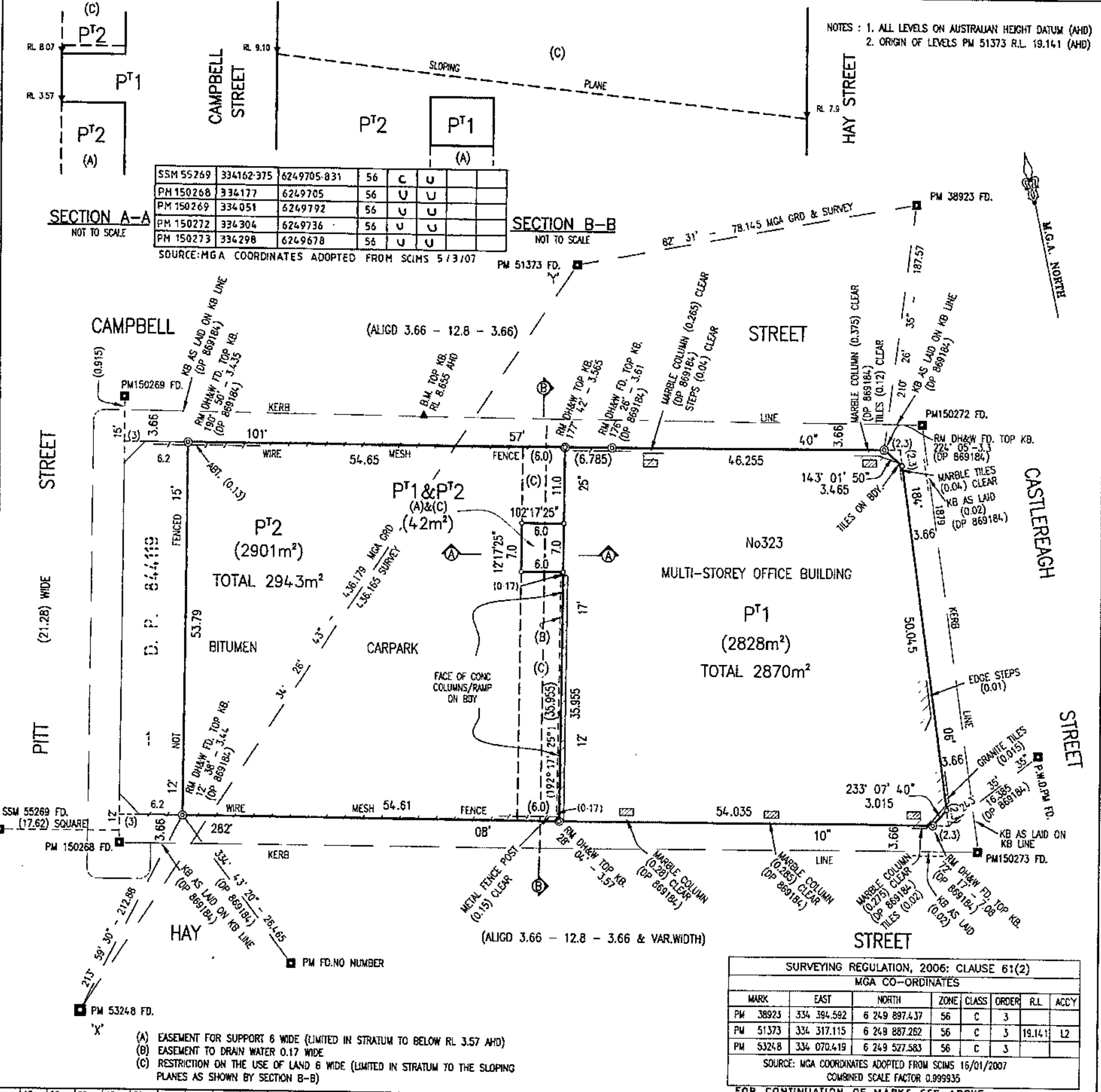
Subdivision Certificate no: 61/2006

File no: S2006/00044

Note:
When the plan is to be lodged electronically in the Land Titles Office, it should include a signature in an electronic or digital format approved by the Registrar-General.

* Delete whichever is inapplicable.

SURVEYOR'S REFERENCE: 020419 DP



SSM 55269	334162·375	6249705·831	56	C	U			
PM 150268	334177	6249705	56	U	U			
PM 150269	334051	6249792	56	U	U			
PM 150272	334304	6249736	56	U	U			
PM 150273	334298	6249678	56	U	U			

SOURCE: MGA COORDINATES ADOPTED FROM SCIMS 5/3/07

(A) EASEMENT FOR SUPPORT 6 WIDE (LIMITED IN STRATUM TO BELOW RL 3.57 AHD)
(B) EASEMENT TO DRAIN WATER 0.17 WIDE
(C) RESTRICTION ON THE USE OF LAND 6 WIDE (LIMITED IN STRATUM TO THE SLOPING PLANES AS SHOWN BY SECTION B-B)

SURVEYING REGULATION, 2006: CLAUSE 61(2)

MGA CO-ORDINATES

MARK		EAST	NORTH	ZONE	CLASS	ORDER	R.L.	ACCY
PM	38923	334 394.592	6 249 897.437	56	C	3		
PM	51373	334 317.115	6 249 887.262	56	C	3	19.141	L2
PM	53248	334 070.419	6 249 527.583	56	C	3		

SOURCE: MGA COORDINATES ADOPTED FROM SCIMS 16/01/2007
COMBINED SCALE FACTOR 0.999935

FOR CONTINUATION OF MARKS SEE ABOVE

Table of mm

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

* OFFICE USE ONLY

DP1109323

Registered: 7/3/2007

C.A.:

Title System: TORRENS

Purpose: SUBDIVISION

Ref.Map: U1845-4122 & 4124
PARISH

Last Plan: DP873017

PLAN OF SUBDIVISION OF LOT 10 & 11 IN D.P. 873017

Lengths are in metres. Reduction Ratio 1:400

LGA: SYDNEY

Locality: HAYMARKET

Parish: ST.LAWRENCE

County: CUMBERLAND (49)

This is ~~sheet 1 of my plan in~~ sheets (Delete if inapplicable)

SURVEYING REGULATION, 2006

KARL ROBERTSON

of Level 5, 17 RANDLE ST, SURRY HILLS 2010 a surveyor registered under the Surveying Act, 2002, certify that the survey represented in this plan is accurate, has been made in accordance with the Surveying Regulation, 2006 and was completed on 16/01/2007.
The survey relates to: LOTS 1 & 2.

(specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey)

Signature: Dated: 16/1/07

Surveyor registered under the Surveying Act, 2002

Datum Line: 'X' - 'Y'

Type: Urban /~~Rural~~

Plans used in preparation of survey/~~compilation~~
D.P.'S 869184
873017

PANEL FOR USE ONLY for statements of intention to dedicate public roads, to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants

PURSUANT TO SEC. 88B OF THE CONVEYANCING ACT 1919 AND SECTION 7(3) OF THE STRATA SCHEMES (FREEHOLD DEVELOPMENT) ACT 1973 IT IS INTENDED TO CREATE:

1. EASEMENT FOR SUPPORT 6 WIDE (LIMITED IN STRATUM) (A)
2. EASEMENT TO DRAIN WATER 0.17 WIDE (B)
3. RESTRICTION ON THE USE OF LAND 6 WIDE (LIMITED IN STRATUM) (C)

IT IS INTENDED TO RELEASE:

1. EASEMENT FOR SERVICES ~~AFFECTING THE WHOLE OF THE LAND~~ (D.P.873017).
2. EASEMENT FOR SUPPORT & SHELTER ~~AFFECTING THE WHOLE OF THE LAND~~ (D.P.873017).
3. RIGHT OF ACCESS VARIABLE WIDTH ~~LIMITED IN HEIGHT & DEPTH A~~ (D.P.873017).
4. EASEMENT FOR GAS VARIABLE WIDTH ~~W~~ (D.P.869184).

PLAN AMENDED 06/03/2007

X:\02JOBS\020419-PITT & HAY ST SYDNEY\020419 sp-final.dwg

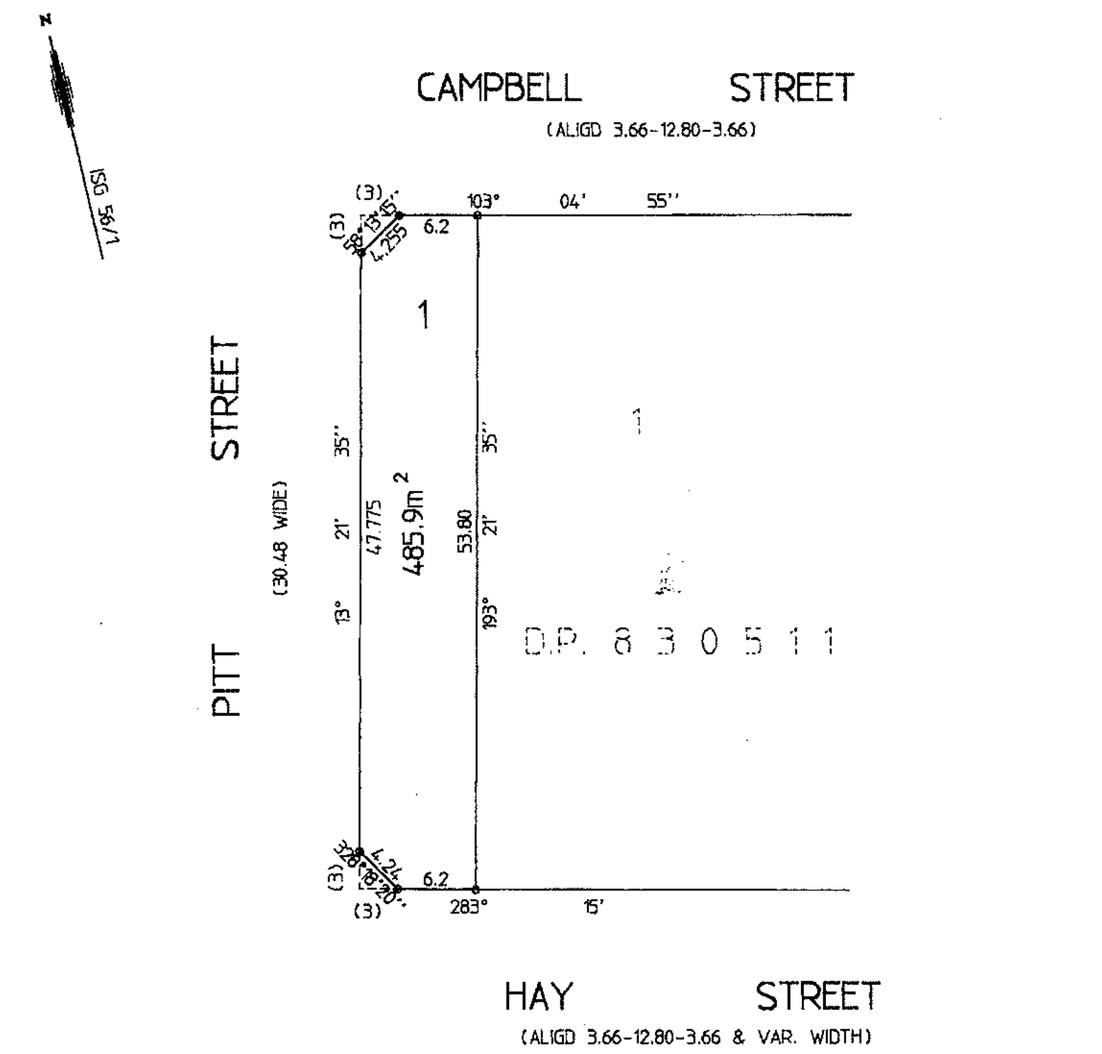
Req:R607563 /Doc:DP 1109323 P /Rev:09-Mar-2007 /Sts:SC.OK /Prt:15-Jul-2008 19:30 /Pgs:ALL /Seq:1 of 1
Ref:DERRIEN /Src:B

PLANFORM 1

Plan Drawing only to appear in this space

OFFICE USE ONLY

SIGNATURES, SEALS AND STATEMENTS of intention to dedicate public roads or to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.



Crown Lands Office Approval

PLAN APPROVED ....
Authorised Officer

Land District ....
Paper No. ....
Field Book .... pages.......

Council's Certificate

I hereby certify that -
(a) the requirements of the Local Government Act, 1919 (other than the requirements for the registration of plans), and
*(b) the requirements of † Part 3 Division 2 of the Water Board Act 1987, or † Part 5 Division 7 of the Hunter Water Board (Corporatisation) Act 1991

have been complied with by the applicant in relation to the proposed ....
(insert 'new road', 'subdivision' or 'consolidated lot') set out herein

Subdivision No. ....
Date ....
(Signature) ....
General Manager / Authorised Person
Council File No. ....

*This part of the certificate to be deleted where the application is only for a consolidated lot or the opening of a new road or where the land to be subdivided is wholly outside the areas of operations of the Metropolitan Water Sewerage and Drainage Board and the Hunter District Water Board.
† Delete if inapplicable.

SURVEYOR'S REFERENCE

10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	Table of mm

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION MPD.

DP 844119

Registered : 8·11·1994

C.A. :

Title System : CROWN LAND

Purpose : ROADS ACT 1993

Ref. Map : PARISH #

Last Plan :

PLAN
OF PART OF PITT STREET (VESTED IN SYDNEY CITY COUNCIL BY SEC.30 SYDNEY CORPORATION ACT No.27, 1908 SCHEDULE TWO) CREATING LOT 1

Lengths are in metres. Reduction Ratio 1:400

L.G.A. : SYDNEY CITY
Locality : HAYMARKET
Parish : ST. LAWRENCE
County : CUMBERLAND (49)

Plans used in preparation of ~~survey~~/compilation
D.P.830511

I, Thomas John CLARKE
of Sydney City Council
a surveyor registered under the Surveyors Act 1929, ~~hereby certify that the survey represented in this plan~~ is accurate and has been ~~made in accordance with the Survey Practice Regulation 1990 and was completed on~~
25th JULY 1994
Signature
Surveyor registered under Surveyors Act 1929, as amended.

Datum Line of Azimuth.
Insert date of survey.

S1-431/56

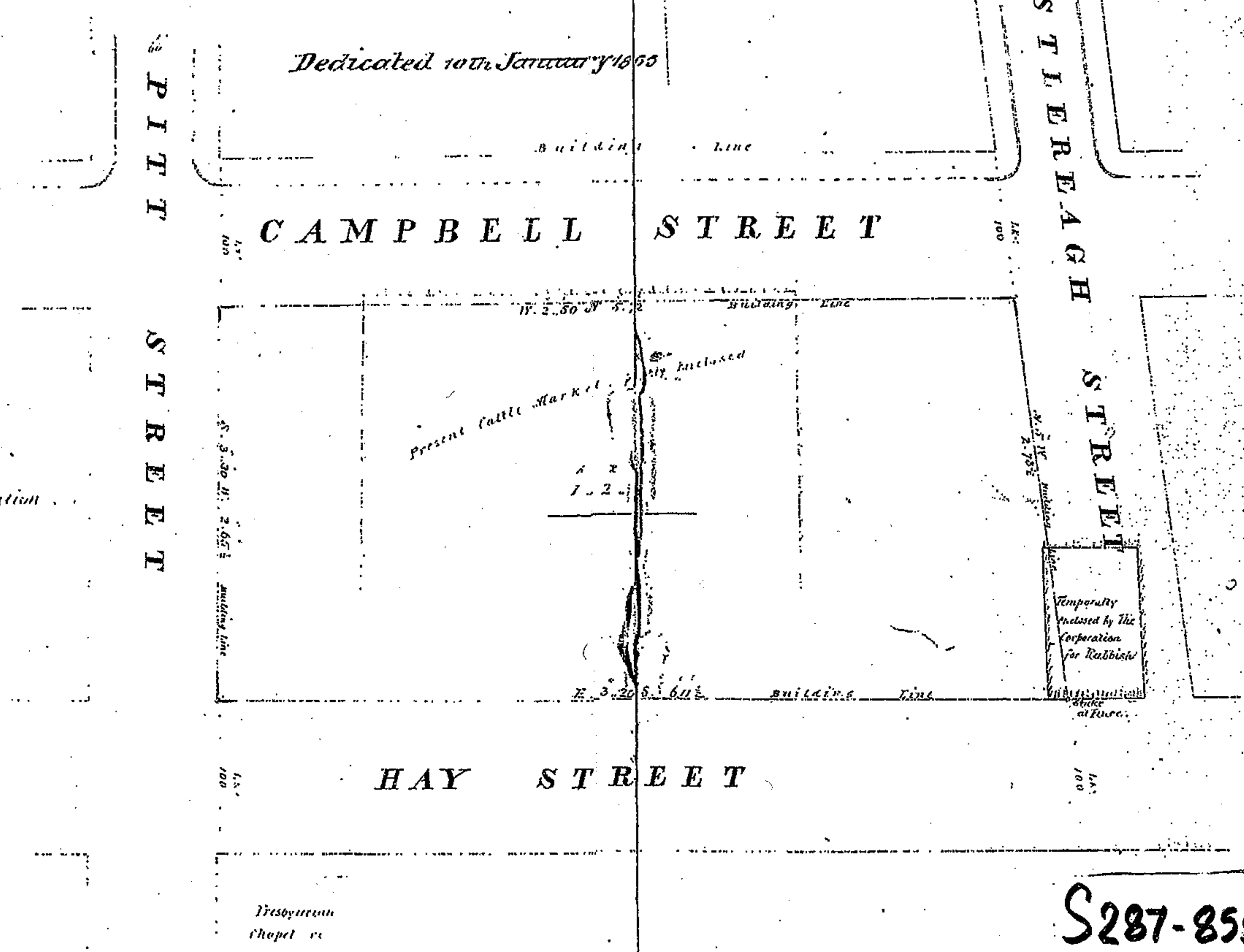
ATMPF1 BBA3

1 R 1 0 0 2

1223
63.

PLAN of an Allotment of Land containing 1 . 2 . 13 , situate between Pitt, Castlereagh, Campbell, and Hay Streets .. appropriated as additional Market Accommodation for the City of Sydney.

Parish of St. Lawrence



Transmitted to the Acting Surveyor General with letter dated April 11. 1863 No. 63/17

Jno. Armstrong L.S.

Scale ... 80 links to 1 inch

S287-858

URGENT MATTER

PA 063544 A

OFFICE OF STATE REVENUE (N.S.W. TREASURY) 1992/93 SG NO STAMP DUTY IS PAYABLE ON THIS INSTRUMENT

PRIMARY APPLICATION

SECTION 14, REAL PROPERTY ACT, 1900

CAUTION.—Severe penalties are provided by the Crimes Act, 1900, and the Real Property Act, 1900, for procuring a certificate of title through fraud.

$

(a) APPLICANT

THE COUNCIL OF THE CITY OF SYDNEY
Of Town Hall, Sydney Square, Sydney, 2000.

hereby applies to have the undermentioned land brought under the provisions of the Real Property Act, 1900

All that piece of land situated at Sydney County of Cumberland Parish of St. Lawrence
being(b) Lot 1 in Deposited Plan No. 830511

and being the whole(c) / ~~part~~ of(d) land vested in the ~~granted to~~(e) former Municipal Council of Sydney by the Sydney Corporation (Amendment) Act, 1908 (Act No. 27, 1908) Section 25, Schedule 1 Section C subsequently vested in the Applicant by the Local Government (Areas) Act, 1948 (Act No. 30 of 1948) Section 11. ~~by Crown grant dated...../...../.....~~

and requests that the folio of the Register issue in the name of

(f) the Applicant

as ~~joint tenants/tenants in common~~(g)

and in support of this application I/~~We~~(h) GRAHAM JOSS of Town Hall House, Sydney Square, Sydney, 2000 solemnly and sincerely declare that—

1. The applicant is seised for an estate in (1) fee simple(i) / (2) ~~possession of the abovedescribed land~~ / (3) life estate
2. There is no person in possession or occupation of the said land or any part thereof adversely to the estate or interest therein of the applicant.
3. The said land is now(j) occupied by the persons specified in the First Schedule as occupiers. / ~~unoccupied~~
4. There does not exist any lease or agreement for lease of the said land for any term exceeding a tenancy for one year, or from year to year, except as set out in the First Schedule.
5. There does not exist any right of way, right of drainage or other easement or any restrictive covenant affecting the said land, except as disclosed in the First Schedule.
6. There does not exist any mortgage, lien, writ of execution, order, charge, encumbrance, will, settlement, deed, writing, contract, or dealing giving any right, claim or interest in the said land, or any part thereof, to any person other than the applicant except as set out in the First Schedule; nor, to the best of my knowledge and belief, is there any action, proceeding or suit pending which affects or could affect the said land, or any person other than the applicant who has or claims any estate, right, title or interest therein, except as disclosed in the First Schedule.(k)
7. There is no resumption or instrument whereby minerals or substrata have been excepted or reserved to any person, except as disclosed in the First Schedule.
8. The Second Schedule contains a full and correct list(l) commencing from Book 2921 No. 841.

of all settlements, deeds, documents, instruments, maps, plans and papers relating to the said land so far as I have any means of ascertaining them. All such documents as are in my possession or under my control are lodged herewith; the whereabouts of all other documents listed, so far as is known to me, is stated in such list.

9. The applicant has not become bankrupt or assigned his estate for the benefit of creditors.

10. The information shown in the Schedules hereto is to be taken as part of this declaration.

11. Searches and inquiries for those documents shown as whereabouts unknown, and referred to in the Second Schedule as Nos ....., have been made at the premises of the applicant, previous and present lending institutions, solicitors and agents and have not been lodged with any person or corporation as security for a loan or for any purpose whatsoever.

12. I have been authorised by power of attorney No. 963 Book 3506 dated the 21st day of April 19 82 to make this application on behalf of the applicant, and I have received no notice of revocation of such authority.(l)

I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act, 1900,(m) and certify this application to be correct for the purposes of the Real Property Act, 1900,(n) and I hereby undertake to notify the Registrar General promptly of any further interest in the said land created after the making of this my declaration and before issue of the certificate of title.

DATE 20 May 1993.

Maria Williams, J.P.
Signature of witness

MARIA WILLIAMS
Name of witness (BLOCK LETTERS)

JUSTICE OF THE PEACE
Qualification of witness (o)

Applicant, or authorised agent of applicant(o)

CONSENT OF MORTGAGEE

MW

, being the mortgagee under mortgage registered Book Number , hereby joins in and consents to this application subject to:

(i) entry on the folio of the register to be created and on the certificate of title to issue of a notification relating to such mortgage,(p) AND

(ii) delivery to me of the certificate of title.

Witness

Mortgagee

FIRST SCHEDULE

PARTICULARS OF SUBSISTING INTERESTS (LEASES, EASEMENTS, MORTGAGES AND OTHER MATTERS REFERRED TO IN CLAUSES 3 TO 7 INCLUSIVE OF DECLARATION)

Full name and address (of occupier, lessee, mortgagee, etc.)	Nature of entitlement ("occupier", "lessee", "mortgagee", etc.)	Particulars of instrument (if any) by which entitlement created(q)
SEE ANNEXURE A		

SECOND SCHEDULE

063544

(See notes on back page hereof)

B

DOCUMENTS REFERRED TO IN CLAUSE 8 OF DECLARATION

To be completed by declarant

Documents Nos. hereunder LODGED HEREWITH

Documents Nos. hereunder WHEREABOUTS UNKNOWN see clause 11 of declaration

Documents Nos. hereunder PERMANENTLY LODGED

Receipt Nos.

Documents Nos. hereunder TO BE LODGED BY:

List each chain of title separately

Schedule should commence from a good root of title

No.	Date	Nature of document	Parties	Registration	
				Book	No.
			SEE ANNEXURE "B"		

If space is insufficient, add annexure sheet(s)

Ref:DERRIEN /Src:B

DEPARTMENTAL USE ONLY

PRIMARY APPLICATION

TO BE COMPLETED BY LODGING PARTY

Lodged by

BLAKE DAWSON WALDRON
Solicitors
225 George Street
SYDNEY NSW 2000

Tel. 258.6566
Ref: Mr. I.E. Cribb

Delivery Box Number 238N

INSTRUCTIONS FOR COMPLETION

Typewriting and handwriting should be clear, legible and in permanent black non-copying ink. No alterations should be made by erasure; the words rejected must be ruled through and verified by signature or initials in the margin.

(a) Full name and postal address of person or corporation entitled to the land.
(b) Give an adequate description of the land, e.g. "Lot ..... in Deposited Plan .....". If an appurtenant easement is claimed, the deed creating it should be disclosed and an adequate description of its location should be given; its location should also be shown on the plan.
The application should be accompanied by a plan of survey unless the Registrar General has previously dispensed therewith.
(c) Delete whichever is inapplicable.
(d) Insert reference to portion or allotment, or if none, to number of acres granted.
(e) Name of grantee.
(f) If the folio of the Register is required to issue in favour of the applicant, insert "the applicant"; otherwise here insert the full name of the person or corporation in whose name the certificate of title is to issue. In the case of a person, the full postal address occupation should be stated.
(g) See Section 26 Conveyancing Act 1919.
(h) Full name and address of declarant.
(i) Delete whichever is inapplicable.
(j) Should any transaction affecting the land in this application be entered into or any alterations in the building or fences be made subsequent to the date of the application, but prior to the issue of the folio of the Register, the Registrar General should be informed immediately, and all documents evidencing such transaction should be lodged.
(k) The declaration may be qualified, e.g. by inserting the words "commencing with conveyance dated ..... registered Book ..... No. ....." or as the case may be. See also notes.
(l) Delete this clause if inapplicable.
The relevant power of attorney or other such authority should be lodged with the application.
(m) If made outside N.S.W., strike out Oaths Act, 1900 and insert reference to local Act.
(n) Any person falsely or negligently certifying is liable to the penalties provided by section 117 of the Real Property Act, 1900.
(o) **The application is a statutory declaration and must be made before a prescribed functionary. Attention is drawn to the penalties provided by law for any false statement therein.**
(p) Delete whichever is inapplicable.
(q) Where the whole or any part of the land is occupied by a tenant state also the nature and duration of the tenancy.

NOTES

Documents to be scheduled

This application should be marked by the Stamp Duties Division, Office of State Revenue before lodgment by hand at the Land Titles Office.
Where an applicant claims an estate in fee simple by virtue of a documentary title the Second Schedule should commence with a good root of title at least thirty years old or with a later deed which has already been accepted by the Registrar General in an earlier application. Clause 8 of the declaration should be suitably amended.

Where the applicant claims title by possession the devolution of the documentary title of the person(s) against whom possession is asserted should be shown in the Second Schedule.

Where the applicant claims the benefit of an appurtenant easement the Second Schedule should contain a reference to:

* the deed by which the grantor of the easement acquired title to the servient tenement, and

* the deed by which the easement was created.

The applicant will be required to establish (e.g., by production of searches) that (i) the grantor of the easement had a good title to the servient tenement; and (ii) the easement has not been determined by surrender, union of tenements or otherwise.

Documents to be lodged

Upon lodgment the application should be accompanied by:

* all deeds and other documents evidencing the devolution of title from the abovementioned commencing point;

Deeds and other documents which relate to the period prior to the selected commencing point should not be scheduled in or lodged with this application but should be retained in case their subsequent production should be required.

* any abstract(s) of title in the applicant's possession covering the relevant period ; and

* searches showing the result of searches in the general register of deeds, the register of causes, writs and orders, the register of resumptions and the bankruptcy registers.

Searches

The searches obtained when the applicant or a predecessor in title acquired the land in the application will suffice provided that they commence with a good root of title at least thirty years old or with a later deed already accepted by the Registrar General in an earlier application and, in either case, have been brought up to date or to a recent date. In the case of an application based on possession the searches should show not only the devolution of the documentary title (which in most cases will need to be traced from the Crown grant) but also the result of searches against the applicant and his predecessors in possession.

Applicants based upon possession

There is available upon request at the Customer Services Branch a departmental circular containing directions for the guidance of applicants who claim title by possession.

Destruction of documents lodged with the application

Upon the issue of the folio of the Register the Registrar General will as a general rule destroy those documents which exclusively affect the land in the application (and which accordingly will be totally cancelled pursuant to Section 23A (2), Real Property Act, 1900). However, documents which would otherwise be destroyed may be returned upon request to interested persons. The request (in writing) should specify the documents to be returned and should be made before the processing of the application has been completed.

063544

ANNEXURE 'A'

This is the Annexure "A referred to in a Primary Application dated the 20th day of May 1993 submitted on behalf of THE COUNCIL OF THE CITY OF SYDNEY

Rocco Antonio Musumeci and Maria Musumeci of 50 Russell Street, Five Dock	Lease Bk 3795 No 497 Doc 20 Annexure "B"	Level 3, Suite 1,- term 6 years from 4 July, 1989 to 3 July, 1995 No option	2
Golden Manly Management Services Pty Limited (ACN 003 510 585) of 283 Main Street. Katoomba	Lease Bk 3864 No 575 Doc 21 Annexure "B"	Level 3, Suite 3, - term 2 years from 17 July, 1991 to 16 July, 1993 - Option 2 years	4
Golden Manly Management Services Pty Limited (ACN 003 510 585) of 283 Main Street, Katoomba	Lease Bk 4005 No 547 Doc 23 Annexure B	Level 3, Suites 2 and 4,- term 1 year and 46 days from 1 June, 1992 to 16 July, 1993, - Option 2 years	6
National Australia Bank Limited of 225 George Street, Sydney	Lease Bk 3738 No 10 Doc 19 annexure "B"	Level 4, Suites 1 and 2, - term 6 years from 19 November, 1987 to 18 November, 1993	1 No option
Stopanska Banka–Skopje (ARBN 001 372 210) of Suite 3 Level 4, Central Square Building, Sydney	Lease Bk 3869 No 618 Doc 22 Annexure "B"	Level 4, Suite 3, - term 4 years from 1 May, 1990 to 30 April, 1994	5
Commonwealth of Australia	Lease Bk 3858 No 34 Doc 26 Annexure "B"	Level 19, Suite 2, - term 6 years from 1 April, 1989 to 31 March, 1995 - Option 6 years	3
Orion Open Systems Pty Limited (ACN 002 831 585) of	Lease Bk 4005 No 998 Doc 24 Annexure "B"	Level 20, Suite 4, - term 6 years from 1 August, 1992 to 31 July, 1998 - Option 4 years	8
Alfred Teng Kat Kok of 85 Fingal Avenue, Glenhaven	Lease Bk 4005 No 791 Doc 25 Annexure "B"	Level 20, Suite 5, - term 3 years from 27 November, 1992 to 26 November, 1995 - Option 3 years.	9
James Neil Adams of 10 Woodland Avenue, Blakehurst	Lease Bk 4016 No 97 Doc 27 Annexure "B"	Level 20, Suite 6, - term 2 years from 22 November, 1992 to 22 November, 1994 - Option 2 years	10

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19/5/93

Maria Williams

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Infolink Network Services Pty Limited Pty Limited (ACN 002 864 894)	Lease Bk 4016 No 96 Doc 28 "A" Annexure B	Level 20, Suites 8A and 8B, - term 6 years from 1 January, 1993 to 31 December, 1998

NOTE: All above documents were originally granted as Sub-Leases but are now Leases by operation of law following surrender of the Head Lease.

Maria Williams

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IEC
19/5/93

063544

ANNEXURE 'B'

This is the Annexure "B" referred to in a Primary Application dated the 24th day of May 1993 submitted on behalf of THE COUNCIL OF THE CITY OF SYDNEY

No.	Date	Nature of Document	Parties	Book	No.
1.	18 December, 1968	Lease (Term of 50 years from 18 December, 1968)	The Council of the City of Sydney to Lend Lease Development Pty Limited Registered 27 March, 1969	2921	841
2.	29 October, 1970	Assignment of Lease Book 2921 No. 841	Lend Lease Development Pty Limited to Perco Limited Registered 14 November, 1970	2992	237
3.	29 October, 1970	Mortgage of Lease Book 2921 No. 841	Perco Limited to J. Henry Schroder Wagg & Co. Limited Registered 24 November, 1970	2992	238
4.	29 April, 1971	Mortgage of Lease Book 2921 No. 841	Perco Limited to J. Henry Schroder Wagg & Co Limited Registered 6 May, 1971	3009	53
5.	10 March, 1972	Mortgage of Lease Book 2921 No. 841	Perco Limited to Property Holdings International Limited Registered 28 June, 1972	3054	431
6.	10 March, 1972	Mortgage of Lease Check No 8	Perco Limited to Lend Lease Development Pty Limited Registered 28 June, 1972	3054	520
7.	10 March, 1972	Assignment of Lease Book 2921 No. 841	Perco Limited to Kerry Company Limited Registered 28 June, 1972	3054	522
8.	6 June, 1972	Discharge of Mortgage of Lease Book 2992 No. 238	J. Henry Schroder Wagg & Co. Limited to Perco Limited Registered 11 July, 1972 (Registration endorsed on Deed Book 2992 No. 238)	3055	902
9.	6 June, 1972	Discharge of Mortgage Book 3009 No. 53	J. Henry Schroder Wagg & Co. Limited and Perco Limited Registered 11 July, 1972 (Registration endorsed on Deed Book 3009 No. 53)	3055	903

dis Bk 3055 No 902

dis Bk 3055 No 903

dis Bk 3055 No 904

dis Bk 3055 No 905

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19/5/93

J Maria Williams

063544

10.	29 June, 1972	Discharge of Mortgage of Lease Book 3054 No. 431	Property Holdings International to Kerry Company Limited Registered 11 July, 1972 (Registration endorsed on Deed Book 3054 No. 431)	3055	904
11.	29 June, 1972	Discharge of Mortgage of Lease Book 3054 No. 520	Lend Lease Developments Pty Limited to Perco Limited Registered 11 July, 1972 (Registration endorsed on Deed Book 3054 No. 520	3055	905
12.	29 June, 1972	Assignment of Lease Book 2921 No. 841	Kerry Company Limited to Burns Philp Trustee Company Limited (as Trustee for General Property Trust) Registered 11 July, 1972	3055	906
13.	29 June, 1972	Mortgage of Lease Book 2921 No. 841	Burns Philp Trustee Company Limited to Bank of New South Wales Registered 11 July, 1972	3055	907
14.	28 June, 1977	Discharge of Mortgage of Lease	Bank of New South Wales Limited to Burns Philp Trustee Company Limited Registered 6 July, 1977	3281	504
15.	19 October, 1990	Order of Supreme Court in Equity in proceedings No. 5067 of 1990	Burns Philp Trustee Company Limited (Plaintiff) and Permanent Trustee Company Limited (Defendant) (original not in Applicant's possession, lodged in Supreme Court)		
16.	7 December, 1990	Retirement and Appointment of Trustee	Australian Funds Management Limited (formerly Lend Lease Management Limited) Manager of General Property Trust , Permanent Trustee Company Limited (Retiring Trustee) and Perpetual Trustee Company Limited (New Trustee)	3832	239

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17.	1 April, 1992	Assignment of Lease Book 2921 No. 841	Permanent Trustee Company Limited to Perpetual Trustee Company Limited Registered 29 April, 1992	3870	791	
18.	31 March, 1993	Surrender of Lease	Perpetual Trustee Company Limited (ACN 000 001 007) and the Council of the City of Sydney	4018	61	
19.	Sub-Lease	20 May, 1988	Burns Philp Trustee Co. Limited to National Australia Bank Limited	3738	10 See Annexure "A"	
20.	Sub-Lease	15 October, 1989	Burns Philp Trustee Co. Limited to Rocco Antonio Musumeci and Maria Musumeci	3795	497 See Annexure "A"	
21.	Sub-Lease	16 July, 1991	Perpetual Trustee Company Limited to Golden Manly Management Services Pty Limited	~~3869~~ 3864	575 See Annexure "A"	
22.	Sub-Lease	16 April, 1992	Perpetual Trustee Company Limited to Stopanska Banka-Skopje	3869	618 See Annexure "A"	
23.	Sub-Lease	7 July, 1992	Perpetual Trustee Company Limited to Golden Manly Management Services Pty Limited	4005	547 See Annexure "A"	
24.	Sub-Lease	14 August, 1992	Perpetual Trustee Company Limited to Orion Open Systems Pty Limited	4005	998 See Annexure "A"	
25.	Sub-Lease	9 November, 1992	Perpetual Trustee Company Limited to Alfred Teng Kat Kok	4005	791 See Annexure "A"	
26.	Sub-Lease	24 September. 1991	Perpetual Trustee Company to The Commonwealth of Australia	3853	034 See Annexure "A"	
27.	Sub-Lease	10 December, 1992	Perpetual Trustee Company Limited to James Neil Adams	4016	97 See Annexure A.	

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Maria Williams

063544

28.	Sub-Lease	7 January, 1993	Perpetual Trustee Company Limited to Infolink Network Services Pty Limited	4016	96 See Annexure "A"
29.	Deposited Plan		Deposited Plan No. 830511 (lodged in the Land Titles Office on 14 May, 1993)		

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19/5/93

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
15/7/2008 7:25PM

FOLIO: 1/830511

First Title(s): OLD SYSTEM
Prior Title(s): PA63544

Recorded	Number	Type of Instrument	C.T. Issue
5/8/1993	PA63544	PRIMARY APPLICATION	FOLIO CREATED EDITION 1
8/12/1993	I860411	LEASE	EDITION 2
10/1/1994	I910372	LEASE	
10/1/1994	I910373	LEASE	
10/1/1994	I910374	TRANSFER	EDITION 3
11/2/1994	U22267	CHANGE OF NAME	EDITION 4
29/11/1994	U826859	LEASE	EDITION 5
1/2/1995	U982532	MORTGAGE	EDITION 6
26/7/1995	O411882	LEASE	EDITION 7
24/1/1996	O650152	LEASE	EDITION 8
11/3/1996	O965089	LEASE	EDITION 9
16/5/1996	2162538	LEASE	EDITION 10
18/11/1996	2620781	LEASE	EDITION 11
2/12/1996	2657248	LEASE	
2/12/1996	2657249	LEASE	EDITION 12
18/2/1997	2845015	DEPARTMENTAL DEALING	
12/3/1997	2841253	REQUEST	EDITION 13
18/6/1997	DP869184	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

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SEARCH DATE
15/7/2008 7:27PM

FOLIO: 100/869184

First Title(s): OLD SYSTEM
Prior Title(s): 1/830511

Recorded	Number	Type of Instrument	C.T. Issue
18/6/1997	DP869184	DEPOSITED PLAN	FOLIO CREATED EDITION 1
8/10/1997	3476118	CAVEAT	
27/11/1997	3577469	RELEASE OF EASEMENT	
27/11/1997	3577470	RELEASE OF EASEMENT	EDITION 2
3/12/1997	DP873017	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
15/7/2008 7:27PM

FOLIO: 101/869184

First Title(s): OLD SYSTEM
Prior Title(s): 1/830511

Recorded	Number	Type of Instrument	C.T. Issue
18/6/1997	DP869184	DEPOSITED PLAN	FOLIO CREATED EDITION 1
31/7/1997	3285032	DISCHARGE OF MORTGAGE	EDITION 2
8/10/1997	3476118	CAVEAT	
27/11/1997	3577469	RELEASE OF EASEMENT	
27/11/1997	3577470	RELEASE OF EASEMENT	EDITION 3
3/12/1997	DP873017	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

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SEARCH DATE
15/7/2008 7:28PM

FOLIO: 11/873017

First Title(s): OLD SYSTEM
Prior Title(s): 100-101/869184

Recorded	Number	Type of Instrument	C.T. Issue
5/12/1997	DP873017	DEPOSITED PLAN	FOLIO CREATED EDITION 1
23/12/1997	3682877	DISCHARGE OF MORTGAGE	EDITION 2
24/2/2006	AC138301	WITHDRAWAL OF CAVEAT	
24/2/2006	AC138302	MORTGAGE	EDITION 3
8/3/2007	DP1109323	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
15/7/2008 7:28PM

FOLIO: 2/1109323

First Title(s): OLD SYSTEM
Prior Title(s): 11/873017

Recorded	Number	Type of Instrument	C.T. Issue
8/3/2007	DP1109323	DEPOSITED PLAN	FOLIO CREATED EDITION 1
16/3/2007	AC996604	DISCHARGE OF MORTGAGE	
16/3/2007	AC996605	TRANSFER	EDITION 2

*** END OF SEARCH ***

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Form: 01T
Release: 3.1
www.lands.nsw.gov.au

(1)

TRANSFI

New South Wales
Real Property Act 1

AC996605C

ial

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authoris ... required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
26-02-2007 0004085320-001
SECTION 18(2)
DUTY $ **********2.00

(A) **TORRENS TITLE** 2/1109323

(B) **LODGED BY**

Document Collection Box	Name, Address or DX and Telephone	CODES
48T	LLPN : 123819E CITYLINK Reference: BP:PLC 06 4404 EA	T TW (Sheriff)

(C) **TRANSFEROR** MKH PROPERTIES PTY LIMITED (ACN 061 880 073)

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 36,697,310.10 and as regards

(E) **ESTATE** the land specified above transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** ENERGYAUSTRALIA (ABN 67 505 337 385)

(I) **TENANCY:**

DATE 15 MARCH 2007

(J) I certify that the person(s) signing opposite, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

Signature of witness:

Name of witness: William John Crouch Rees

Address of witness: Level 18, 323 Castlereagh St Sydney

Certified correct for the purposes of the Real Property Act 1900 by the person(s) named below who signed this instrument pursuant to the power of attorney specified.

Signature of attorney:

Attorney's name: Christopher Jude Thompson
Signing on behalf of: MKH Properties Pty Ltd
Power of attorney-Book: 4508
-No.: 848

Certified correct for the purposes of the Real Property Act 1900 by the person whose signature appears below.

Signature:

Signatory's name: Pasquale Crino
Signatory's capacity: transferee's solicitor

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 2/1109323

SEARCH DATE	TIME	EDITION NO	DATE
15/7/2008	7:25 PM	2	16/3/2007

LAND

LOT 2 IN DEPOSITED PLAN 1109323
AT HAYMARKET
LOCAL GOVERNMENT AREA SYDNEY
PARISH OF ST LAWRENCE COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1109323

FIRST SCHEDULE

ENERGYAUSTRALIA (T AC996605)

SECOND SCHEDULE (6 NOTIFICATIONS)

1 2841253 RESTRICTION(S) ON THE USE OF LAND
2 DP869184 RESTRICTION(S) ON THE USE OF LAND
3 DP1109323 EASEMENT FOR SUPPORT 6 METRE(S) WIDE (LIMITED IN STRATUM TO BELOW RL3.57 AHD) AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
4 DP1109323 EASEMENT TO DRAIN WATER 0.17 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
5 DP1109323 RESTRICTION(S) ON THE USE OF LAND
6 THE LAND ABOVE DESCRIBED IS LIMITED IN STRATUM IN THE MANNER DESCRIBED IN THE TITLE DIAGRAM

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
15/7/2008 7:25PM

FOLIO: 1/844119

First Title(s): 1/844119
Prior Title(s): PA90000

Recorded	Number	Type of Instrument	C.T. Issue
9/11/1994	DP844119	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
22/12/1994	U887898	APPLICATION	FOLIO CREATED EDITION 1
23/12/1994	U887898	APPLICATION	
23/12/1996	2716893	TRANSFER	EDITION 2
12/3/1997	2841253	REQUEST	EDITION 3
18/6/1997	DP869184	DEPOSITED PLAN	EDITION 4
29/1/2004	AA365555	CAVEAT	
23/3/2007	AD5036	WITHDRAWAL OF CAVEAT	
23/3/2007	AC996612	TRANSFER	EDITION 5

*** END OF SEARCH ***

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Form: 01T
Release: 3.1
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TRANSFI

New South Wale
Real Property Act 1

AC996612F

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authori
by this form for the establishment and maintenance of the Real Pr
the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
23-01-2007 0004015543-001
SECTION 18(2)
DUTY $ **********2.00

(A) **TORRENS TITLE** 1/844119

(B) **LODGED BY**

Document Collection Box	Name, Address or DX and Telephone	CODES
48T	LLPN : 123819E CITYLINK Reference: BP:PLC 06 4405 /EA	T TW (Sheriff)

(C) **TRANSFEROR** CNC PROPERTIES PTY LIMITED (ACN 069 132 743)

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 6,052,689.50 and as regards

(E) **ESTATE** the land specified above transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** ENERGYAUSTRALIA (ABN 67 505 337 385)

(I) **TENANCY:**

DATE 15 MARCH 2007

(J) I certify that the person(s) signing opposite, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

Signature of witness:

Name of witness: William John Glenville Rees

Address of witness: Level 16, 323 Castlereagh Street, Sydney

Certified correct for the purposes of the Real Property Act 1900 by the person(s) named below who signed this instrument pursuant to the power of attorney specified.

Signature of attorney:

Attorney's name: CHRISTOPHER JUDD C S THOMPSON

Signing on behalf of: CNC Properties Pty Ltd

Power of attorney-Book: 4508

-No.: 849

Certified correct for the purposes of the Real Property Act 1900 by the person whose signature appears below.

Signature:

Signatory's name: Pasquale Crino

Signatory's capacity: transferee's solicitor

MA365555

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/844119

SEARCH DATE	TIME	EDITION NO	DATE
15/7/2008	7:25 PM	5	23/3/2007

LAND

LOT 1 IN DEPOSITED PLAN 844119
AT HAYMARKET
LOCAL GOVERNMENT AREA SYDNEY
PARISH OF ST LAWRENCE COUNTY OF CUMBERLAND
TITLE DIAGRAM DP844119

FIRST SCHEDULE

ENERGYAUSTRALIA (T AC996612)

SECOND SCHEDULE (4 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS
2 2716893 COVENANT
3 2841253 RESTRICTION(S) ON THE USE OF LAND
4 DP869184 RESTRICTION(S) ON THE USE OF LAND

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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PHOTO 1: 1930 Aerial Photograph

PHOTO 2: 1951 Aerial Photograph

PHOTO 3: 1970 Aerial Photograph

PHOTO 4: 1986 Aerial Photograph

PHOTO 5: 1994 Aerial Photograph

PHOTO 6: 2005 Aerial Photograph

WorkCover
NEW SOUTH WALES

Our Ref: D08/064724
Your Ref: Jessica Derrien

8 July 2008

DOUGLAS PARTNERS
10 JUL 2008

WORKCOVER NSW
92 DONNISON STREET
GOSFORD NSW 2250

29/05/08 14:05
0000SDW1571 0006
CLERK006

OTHER*	$132.00
INV TTL	$132.00
GST	$12.00

CHEQUE $132.00

* indicates taxable
TAX INVOICE
ABN 77 682 742 966

Attention: Jessica Derrien
Douglas Partners
PO Box 472
WEST RYDE NSW 1685

Dear Jessica,

RE SITE: 15 Fountain St, Alexandria

I refer to your search request of 2nd July 2008 requesting information on licences to Keep Dangerous Goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover has not located any records pertaining to the above-mentioned premises.

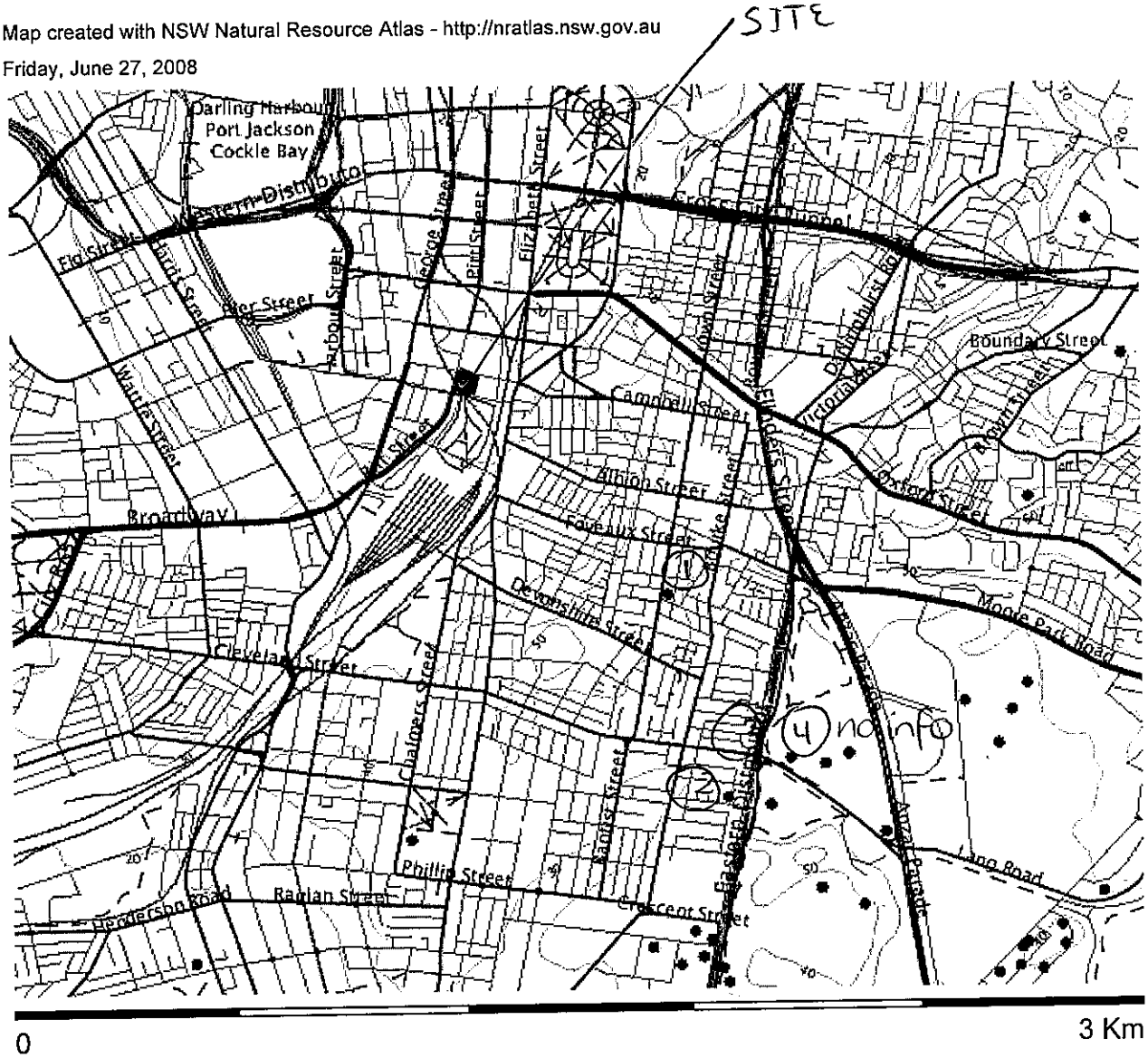
If you have any further queries, please contact Dangerous Goods Licensing staff on (02) 4321 5500.

Naomi James
A/Senior Licensing Officer
Dangerous Goods

Map from the NSW Natural Resource Atlas

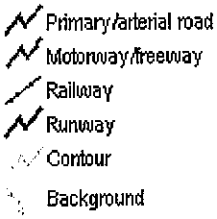
Map created with NSW Natural Resource Atlas - http://nratlas.nsw.gov.au

Friday, June 27, 2008



Legend

Symbol	Layer	Custodian
	Cities and large towns renderImage: Cannot build image from features	
Bowral	Populated places renderImage: Cannot build image from features	
	Towns	
	Groundwater Bores	
	Catchment Management Authority boundaries	
	Major rivers	
	Topographic base map	



(1)

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Friday, June 27, 2008

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

Work Requested -- GW102476

Works Details (top)

GROUNDWATER NUMBER	GW102476
LIC-NUM	10BL157882
AUTHORISED-PURPOSES	MONITORING BORE
INTENDED-PURPOSES	MONITORING BORE
WORK-TYPE	Bore
WORK-STATUS	(Unknown)
CONSTRUCTION-METHOD	
OWNER-TYPE	
COMMENCE-DATE	
COMPLETION-DATE	1999-01-01
FINAL-DEPTH (metres)	4.00
DRILLED-DEPTH (metres)	
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	N/A
GWMA	- GREAT ARTESIAN BASIN
GW-ZONE	- MISCELLANEOUS
STANDING-WATER-LEVEL	
SALINITY	
YIELD	

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6248965.00
EASTING	334832.00
LATITUDE	33 53' 12"
LONGITUDE	151 12' 50"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

no details

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	LOT1 DP70006

Construction (top)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;
ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE-NO	PIPE-NO	COMPONENT-CODE	COMPONENT-TYPE	DEPTH-FROM (metres)	DEPTH-TO (metres)	OD (mm)	ID (mm)	INTERVAL DETAIL
1	1	Casing	P.V.C.	0.00	0.00	50.8		

Water Bearing Zones (top)

no details

Drillers Log (top)

no details

2

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Friday, June 27, 2008

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

Work Requested -- GW024057

Works Details (top)

GROUNDWATER NUMBER	GW024057
LIC-NUM	10BL017826
AUTHORISED-PURPOSES	RECREATION (GROUNDWATER)
INTENDED-PURPOSES	IRRIGATION
WORK-TYPE	Bore
WORK-STATUS	(Unknown)
CONSTRUCTION-METHOD	Cable Tool
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	1966-11-01
FINAL-DEPTH (metres)	13.10
DRILLED-DEPTH (metres)	13.10
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	N/A
GWMA	018 - BOTANY BAY SAND BEDS
GW-ZONE	- MISCELLANEOUS
STANDING-WATER-LEVEL	
SALINITY	
YIELD	

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	213 - SYDNEY COAST - GEORGES RIVER
AREA-DISTRICT	
CMA-MAP	9130-3S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	(Unknown)
NORTHING	6248580.00
EASTING	335738.00
LATITUDE	33 53' 25"
LONGITUDE	151 13' 25"
GS-MAP	0055A4

AMG-ZONE	56
COORD-SOURCE	GD.,PR. MAP
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	RES 99999

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	N/A

Construction (top)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter; ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE-NO	PIPE-NO	COMPONENT-CODE	COMPONENT-TYPE	DEPTH-FROM (metres)	DEPTH-TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1	1	Casing	Corrugated Galvenised Iron	-0.20	6.20	76			(Unknown)
1	1	Opening	Screen	0.00	6.70	76		1	Copper Alloy; SL: 0mm; A: 0mm

Water Bearing Zones (top)

FROM-DEPTH (metres)	TO-DEPTH (metres)	THICKNESS (metres)	ROCK-CAT-DESC	S-W-L	D-D-L	YIELD	TEST-HOLE-DEPTH (metres)	DURATION	SALINITY
3.00	13.00	10.00	Unconsolidated			1.26			(Unknown)

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	1.52	1.52	Topsoil		
0.00	1.52	1.52	Loam Sandy		
1.52	3.04	1.52	Sand Dark Brown		
3.04	6.09	3.05	Sand Yellow Water Supply		
6.09	11.27	5.18	Sand Dark Brown Wet Water Supply		
11.27	11.88	0.61	Sand Light Brown Wet Water Supply		
11.88	13.10	1.22	Sand Light Brown Wet Water Supply		
11.88	13.10	1.22	Clay Veined Water Supply		

3

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Friday, June 27, 2008

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

Work Requested -- GW105480

Works Details (top)

GROUNDWATER NUMBER	GW105480
LIC-NUM	10BL162139
AUTHORISED-PURPOSES	RECREATION (GROUNDWATER)
INTENDED-PURPOSES	RECREATION (GROUNDWATER)
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	
OWNER-TYPE	
COMMENCE-DATE	
COMPLETION-DATE	2003-07-23
FINAL-DEPTH (metres)	13.50
DRILLED-DEPTH (metres)	13.50
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	SYDNEY CRICKET & SPORTS GROUND
GWMA	- BOTANY BAY SAND BEDS
GW-ZONE	- MISCELLANEOUS
STANDING-WATER-LEVEL	5.13
SALINITY	
YIELD	1.00

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6248550.00
EASTING	335882.00
LATITUDE	33 53' 26"
LONGITUDE	151 13' 31"
GS-MAP	

AMG-ZONE 56
COORD-SOURCE
REMARK

Form-A (top)

COUNTY CUMBERLAND
PARISH ALEXANDRIA
PORTION-LOT-DP 1530 752011

Licensed (top)

COUNTY CUMBERLAND
PARISH ALEXANDRIA
PORTION-LOT-DP 1530 752011

Construction (top)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter; ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

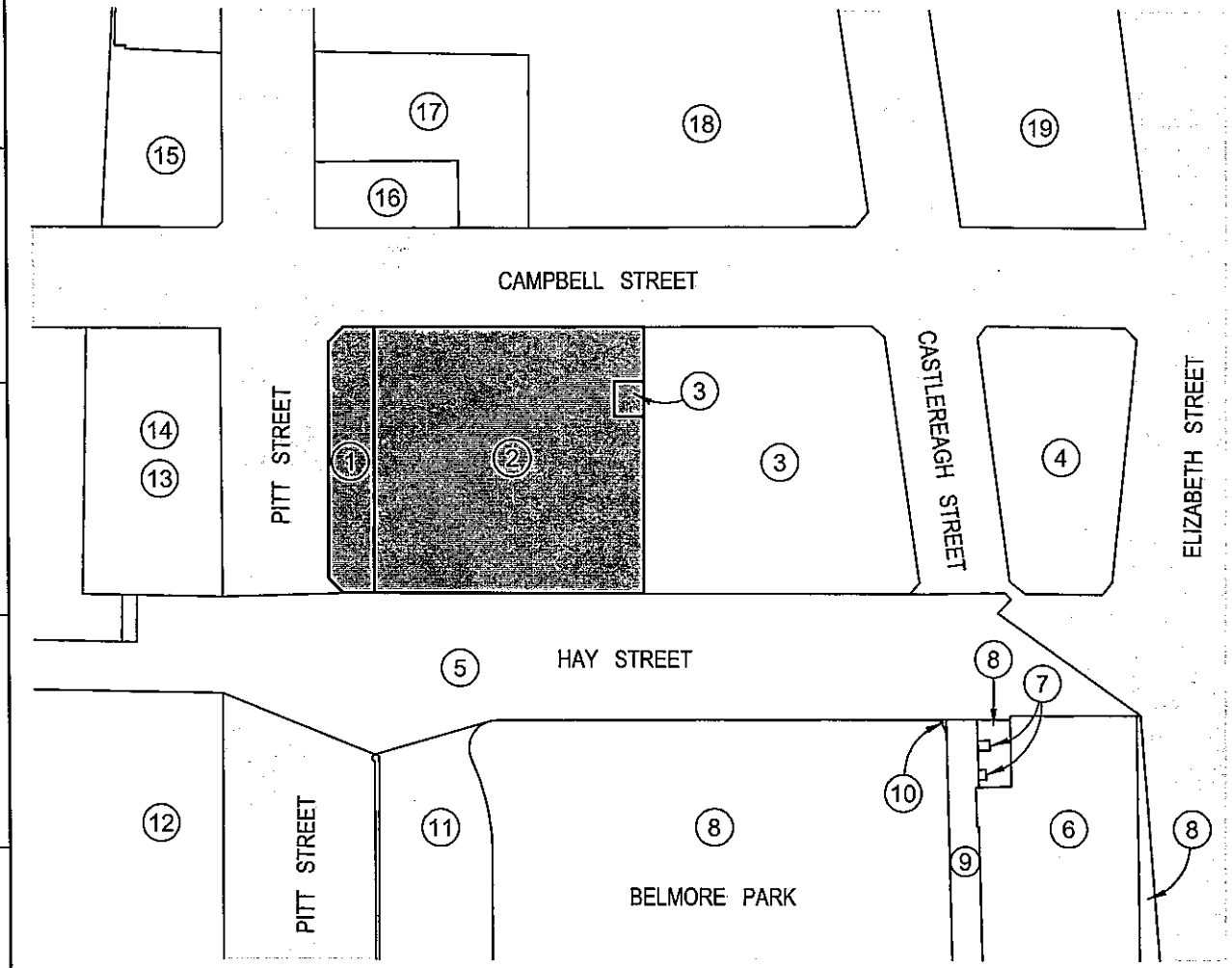
HOLE-NO	PIPE-NO	COMPONENT-CODE	COMPONENT-TYPE	DEPTH-FROM (metres)	DEPTH-TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Hole	Hole	0.00	13.50	150			Cable Tool
1	1	Casing	Steel	0.00	8.00	150	142		Screwed; Driven into Hole
1	1	Opening	Slots - Horizontal	8.00	10.00	130			Steel

Water Bearing Zones (top)

FROM-DEPTH (metres)	TO-DEPTH (metres)	THICKNESS (metres)	ROCK-CAT-DESC	S-W-L	D-D-L	YIELD	TEST-HOLE-DEPTH (metres)	DURATION	SALINITY
5.13	13.50	8.37		5.13	7.20	1.00		1.00	

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	0.50	0.50	BITUMEN,FILL		
0.50	1.20	0.70	BROWN SAND		
1.20	4.60	3.40	YELLOW SAND		
4.60	5.90	1.30	YELLOW SAND WITH ORANGE SILT		
5.90	8.60	2.70	YELLOW SAND/DECOM. SANDSTONE		
8.60	10.30	1.70	YELLOW SAND/ORANGE SILT		
10.30	13.50	3.20	RED,WHITE,DECOMPOSED SANDSTONE		



Property Schedule			
1	Lot 1 DP844119	CT 1/844119	EnergyAustralia
2	Lot 2 DP1109323	CT 2/1109323	EnergyAustralia
3	Lot 1 DP1109323	CT 1/1109323	M K H Properties Pty Ltd
4	Lots 1-3 DP5771	Auto Consul 2984-102	Rail Corporation NSW
5	Lot 1 DP868663	CT 1/868663	RTA
6	Lot 11 DP868834	CT 11/868834	Rail Corporation NSW
7	Lot 1 DP267889	CT 1/267889	Rail Corporation NSW
8	Dedicated for Public Recreation vide Government Gazette 19 May 1868 Folio 1424	Crown Land	Crown Land - Sydney City Council is Trustee under Public Parks Act
9	Lot 63 DP227840	Auto Consul 10532-103	Rail Corporation NSW
10	Lot 1 DP868829	CT 1/868829	Rail Corporation NSW
11	Lot 12 DP868831	CT 12/868831	Rail Corporation NSW
12	Lot 1 DP633690	CT 1/633690	ISPT Pty Ltd
13	CP SP71062	CT CP/SP71062	The Owners - SP71062
14	CP SP71061	CT CP/SP71061	The Owners - SP71061
15	Lot 2 DP585334	CT 2/585334	Kol Tov Pty Ltd
16	Lot 1 DP79095	CT 1/79095	Reserve Hotels Pty Ltd
17	Lot 10 DP1111588	CT 10/1111588	Meriton Property Management Pty Ltd
18	CP SP56443	CT CP/SP56443	The Owners - SP56443
19	Lot 1 DP203829	CT 1/203829	Rail Corporation NSW

Denotes Public Road

CAD DRAWING
DO NOT MANUALLY AMEND

AMENDMENTS

Enerserve
A business of EnergyAustralia
DESIGN SERVICES
24 CAMPBELL ST HAYMARKET, NSW 2000
TEL: 9272 3865 Fax: 9272 6267
email: survey@energy.com.au

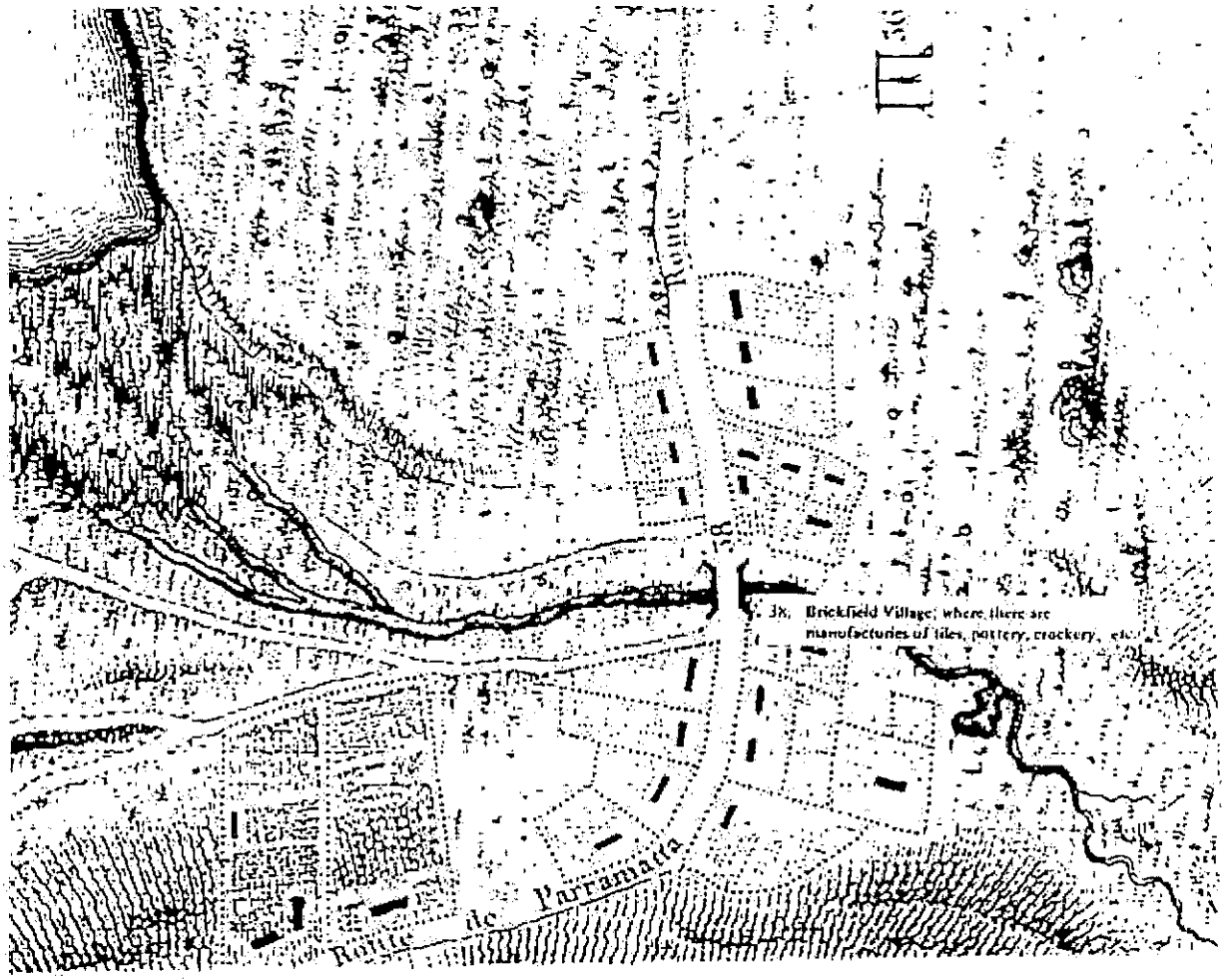
SCALE	NTS
SURVEYED	
DRAWN	CNM
CHECKED	SW
APPROVED	MR
DATE	24-10-2007
PRJTRK No.	
PROJECT NUMBER	ES208-14-6-3

PLAN SHOWING PROPERTY STATUS ADJOINING PROPOSED BELMORE PARK ZONE SUBSTATION HAY STREET HAYMARKET

DRAWING No S 17486 | SHEET | AMD 0 | SIZE A3

ARCHAEOLOGICAL ASSESSMENT

430-450 Pitt Street, Sydney



for

Metro D Architects Pty Ltd

October 1995

Casey & Lowe Associates
Archaeological & Heritage Consultants
68 Warren Road, Marrickville NSW 2204
Tel. & Fax: (02) 558 2014

1.11 Executive Summary

Historical Summary (see Section 2)
The site has been in use since 1788, firstly as part of Brickfield Hill, which was the source of much of early Sydney's building materials and where some of the colony's first pottery was manufactured. Small huts were erected to house the convicts working the brickfield. This activity is as early as any European activity that is likely to be found in Sydney. The building materials produced here were used to build the first buildings in Sydney, First Government House among them.

After the brickfields moved southwards the study area was used as Sydney's cattleyards from 1829 and later as its main produce markets. The Belmore Markets buildings were erected on the site in 1869 and were Sydney's main vegetable markets until they were demolished in 1910. The study area therefore held part of Sydney's main markets for some eighty years.

The Hotel Sydney, erected on the site by 1918, was designed to complement the New Belmore Markets and Central Railway buildings. It location on this site provided fine accommodation for travellers and people attending the markets.

Statement of Cultural Significance (see Section 5)
The study area is likely to contain archaeological deposits associated with early Brickfield activities, industrial and residential, dating between 1788 to 1829. Deposits, features and structures associated with this early period of occupation have the potential to illustrate some of the earliest industrial activities following European settlement of Australia. It has the potential to help answer questions relating to the origin and manufacture of early earthenware ceramics. In addition it may contain occupation deposits associated with the residential use of this area prior to 1829. Therefore this site has the potential to contain archaeological deposits, features and structures belonging to the earliest years of Sydney's occupation. There are few other sites in Sydney with this potential.

Recommendations (see Section 6)

1. As there is some uncertainty about the extent to which significant archaeological remains survive following the construction and demolition of the Hotel Sydney the site should be tested before firm recommendations can be put into place.

2. If the testing reveals the presence of significant remains then a controlled archaeological excavation program will be required to record them before the development proceeds. This excavation should include soil and pollen analysis.

3. If the testing indicates that the impact of the later buildings has removed all trace of the Brickfields phase then no further archaeological excavation will be needed. Any remains of the Belmore Markets building or the Hotel Sydney encountered during the testing should be recorded.

4. The bulk excavation of the site should be monitored by the archaeologist so as to record any relevant information about the construction of the Belmore Markets/Hotel Sydney that might be revealed during this process.

5. No disturbance to the subsurface site should occur unless as part of a controlled archaeological investigation of the development area by qualified archaeologists.

6. The appointment of an Excavation Director should be made as soon as development plans are finalised. Sufficient time should be allowed for the completion of the archaeological excavation prior to the commencement of development.

7. An excavation permit will have to be obtained from the Heritage Council prior to any disturbance of the sub-surface deposits. The preparation of an excavation permit will require the formation of a Research Design and the finalising of any historical research that is required to guide the archaeological testing and any subsequent excavation. Once a permit application is lodged it will take three to four weeks to have it processed by the Heritage Branch.

8. Liaison should be established with the Heritage Branch of the NSW Department of Planning in relation to the archaeological works on site.

9. Under the conditions of granting an excavation permit all artefacts recovered and catalogued by the excavation will have to be curated and stored in a repository. There is at present no official repository available. Some short term storage of the artefacts may be necessary. The client may have to provide for permanent storage of the artefacts.

10. The archaeological program needs to be considered as a phase of the development program and should be not be allowed to become a critical path activity. The bulk excavation phase should begin upon the completion of the archaeological work.

CASEY & LOWE ASSOCIATES

MARY CASEY, MBEnv. ANTHONY LOWE, MA

6th August, 1996

Cath Snelgrove
Heritage Office
Level 17
Governor Macquarie Tower
Sydney 2000

Dear Ms Snelgrove,

Re: Excavation Permit Application
430-450 Pitt Street, Sydney

Please find enclosed an application for an excavation permit for the above site which is referred to as 'Park Central' and previously as 'Central Square'. We also enclose two copies of our archaeological assessment of the site. This has established that the earliest remains on the site are likely to date to the Brickfields period. Remains dating to this period would represent the site's main significance and research potential.

Since the Brickfields period the site has been impacted by its use as the cattle markets, the Belmore Markets, the Hotel Sydney, and more recently, its use as a carpark. We plan to test the redevelopment area in order to see whether remains belonging to the Brickfields period have survived. This will be done in the central part of the site where we envisage the Hotel Sydney has caused the least impact. This testing is due to occur in October. If there are *in situ* remains we will advise you of this and submit details of the methodology we will use to record them.

The main purpose of any excavation will be to record any evidence of late eighteenth- and early nineteenth-century brick, roofing tile, or pottery production in this area. A recent excavation in Albion Street has shown that evidence of kiln structure may also survive.

It is thought that evidence of the area's use as part of the cattle markets will not have survived in recognisable form. Any such evidence, however, will be recorded.

Yours sincerely,

COPY

Tony Lowe

ARCHAEOLOGICAL & HERITAGE CONSULTANTS
420 Marrickville Road Marrickville NSW 2204 ● Tel/Fax (02) 9568 5375

CASEY & LOWE ASSOCIATES

MARY CASEY, MBEnv. ANTHONY LOWE, MA

13th September, 1996

Cath Snelgrove
Heritage Office
Level 17
Governor Macquarie Tower
Sydney 2000

Dear Ms Snelgrove,

Re: Excavation Permit, 430-450 Pitt Street, Sydney
Application no. 210418

As per my letters dated 6th and 12th August we have tested the above site. The testing, which took place on 12th September, involved excavating by bobcat an area approximately 20x20m in the eastern side of the site. The area was chosen because ground plans of the Hotel Sydney, the last building on the site, indicated that the eastern side was potentially less disturbed by footings and cellars than elsewhere.

The testing revealed numerous dry-pressed brick and concrete footings and services. Their size and spacing indicated that no *in situ* pre-1900 remains could have survived in that area.

The unexpected level of disturbance encountered in the area tested indicates that the construction of the Hotel Sydney caused extensive disturbance of the site. It is likely that the entire site was cut down. It is therefore regarded as unlikely that any extensive area of intact nineteenth-century remains has survived.

Based on these results we do not propose to do any further testing. We will monitor the initial bulk excavation of the site and record any items of archaeological interest that are uncovered.

Yours sincerely,

Tony Lowe

cc: Kevin Black, Metro D Architects

PLANNING
BUILDING
HERITAGE
LANDSCAPE
URBAN DESIGN

CITY PLAN HERITAGE

Energy Australia, 5749 Belmore Park Zone Substation Project
Heritage Impact Statement

May 2008

TELEPHONE 8270 3530
FACSIMILE 8270 3501

LEVEL 1 364 KENT STREET
SYDNEY NSW 2000 AUSTRALIA

WWW.CITYPLAN.COM.AU
ABN 46 103 185 413

TABLE OF CONTENTS

1. INTRODUCTION

1.1 BACKGROUND

City Plan Heritage has been engaged by the architects, Kann Finch Group, to prepare a Heritage Impact Statement to accompany a Project Application under Part 3A to the NSW Department of Planning for the Minister's approval of the project as detailed below. Energy Australia, the current owner of the subject site at 430-450 Pitt Street, Sydney proposes to construct an integrated commercial development in association with a substation. The development will comprise a fourteen-storey office building with three basement car parking levels, and an Energy Australia 132kv / 11kv substation, consisting of seven levels including four basement and three above ground.

The city site is currently occupied by a ground level car park (Figure 1). The subject site is not listed as a heritage item under any statutory instruments, and is not located in an area of special interest or character as outlined in the Sydney LEP 2005. However, it is located within the vicinity of a number of heritage items listed in the LEP and within the approaches to Central Railway precinct, (the Rail corridor). The subject site is also listed under the Central Sydney Archaeological Zoning Plan 1992 as an area of archaeological potential. Therefore a Heritage Impact Statement is required in order to assess the likely impact of the proposed development on the cultural heritage values of the locality and the site's archaeological potential.

A number of studies have been carried out for the subject site between 2002 and 2005 by City Plan Heritage in relation to previous Development Applications for the site. An archaeological assessment was also prepared by the archaeologists Casey & Lowe in 1995.[1] Due to the site's identified archaeological potential an Excavation Permit Application and Archaeological Research Design was prepared by City Plan Heritage in conjunction with Casey & Lowe in 2003.[2] A Revised Archaeological Research Design was prepared by City Plan Heritage in 2005.[3] The Excavation Permit was issued by the Heritage Council of NSW in November 2005 to City Plan Heritage [4] The Permit was for "archaeological testing only", valid for five years. We have been advised that Casey & Lowe are engaged to address the archaeology on this project and a copy of the permit has been forwarded to them.

[1] Casey & Lowe Associates, 430-450 Pitt Street, Sydney: archaeological assessment, October 1995
[2] City Plan Heritage with Casey & Lowe Pty Ltd, Park Central Excavation Permit Application, December 2003
[3] City Plan Heritage, Park Central 430-450 Pitt Street, Sydney Archaeological Research Design, June 2005
[4] Application No. 2004/S140/039

1.2 SITE LOCATION

The subject site is addressed as 430-450 Pitt Street, Sydney. It occupies the end of the block defined by the corners of Pitt, Campbell and Hay Streets, as shown below. The subject site is currently occupied by a ground level car park. The site faces Belmore Park to the south. It is located close to the centre of the Haymarket precinct, which features a diverse range of shops, offices, and theatres.

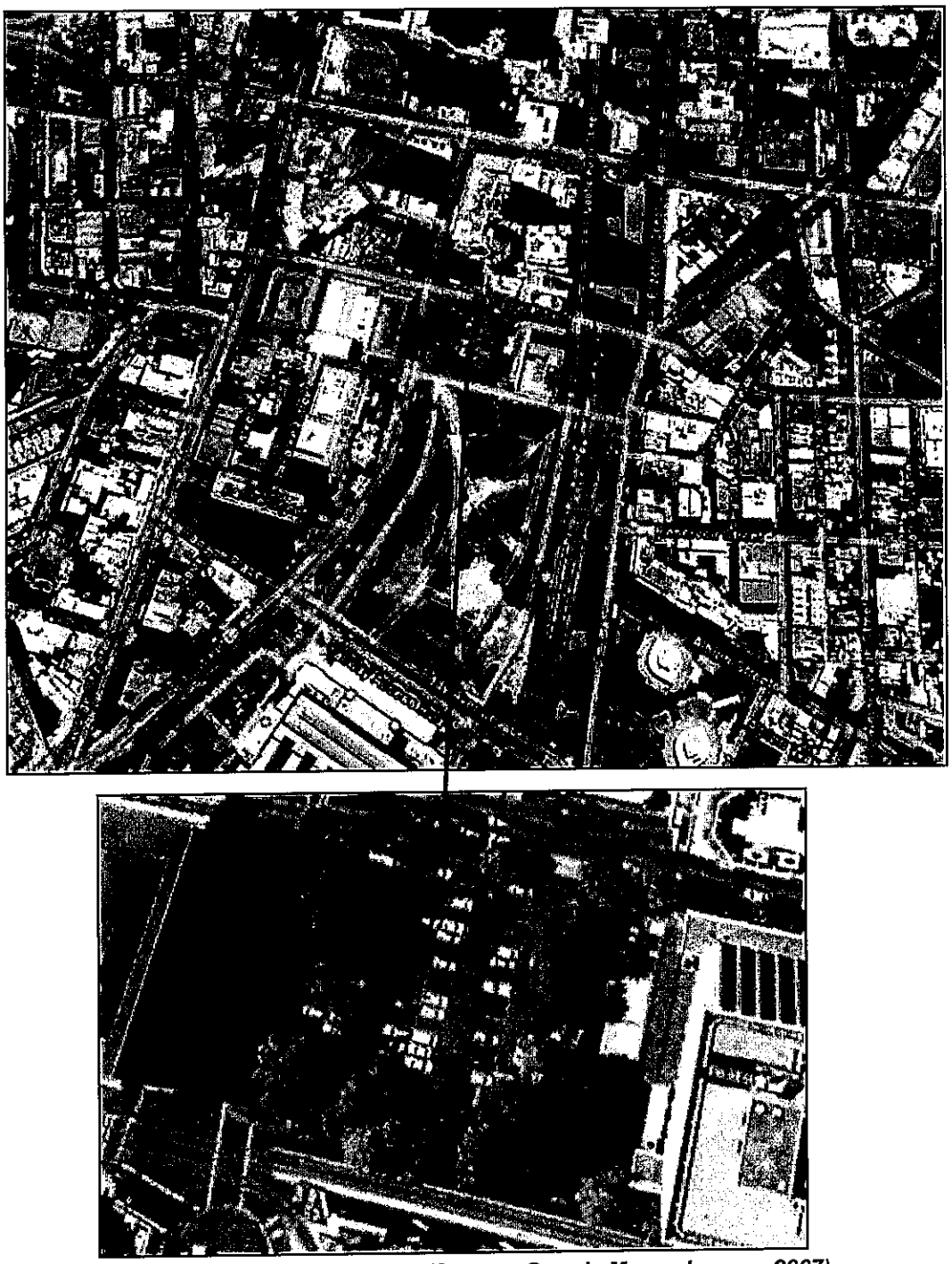


Figure 1: Aerial view of the site. (Source: Google Maps, January 2007)

1.3 METHODOLOGY

This Heritage Impact Statement (HIS) has been prepared in accordance with the *NSW Heritage Manual* 'Statements of Heritage Impacts' and 'Assessing Heritage Significance' guidelines. The philosophy and process adopted is that guided by the Australia ICOMOS *Burra Charter 1999*. The subject proposal has been assessed in relation to the relevant controls and provisions contained within the *NSW Heritage Act 1977* (as amended).

1.4 AUTHOR IDENTIFICATION

The following report has been prepared by Gina Scheer (Heritage Consultant) with reference to and inclusions from the previous City Plan Heritage reports. Section 3.0, Historical Background, along with the majority of historical images, has been compiled from the previous historical research for the Heritage Impact Statements and Excavation Permit Application prepared by City Plan Heritage in conjunction with Casey & Lowe Pty Ltd in 2003. Site photos were taken for the previous reports and by the author in May 2008. Kerime Danis, City Plan Heritage Acting Director - Senior Architectural Heritage Consultant has reviewed this report.

2. SITE DESCRIPTION AND CONTEXT

2.1 SITE DESCRIPTION

The subject site is currently used as a street level commercial car park. There is no below ground car parking. The principle entrance to the car park is via Hay Street (Figure 2).

Figure 2: The subject site, looking at the car park entrance from Hay Street

The site is approximately rectangular in shape. The north, west and southern boundaries are defined by Campbell, Pitt and Hay Streets respectively (see Figure 1). The site has been previously occupied by a succession of building phases (see Section 3.1 below); however there are no above ground remnants of these earlier phases.

Figure 3: The subject site viewed from the east, from the Central Square pathway adjacent to the underground parking ramps for Central Square. Campbell Street is on the right and Hay Street and the car park entry is on the left.

The East side of the car park adjoins the high rise office tower of 'Central Square' and its parking ramps (Figures 4 and 6).

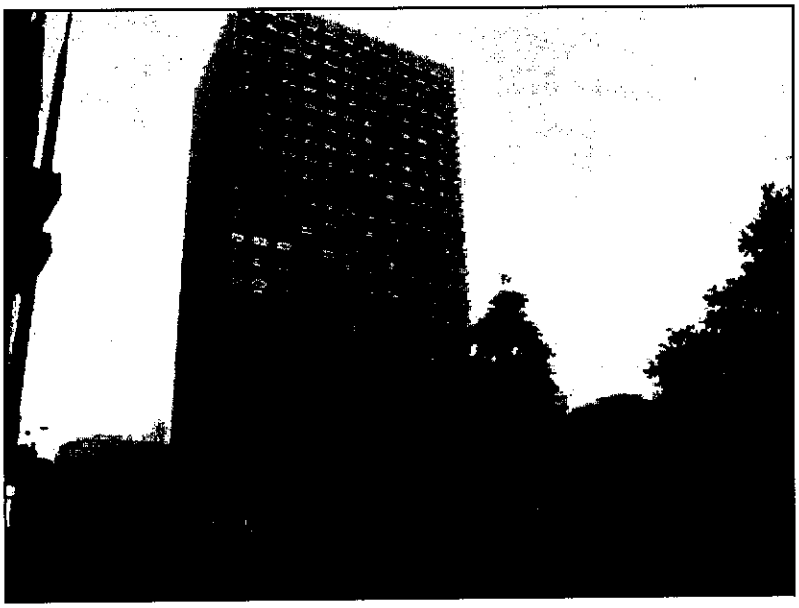


Figure 4: View from the west corner of Hay and Pitt Streets of the subject site. The Central Square building is immediately adjacent and to its left is the stone bridge for the railway line.

The west side of the car park is bordered by Pitt Street and the approach to Central Station. (Figure 5).

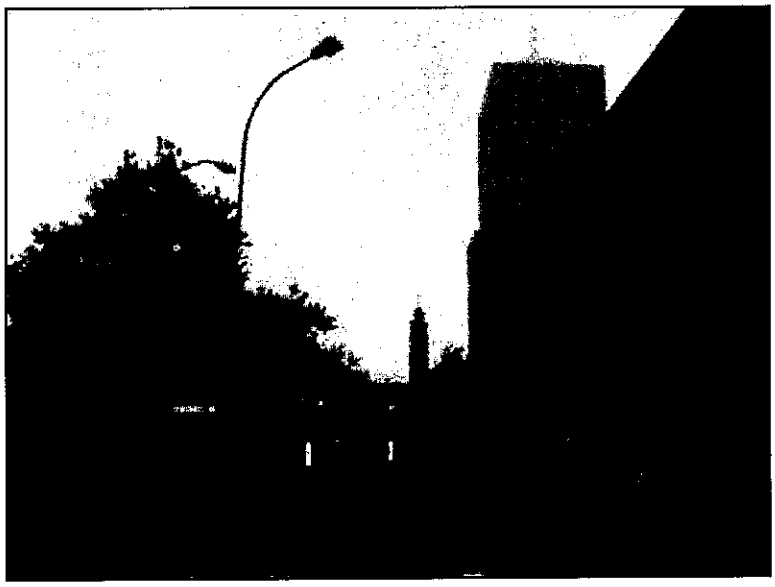


Figure 5: View from corner of Campbell and Pitt Streets, looking South toward Central station with the clock tower visible on the Pitt Street alignment. Note the plane trees on the car park.

Landscaping on the site is restricted to mature Plane trees, planted at intervals, some surrounded by raised planter boxes. There is some attempt at landscaping at the east end of the site, within the boundary marking the edge of the deep excavation which provides access ramps to parking and delivery facilities for the neighbouring Central Square building.

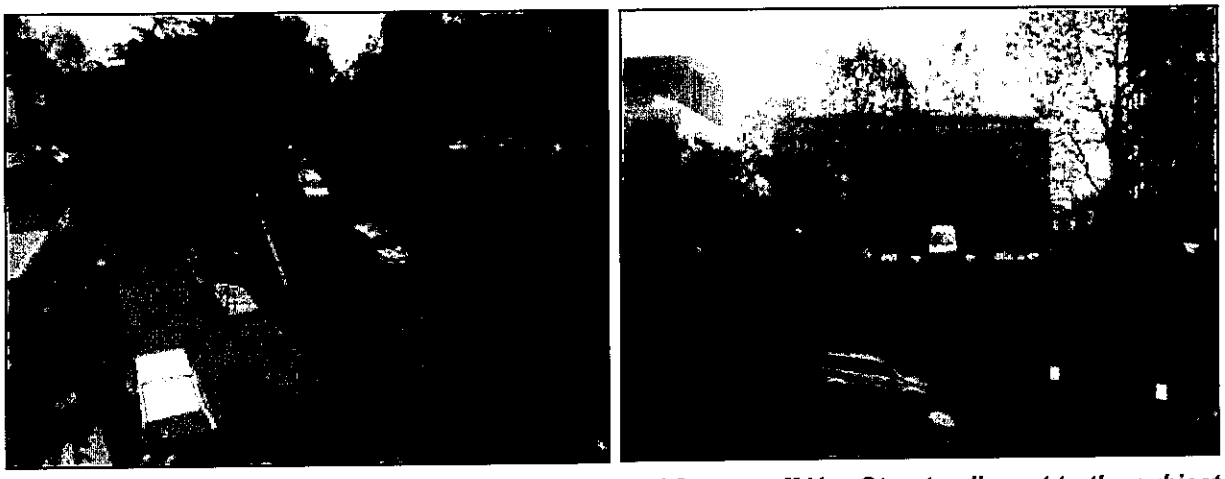


Figure 6: Views of the deep car ramp access for Central Square off Hay Street, adjacent to the subject car park with the landscaping on the boundary.

The topography of the site is relatively flat, sloping slightly towards the south west, with a more accentuated drop at the western end of the site (Pitt Street side). The site is currently surrounded by a temporary wire fence (Figure 2). Aside from the Plane trees, and the open space, it cannot be said that the site in its existing state makes a particular contribution to the character of the locality.

2.2 SITE CONTEXT

The subject site is centrally located within the Haymarket district, with George and Pitt Streets to the west, the railway line to the east and Belmore Park fronting Central Station precinct to the south (Figure 1). This area is now a busy commercial zone.

The subject site is faced on the south by Belmore Park, which is listed under the Central Sydney LEP. Though interrupted by the considerable tree canopy of Belmore Park, the subject site has views to and from Central Railway Station, with its associated bridges, viaducts, and ramps particularly along the Pitt Street alignment.

The light-rail system runs along Hay Street, past the subject site. Hay Street is also the location of an entertainment precinct including the Capital Theatre, restaurants, hotels and shopping centres continuing on into Chinatown and the Haymarket.

Figure 7: View from the subject site on Hay Street south to Belmore Park and Central Station, on the right.

Reflecting the various phases of this historic precinct, there are several heritage items located within the vicinity of the site. These items are listed in Schedule 8 of the Sydney LEP; [Central Sydney Heritage Items]. The Chamberlain Hotel is listed as No. 360 on the Schedule and is located at 420-428 Pitt Street, No. 361 on the Schedule is the Manning Building located at 441-459 Pitt Street, and No. 362 the former Presbyterian Manse at 461 Pitt Street.

Hay and Campbell Streets are listed as Heritage Streetscapes, however, the extent of the listing does not extend beyond the corner with Pitt Street. The Pitt Street facades of Manning Building, and 461 Pitt Street, are not part of a listed Heritage Streetscape.

The Chamberlain Hotel, located at 420-428 Pitt Street, is immediately to the north of the subject site (Figure 8). It was built c.1904 and later altered in 1936, and is one of the City's few surviving Federation Anglo-Dutch style hotels. The hotel occupies a prominent position on the corner of Pitt and Hay Streets.

Figure 8: A view north west across the subject site to the Chamberlain Hotel on the corner of Pitt and Campbell Streets.

Figure 9: A view north along Pitt Street, adjacent to the subject site and towards the Chamberlain Hotel .

Directly opposite the car park on the west side of Pitt Street, running horizontally between Hay and Campbell Streets, is the Manning Building (Figure 10). The Manning Building was erected from 1913-1916, reusing a large proportion of materials from the pre-existing New Belmore Market building, constructed on part of the subject site in 1892/3. The Manning Building presents a red-brown face brick façade to the street. It incorporates typical early Federation city building design elements, such as arched fenestrations, strong pilasters, rendered and carved decorative elements (capitals, shields, balusters). The Manning Building has undergone redevelopment, which involved the addition of five floors, raising the building height to about eight floors (Figure 10). The upper levels are finished in face brick similar to

the original section of the building with a traditional pattern of fenestration. The top level is setback with a floating flat roof element.

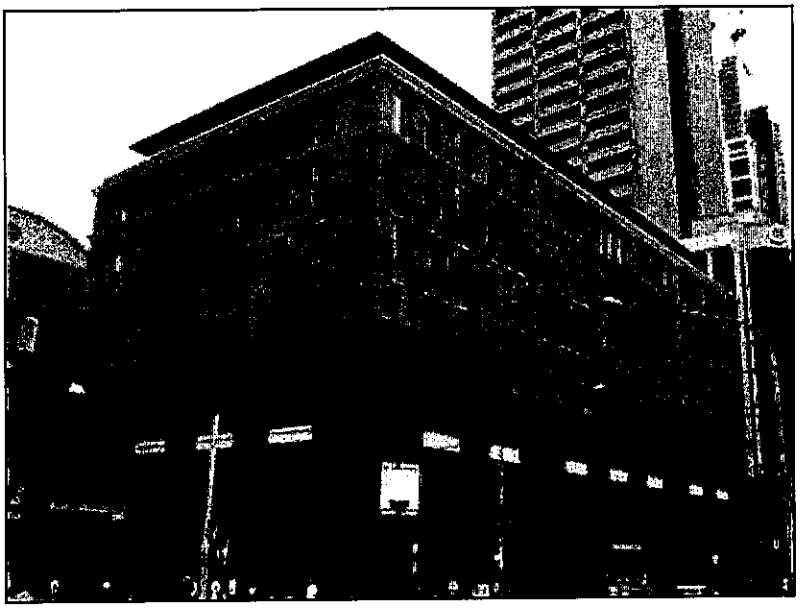


Figure 10:Manning Building, viewed to the south west from Hay Street across from the site.

To the north of the site, high rise office and residential towers form a backdrop, dwarfing those streetscape elements reflecting the 19th and early 20th century phases in the district.

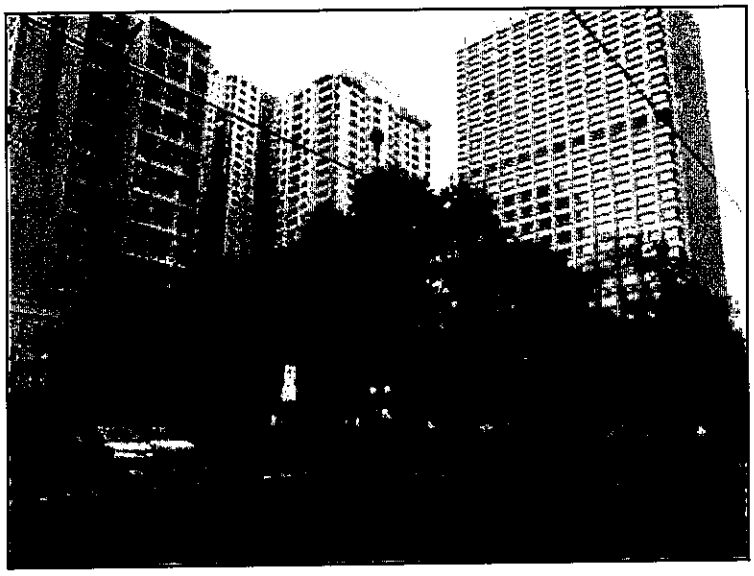


Figure 11: High rise backdrop to the site

To the south west of the car park, on the corner of Pitt and Hay Streets, is number 461 Pitt Street, one of the precinct's most distinctive heritage items (Figure 12). Constructed c.1820 as a Presbyterian Manse, this two-storey sandstone cottage is an important element in the Haymarket streetscape. The simple Georgian form and proportions of this building, signify a

considerably earlier phase of development, juxtaposed with its present surroundings. The scale of this building presents a strong contrast with the surrounding development.

Figure 12: Two views of the heritage item at 461 Pitt Street, the two storey sandstone Georgian building on the corner of Pitt and Hay Streets, viewed west from the subject site.

3. HISTORICAL BACKGROUND

The history of the subject site has been well documented in the four previous Heritage Impact Statements as well as the Excavation Permit Application and Archaeological Research Design undertaken by City Plan Heritage between 2002 and 2005 for the previous developments for the site. This section is taken from those reports.

The subject site has a long history of occupation, stretching back to the early years of European settlement after 1788. The site was developed through successive phases, until the last substantial building on the site – the Hotel Sydney – was demolished in the 1960s. The site has been undeveloped since.

During the early years of settlement, the area in which the subject site is located was outside the limits of Sydney Town, and was known as the 'Brickfields'. The quarrying of clay and the manufacture of bricks had begun in this area from 1788, having been established by Governor Philip. The limits of 'Brickfield Village' are uncertain, however, it is probable that the subject site was included within this area, and therefore it is a possibility that remains of this early colonial phase may be present on the site. It is not absolutely certain however, whether the subject site was located within any area of intensive activity of the Brickfield village.

Figure 13: Detail of Leseur's plan of Sydney in 1802. Brickfield Village has been established by the brickfields by this stage. The approximate location of the subject site is circled. Source: reproduced in Ashton & Waterson, Sydney Takes Shape, a History in Maps, 2000, 15.

The next phase in the history of the locality, was the use of the area for the Sydney Cattle Markets, transferred here around 1830. The plan below (Figure 14) indicates the location of the Cattle Markets. The subject site was right in the centre of this precinct. From 1833, the 'Hay and Corn Markets" – hence the name 'Haymarket' – were operating to the West of the subject site, on the block between George and Pitt Streets.

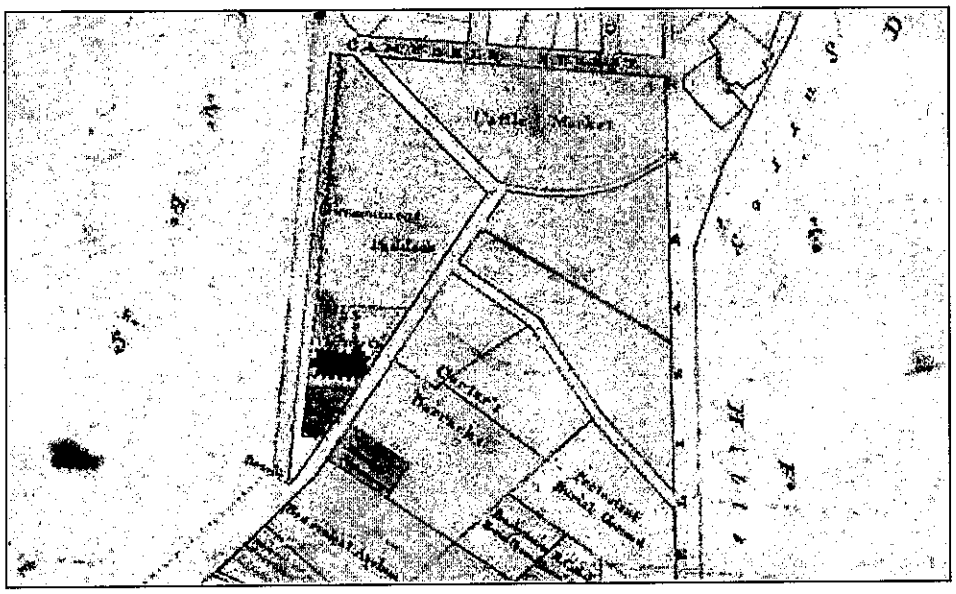


Figure 14: The location of the Cattle Market south of Campbell Street c. 1822 – 1831. Detail from a map of the Parish of St. Lawrence. Source: LPI Parish Map CD 14019701.sid

In the 1860s, the Cattle Markets were again moved further from the City centre, to Glebe Island. In 1869, a new market complex – 'Belmore Markets' - was constructed stretching from Pitt Street to Castlereagh Street, including the area of the subject site. These new markets were owned and operated by the City Council, and comprised the principal fresh produce market for Sydney (Figures 15 and 16).

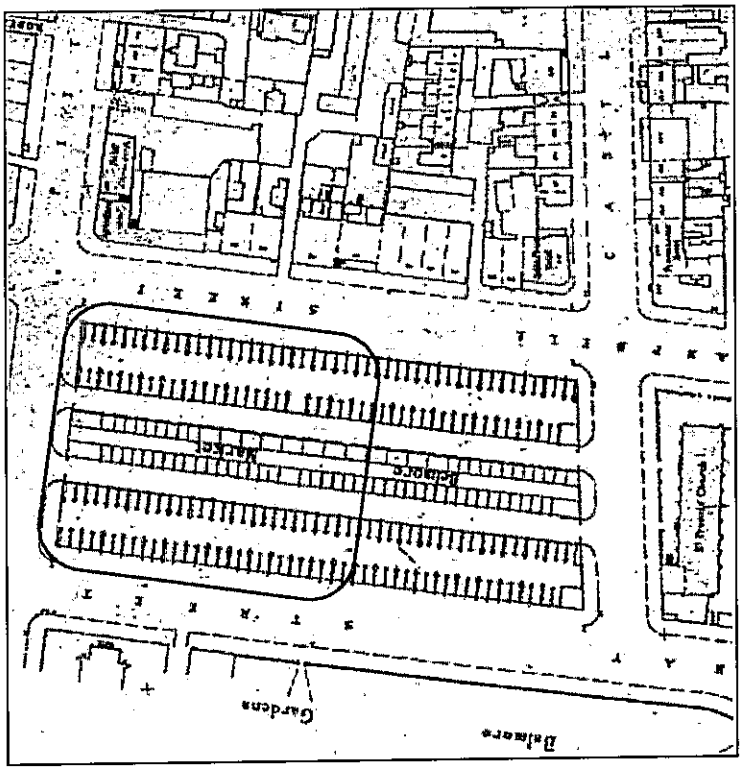


Figure 15: An 1897 plan showing Belmore Markets - three main market buildings with a series of stall in relation to the subject site, indicated. Source Mitchell Library ZM Ser 4 811.17/1, Sydney Sec 3, 4, 6, 7, 1897.

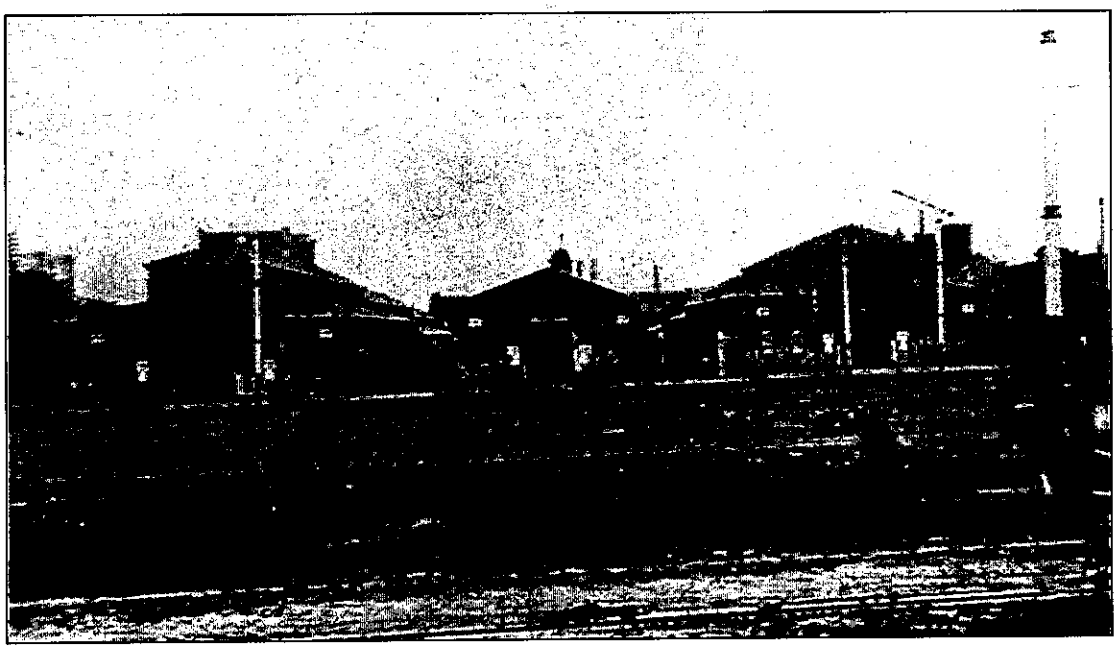


Figure 16: The Belmore Market Buildings, c.1909. The image appears to have been taken looking west as Belmore Gardens (now the park) is visible to the left and Campbell Street to the right. Source: City of Sydney Archives NSCA CRS 51/2511.

In 1910 the Belmore Market complex was demolished, having been superseded by new markets constructed to the west of George Street. The public market association with the block ceased at this time, and the ensuing phase of development was of a commercial character.

With the site vacant the Council sought proposals for the block. Council archives hold several building applications but the winning proposal, from Mr. G. Sydney Jones for the Belmore Building Syndicate, was for the erection of the 'Hotel Sydney' on the western half of the block.[5] They had a 50 year lease on the site.[6] The site was later sub-let to the Central Palace Buildings Ltd (also known as the Central Railway Palace Buildings Ltd).[7]

On the neighbouring site to the subject, presently occupied by 'Central Square', the Adelphi Theatre (later renamed the Tivoli) was constructed – one of Sydney's lost historic houses of popular culture. On the subject site itself, the Hotel Sydney was constructed. (Figure 17). The Hotel Sydney was a five-storey building covering the subject site, built to the street front with shops on its three street frontages (Ground plans indicate that it had various cellars, but the extent of these is not clear (Figure 18).

[5] PC 1913, p.103.
[6] L TO, OS25877.
[7] PC 1914, p.80.

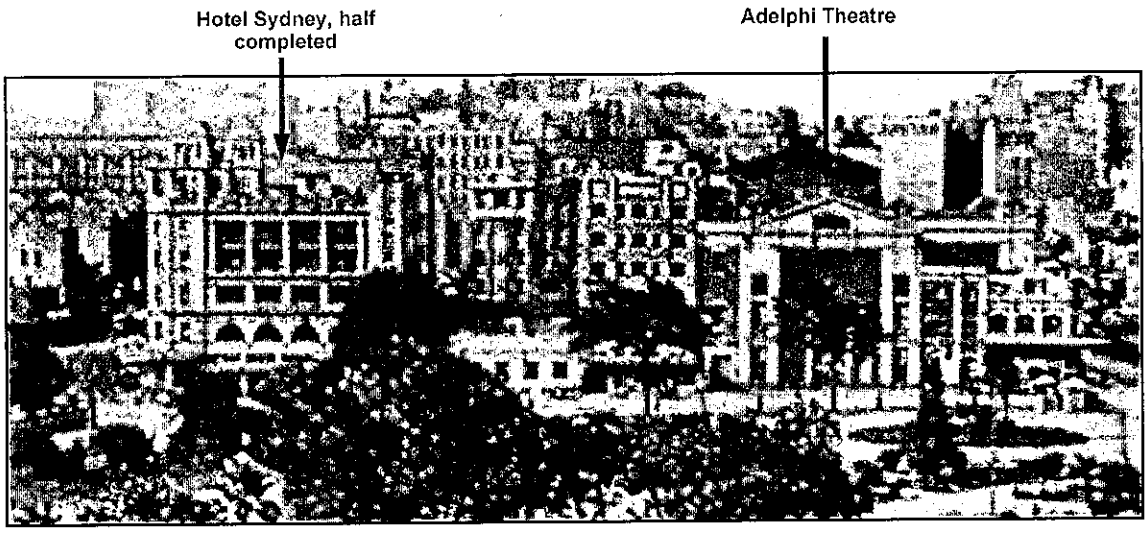


Figure 17: c1918 photograph looking towards the city over Belmore Gardens, from Central Station. Source – City of Sydney Archives, SRC 994.441 PHIL.

The Hotel Sydney was the product of a 'design competition', and Council approved the proposal by Mr G Sydney Jones. The Hotel opened for business in 1918.

The Hotel was designed to respond to the recently constructed Central Railway buildings and ramps, distinguished by the use of heavily rusticated stonework. It was designed in a fairly unconstrained Free Classical style. It featured a two storey 'podium' distinguished by strongly moulded ashlar patterns, which were also repeated on the chamfered corners and central pediments. Between the strongly rusticated sections, the facades were infilled with a combination of classically derived elements, including columns and balusters. Other design elements, such as moulded cartouches and roundels were used. The Hotel had a wide suspended awning on each street front, with a large arched section above the main entrance on the Hay Street frontage. Earlier photographs appear to indicate that corner roof-top towers were constructed as per the original plans. These towers appear to have been removed in later photographs (Figure 20).

The Hotel Sydney was a substantial and distinctive building, designed with regard to the neighbouring developments at Haymarket (the new Belmore Building – Manning Building), and Central Railway Station. The Hotel Sydney was demolished in the 1960s.

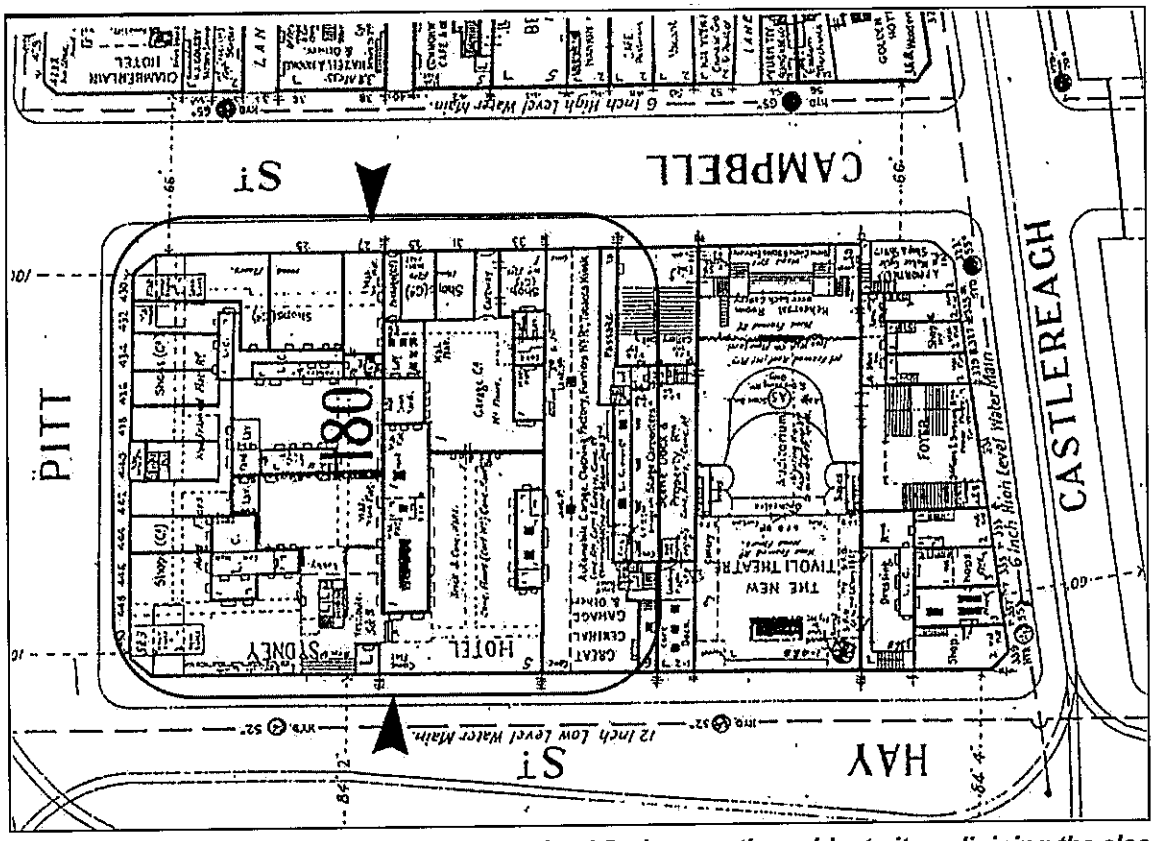


Figure 18: c.1916 Ground floor plan of the Hotel Sydney on the subject site, adjoining the also demolished theatre. Source: Sydney Fire Insurance Plans, Block Plan 180, Mitchell Library.

Figure 19: 1943 aerial photograph of the subject site – showing the Hotel Sydney and adjoining theatre. Source: RTA From the Skies.

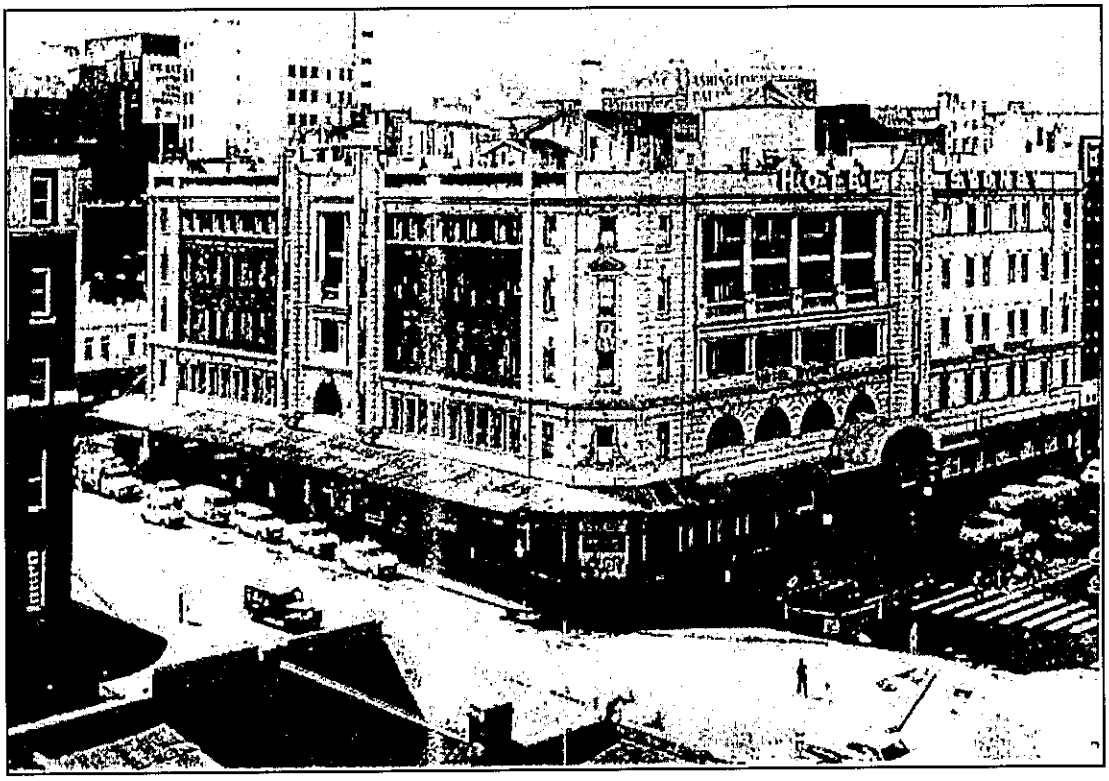


Figure 20: c1960 photograph of the Hotel Sydney, looking towards the corner of Pitt and Hay Streets

The subject site was crown land until it was dedicated on 10th January 1865 as the Belmore Markets and came under the control of the Corporation of Sydney.[8] The Council of the City of Sydney retained ownership of this property until its recent sale to the developers. In 1906 the western 40 feet (12 metres) of the area occupied by the former markets became part of the road reserve. Most of this section of road and footpath has now been reincorporated into the property block.

The subject site has been in operation as a car park for quite some time. Council restrictions on building height for the subject site in the 1990s, in relation to shadows on the neighbouring Belmore Park may have contributed to its long term car park use.[9]

[8] *Plan of Corporation Land,* LTO Crown Plan 62269R.
[9] *Notice of restriction on the use of land not subject to the Real Property Act, 1900*, LTO, Book 2025 No. 699, 19 July 1993

4. SIGNIFICANCE ASSESSMENT

As this Statement of Heritage Impact responds primarily to the effect of the proposal on surrounding heritage items, the State Heritage Inventory (SHI) entries for the surrounding items have been considered in this assessment.

An assessment of the subject site's cultural significance has previously been prepared by City Plan Heritage and archaeologists Casey and Lowe in 2005 for the previous development.[10] City Plan Heritage concurred with the Archaeological Assessment, and that the assessed significance of the earlier use associated with the site was of high archaeological potential. In light of the prior assessment, and the fact that the surface features of the car park have no cultural significance, it is not necessary to reassess the cultural significance of the site for the purposes of this report.

The Statement of Significance of the 2005 Excavation Permit Application and Research Design stated:

> *The site's heritage significance is connected to its use since 1788, firstly as part of the Brickfields, the source of Sydney's early building materials and pottery, then as the site of Sydney's cattle yards and main produce markets, and the Belmore Markets building from 1869, and then as the site of the Hotel Sydney, which provided fine accommodation adjacent to Central Railway Station.*
>
> *There is some possibility that the west portion of the study area has the potential to retain evidence of its use as part of the Brickfields, if later site uses and services have not removed all evidence. This evidence could take the form of remains of kilns, deposits of kiln wasters, brick and clay roofing tile debris, early pottery and the remains of the huts used by the convict workers. The likelihood that this evidence exists elsewhere in the locality has been diminished by the amount of subsequent development. Few in situ Brickfield deposits have yet been located and recorded. Any such remains would have a high level of heritage significance.*
>
> *The cattle markets, apparently being little more than fenced yards, have probably left little behind in the form of recognisable archaeological features. Likewise the Belmore Markets, being timber sheds, are not likely to have left extensive remains on the site other than in the form of the side wall footings and any drains. It is not thought likely that any other remains pertaining to its use as markets will have survived, which reduces its likely archaeological significance.*
>
> *The building of the Hotel Sydney impacted on all the previous phases over most of the site area. The Hotel is relatively well recorded through Council plans and*

[10] City Plan Heritage with Casey & Lowe Pty Ltd, Excavation Permit Application, 2005

photographs. The remains of its basements and footings would have a low level of archaeological significance.

In summary, any evidence of brickfield activity would have a high level of heritage significance at a State level. The other phases of site remains would have a low to medium level of heritage significance at a Local level. The significance of remains in all phases is likely to be affected by the extensive disturbance caused by the construction of the Hotel Sydney.

4.1 ARCHAEOLOGICAL POTENTIAL

Archaeological potential is defined as a site's potential to contain archaeological relics which fall under the provisions of the *Heritage Act* 1977 (amended). This potential is identified by judging whether the current building has removed all evidence of previous land use. The usual example of this would be where a building's basement occupied the full property area and it was deep enough to remove any evidence of previous use of the site. If a site is considered to possess archaeological potential then Council would call for an archaeological assessment to be undertaken prior to development consent being granted. This site was identified as likely to contain archaeological remains in the *Archaeological Zoning Plan for Central Sydney.*[11]

An Archaeological Assessment was previously undertaken for the prior development by the archaeologists Casey and Lowe in 1995.[12] In September 1996 archaeological testing took place under Excavation Permit Application No. 210418. Correspondence between Casey & Lowe Associates and the NSW Heritage Office stated that the testing was undertaken in a 20 x 20m area in the eastern section of the car park. The correspondence concludes:-

The area was chosen because ground plans of the Hotel Sydney, the last building on the site, indicated that the eastern side was potentially less disturbed by footings and cellars than elsewhere. The testing revealed numerous dry-pressed brick and concrete footings and services. Their size and spacing indicated that no in situ pre-1900 remains could have survived in that area. The unexpected level of disturbance encountered in the area tested indicates that the construction of the Hotel Sydney caused extensive disturbance of the site. It is likely that the entire site was cut down. It is therefore regarded as unlikely that any extensive area of intact nineteenth-century remains has survived.[13]

[11] City of Sydney, The Central Sydney Archaeological Zoning Plan, *430-450 Pitt St, vacant item, Category AAP,* Schedule of Sites.
[12] Casey & Lowe Associates, October 1995 430-450 Pitt Street, Sydney: archaeological assessment
[13] Casey & Lowe Associates, Tony Lowe, correspondence with [NSW] Heritage Office, 13.9.1996

However, due to the site's identified archaeological potential an Excavation Permit Application and Archaeological Research Design was prepared by City Plan Heritage in conjunction with Casey & Lowe in 2003,[14] and revised and submitted to the NSW Heritage Office in 2005.[15] An Excavation Permit was issued by the Heritage Council of NSW in November 2005 to City Plan Heritage.[16] The 2005 Permit Application noted that:-

> *Archaeological testing of the site undertaken in 1996 showed that the Hotel Sydney has caused major disturbance. It is still possible, however, that there may be evidence of nineteenth-century land-use in the west portion of the site fronting Pitt Street. It is proposed to monitor the bulk excavation of the site in order to identify and record any nineteenth-century features. Where earlier features occur, it is anticipated that they will be contained in undisturbed areas of remnant topsoil. It is not clear, however, whether such areas remain on the site. The recommendation to monitor site works is consistent with the methodology proposed by Casey & Lowe Associates following test excavations in 1996, and advice provided by Tony Lowe during preparation of the current excavation permit application.*[17]

Casey & Lowe have been engaged to address the archaeology on the current project and a copy of the 2005 permit has been forwarded to them.

5. THE PROPOSAL

The proposal is to remove the current open air car park and replace it with an integrated development comprising an underground electricity substation and above ground office tower. The new development is designed by architects Kann Finch Group.

A full set of architectural floor plans, elevations, and photo montages and the office building design brief were supplied by Kann Finch Group for the completion of this report. The following is a summary of the development, for specific details of the proposal, reference should be made to the submitted plans.

The proposed development consists of an Energy Australia 132kv / 11kv substation over 7 levels, including 4 basement levels and 3 above ground. This substation adjoins an above ground tiered office tower of 14 floors with a steeply sloping roof form. The office tower component incorporates basement car parking over 3 levels, and a basement level loading

[14] City Plan Heritage with Casey & Lowe Pty Ltd, Park Central Excavation Permit Application, December 2003
[15] City Plan Heritage, Park Central 430-450 Pitt Street, Sydney Archaeological Research Design, June 2005
[16] Application No. 2004/S140/039
[17] City Plan Heritage with Casey & Lowe Pty Ltd, , Park Central Excavation Permit Application, 2005, 21

dock, ground level retail spaces and car parking access ramps, and office space over levels 1 to 13. The plant room only is situated on Level 14.

The building comprises 7 floors on the southern side, facing Hay Street and Belmore Park and then on towards Central Railway Station. The northern side of the office tower, facing Campbell Street toward the city and other high rise towers, is the highest side, consisting of 14 floors with the uppermost floor comprising the plant rooms. The tiered design for the tower ensures that shadow patterns do not adversely affect Belmore Park and conforms to Schedule 2 (Sun access plane particulars) of the Sydney LEP 2005.

The building is slightly set back from the western, Pitt Street boundary, with a central office lobby and entry facing Pitt Street This lobby is slightly set back and bordered on each side by retail outlets. The eastern boundary of the development is also set back from the driveway for the adjacent Central Square building and a pedestrian through site paved walkway is provided at ground level. The eastern part of the basement levels are designed for car parking and the majority of the basement at the western part of the building will be for the substation.

On an east-west alignment, the proposed development presents as a stepped transition between the lower level Manning Building and the higher Central Square tower. This can also be said when viewed on a north-south alignment, with the highest elevation of the building at a lower level than its neighbouring northern high rise towers. The position of the building on the Pitt Street alignment will not affect views to and from the heritage items, namely the Chamberlain hotel and 461 Pitt Street due to the slight recess of the construction and the angle of Pitt Street as it curves further west toward Central Station.

6. 6.0 HERITAGE IMPACT ASSESSMENT

6.1 STATUTORY CONTROLS

- This section of the report will address the following issues:
  - Assessment of the proposal under the provisions of the Central Sydney Archaeological Zoning Plan 1992
  - Assessment of the proposal under the provisions of Sydney LEP 2005
  - Assessment of the proposal under the provisions of the City of Sydney Heritage Development Control Plan 2006
  - Assessment of the proposal under the provisions of the Central Sydney Development Control Plan 1996.
  - Assessment of the proposal under the provisions of the NSW Heritage Act 1977.

6.2 CENTRAL SYDNEY ARCHAEOLOGICAL ZONING PLAN 1992

The subject site is listed under the Central Sydney Archaeological Zoning Plan 1992 as an Area of Archaeological Potential (AAP). An AAP is defined as a site where the most recent development, whilst affecting archaeological remains, is likely to have not completely removed deeper deposits.

An Archaeological Assessment for the site was prepared by Casey and Lowe in 1995 which resulted in testing of an area of the site in 1996, (discussed in Section 4 of this report). In brief, the archaeology relates to the four separate phases of development of the site discussed in Section 3 of this report – the c.1780s-1820s Brickfields, the 1829-1842 Cattle market, the 1869-1910 Belmore Markets and the 1918-1963 Hotel Sydney.

According to the test excavations, the archaeological remains located relate to the c.1918 Hotel Sydney, a large five storey building which covered most of the site and appeared to have destroyed any earlier remains. The remains of the Hotel Sydney were identified in the Assessment (by Casey & Lowe, 1995) as being of low significance. It was recommended that they be recorded during archaeological monitoring of the bulk excavation.

Casey & Lowe have been appointed as archaeologists for the current proposal and will submit a separate report.

6.3 SYDNEY LOCAL ENVIRONMENTAL PLAN (LEP) 2005

The subject site is located within the vicinity of several Heritage Items and within the vicinity of a Heritage Streetscape[18]. The subject site was also assessed as an area of archaeological potential. Therefore consideration is required under Clauses 74 and 75 of the Heritage Provisions of the LEP. The proposal is addressed in the table below in relation to the relevant clauses.

SYDNEY LEP (2005) PART 6 – HERITAGE PROVISIONS	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
74 Development within the vicinity of a heritage item The consent authority, when considering an application for development within the vicinity of a heritage item, must take into account the impact of the proposed development on the heritage significance of the heritage item.	• The proposed development is in the vicinity of the following items listed in Schedule 8 of the Sydney LEP; Central Sydney Heritage Items, No. 360, the Chamberlain Hotel at 420-428 Pitt Street, No. 361 the Manning Building located at 441-459 Pitt Street, and No. 362 the former Presbyterian Manse at 461 Pitt Street. The impact of the proposed development on the heritage significance of the items is outlined here below. • The Chamberlain Hotel was designed to take advantage of its corner location, in an already developed context. The context of the Chamberlain Hotel would be altered by any multi-level construction on the currently undeveloped subject site. However, it was not designed in relation to a view corridor across the subject site, which was occupied by the Belmore Market buildings at the time of construction. There will be no impacts on the physical fabric or curtilage of the Hotel itself. In fact, the redevelopment of the subject site will reinstate a built form in this location, and recapture the gradual emergence into view of the Chamberlain Hotel in the streetscape, when moving north along Pitt Street. • The Manning Building, which is located opposite the subject site, also on Pitt Street,

[18] Hay and Campbell Streets are listed as Heritage Streetscapes; however, the extent of the listing does not extend beyond the Pitt Street corner. Pitt Street facades of Manning Building and 461 Pitt Street are not part of a listed Heritage Streetscape. *Central Sydney Heritage Streetscape Map, Sydney LEP 2005.*

SYDNEY LEP (2005) PART 6 – HERITAGE PROVISIONS	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
	was redeveloped with five floors and a roof terrace added to the original building. The proposal for the subject site has responded to the redeveloped form of the Manning Building. The proposed building is proportional in scales of length and height with the size and bulk of the Manning Building. The simplicity of the facade design and its use of glazed panels in gridding of horizontal transoms and vertical mullions provide an openly contemporary building complementary in scale and mass to the more textured Manning Building. • The former Presbyterian Manse is located diagonally opposite the subject site, on the corner of Hay and Pitt Streets. The scale, character, and materials of this building present a dramatic contrast with its surroundings. It is considered that the subject proposal will not have a detrimental effect on the former Manse. No significant view corridors will be interrupted by the proposal. The reinstatement of an appropriate built form on the subject site is considered to be acceptable development option. • Hay and Campbell Streets are listed as Heritage Streetscapes, between George and Pitt Streets. The subject site is not itself located on the Heritage Streetscape sections. The subject proposal will not have a negative impact on the values of the Heritage Streetscapes, as it does not directly impact upon them. It should be noted that the Campbell, Hay and Pitt Street elevations of the proposed development provide a sympathetic contemporary book-end to the Heritage Streetscapes. • The view corridor to the Central Station clock tower (Figure 5) will still be maintained along

SYDNEY LEP (2005) PART 6 – HERITAGE PROVISIONS	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
	the Pitt Street alignment after the current proposal is constructed on the subject site. • Belmore Park is an important open space and landscape element in the Haymarket and Central Railway precincts. The proposed development has been specifically designed in order to relate to the Park. The graduated tiered design for the tower with a minimal pointed top on the northern elevation ensures that shadow patterns do not adversely affect the park and conform to Schedule 2, Sun access plane particulars, of the Sydney LEP 2005.
75 Development of potential archaeological sites The consent authority may grant a consent required by this Part for the carrying out of development on a potential archaeological site only if it has considered an archaeological assessment of how the proposed development would affect the conservation of the site and any relic known or reasonably likely to be located at the site.	• The present development proposal will involve the bulk excavation of the whole of the subject site. An archaeological assessment has previously been carried out for a similar proposal for the subject site in 1995. The recommendations from this assessment entitled *"430-450 Pitt Street, Sydney; archaeological assessment by Casey & Lowe Associate."* are contained in Attachment A to this report. • The Assessment by Casey & Lowe was followed up with test trenches excavated in the eastern section of the car park in 1996. The testing undertaken concluded that: *It is likely that the entire site was cut down. It is therefore regarded as unlikely that any extensive area of intact nineteenth-century remains has survived*[19]. • Casey & Lowe have again been engaged to address the archaeology of the subject site for the present proposal and will present a separate report to address the archaeology.

[19] Casey & Lowe Associates, Tony Lowe, correspondence with [NSW] Heritage Office, 13.9.1996

SYDNEY LEP (2005) PART 6 – HERITAGE PROVISIONS	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
81 Referral - Rail Corporation New South Wales The Consent Authority may consent to the carrying out of development below ground level on land identified as within a rail corridor on the Rail Corridor Map only after referral of the application to Rail Corporation New South Wales and consideration of any written comments received from the Rail Corporation within 21 days of the date of referral.	• Kann Finch Group has engaged City Plan Heritage to prepare this Heritage Impact Statement in order to assess the proposal. The subject site is located within the rail corridor area of Sydney Central Railway Station, as outlined on the Rail Corridor Map of the Sydney LEP. • It is anticipated that Kann Finch Group and the Consent Authority will provide written notice of intention to carry out development to the Rail Corporation of NSW. In addition it is anticipated that they will take into consideration any written response that is received from the Rail Corporation of NSW.

6.4 CITY OF SYDNEY HERITAGE DEVELOPMENT CONTROL PLAN (DCP) 2006

The subject site is not listed on the Heritage DCP. However, under Section 2, Vicinity Controls, Council must consider the impact of the development on the heritage significance of the surrounding heritage items.

CITY OF SYDNEY HERITAGE DCP (2006) SECTION 2 – VICINITY CONTROLS	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
2.2 Provisions (1) Alterations and additions to buildings and structures, and new development of sites in the vicinity of a heritage item are to be designed to respect and complement the heritage item in terms of the: (a) building envelope;	The proposal for the subject site is an integrated development, comprising an electricity substation and office tower development. (a) The above ground section of the development presents as a graduated tiered building presenting glazed external panels of horizontal transoms and vertical mullions with aluminium cappings to the verticals. The lower facade is 7 floors on the southern side of the building, facing

CITY OF SYDNEY HERITAGE DCP (2006) SECTION 2 – VICINITY CONTROLS	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
	Hay Street and Belmore Park and then towards Central Railway Station. The northern side of the development, facing Campbell Street toward the city and other high rise towers, consists of 14 floors. The graduated tiered design for the building ensures that shadow patterns do not adversely affect Belmore Park.
(b) proportions;	(b) The proportions of the building feature a rectangular lower level with graduated upper levels, finishing in a triangular pointed top. The building presents a regular and clear appearance with the central atrium and accompanying recessed entry the only external details for the structure. The proportions are clean and contemporary and fit well not only within the regular shape of the subject site but also for the surrounding streetscape which consists of a variety of low scale heritage buildings, the open air Belmore Park and high rise office towers.
(c) materials, colours and finishes; and	(c)The regular appearance of the building is balanced by the choice of light weight glazed panels forming a 'mullioned' exterior curtain wall of graduated, tiered levels. These panels will be of dark grey colour with a central external section on the north, east and southern elevation of light grey glazing which will emphasise the central atrium and entry lobby. The atrium glazing on the northern and eastern facades will be protected by a system of powder coated aluminium louvred blades, set in front of the curtain wall glazing. This system is designed to also maximise views and meet ESD requirements. At ground level an entry awning will be installed above the Pitt Street entry lobby. This will be comprised of structural steel and clear toughened glass.

CITY OF SYDNEY HERITAGE DCP (2006) SECTION 2 – VICINITY CONTROLS	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
(d) building and street alignment.	(d) The building is slightly set back from the western boundary to Pitt Street, with a central office lobby and entry facing Pitt Street The ground level entry is itself slightly recessed and bordered on each side by retail outlets. The eastern boundary of the development is also set back from the driveway ramps for the adjacent Central Square building and provides for a paved walkway at ground level along the ground level border of the development. The use of the boundary space for pedestrian walkways extends the public nature of the opposite park to the proposed building. The upper levels respond to the park setting by use of the street wall and the progressive set back of the levels to reduce the impact of the height. The proposal will provide an appropriate border element to the park and define the precinct in a more successful manner than the existing car park.
(2) Development in the vicinity of a heritage item is to minimise the impact on the setting of the item by: (a) providing an adequate area around the building to allow interpretation of the heritage item; ... (c) protecting (where possible) and allowing the interpretation of archaeological features; and	a) This control has been previously addressed for Clause 24 of the Sydney LEP 2005, please see the relevant table above. c) The site was identified as an Area of Archaeological Potential on the Central Sydney Archaeological Zoning Plan 1992. Archaeological features associated with the site, were identified and assessed by Casey & Lowe in 1995. They relate to four separate phases of development of the site – the c.1780s-1820s Brickfields, the 1829-1842 Cattle market, the 1869-1910 Belmore

CITY OF SYDNEY HERITAGE DCP (2006) SECTION 2 – VICINITY CONTROLS	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
	Markets and the 1918-1963 Hotel Sydney. According to the 1995 assessment and accompanying 1996 test excavations, the archaeological remains discovered relate to the c.1918 Hotel Sydney, a large five storey building which covered most of the site. These remains were identified in the Assessment (by Casey & Lowe, 1995) as being of low significance. They recommended that the remains be recorded during archaeological monitoring of the bulk excavation. The interpretation of the four identified phases of the site within the public access areas of the proposed development is recommended by City Plan Heritage. There is abundant historical information and images available to provide an interesting historical background for the new development.
(d) retaining and respecting significant views to and from the heritage item.	d) The proposed development will be built set back slightly from the Pitt Street alignment and will face toward the Chamberlain Hotel. Naturally, the context of the Chamberlain Hotel will be altered by any multi-level construction on the currently undeveloped subject site. In light of its history, particularly the Hotel Sydney phase, it is clear that the existing view corridors afforded by the vacant site are not historically significant. The Chamberlain Hotel was designed to take advantage of its corner location, in an already developed context. It was not designed in relation to a view corridor across the subject site. In fact, the redevelopment of this site will reinstate a built form in this location, and recapture the gradual emergence into view of the Chamberlain Hotel in the streetscape, when moving north along

CITY OF SYDNEY HERITAGE DCP (2006) SECTION 2 – VICINITY CONTROLS	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
	Pitt Street from Central Station. In much the same way, the development of the site will affect views to and from the Manning Building and the former Presbyterian Manse – both located on Pitt Street. However, the impact on the views for both items is a limited one, and the Pitt Street corridor view will not be affected due to the designed setback of the new proposal on this alignment. View corridors to Belmore Park, 461 Pitt Street and Central Railway from north of the subject site will be minimally affected by the proposed development. However, the proposal will make a greater contribution to the urban form of the area than that of the existing parking lot.

6.5 CENTRAL SYDNEY DEVELOPMENT CONTROL PLAN (DCP) 1996

The proposal for the subject site is addressed for the relevant clauses of the DCP in the table below.

CENTRAL SYDNEY DCP (1996) SECTION 2 – BUILDING FORM & CHARACTER	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
2.2 Provisions 2.1.2 Circumstances where building predominantly to the street alignment may be inappropriate include development where: ... (i) the site is adjacent to a freestanding or setback heritage building. In this case, the new building should match the setback of the heritage building. In such instances, a Heritage Impact Statement should be prepared	City Plan Heritage has been engaged to undertake this Heritage Impact Statement for the proposed development. The site is within the vicinity of the Chamberlain Hotel, the Manning Building and 461 Pitt Street. These heritage items are located on street corners directly opposite and

CENTRAL SYDNEY DCP (1996) SECTION 2 – BUILDING FORM & CHARACTER	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
	in the case of 461 Pitt Street, diagonally opposite the subject site. The proposal is for the building to be set back from the western, Pitt Street boundary, with a central recessed atrium and entry facing Pitt Street The ground level entry is itself slightly recessed and bordered on each side by retail outlets. The eastern boundary of the development is also set back from the driveway ramps for the adjacent Central Square building and provides for a paved walkway at ground level along the ground level border of the development. These setbacks position the new development outside of the sightlines to and from the heritage items. There would be impact for any development on the subject site as for so many years it has been a ground level car park. The proposed design and setbacks of the building are considered appropriate.
2.7 Building Exteriors 2.7.1 Adjoining buildings (particularly heritage buildings) are to be considered in the design of new buildings in terms of: (i) building to the street alignment, (ii) street frontage heights (see Figure 2.5), (iii) setbacks above street frontage heights, (iv) facade proportions including horizontal or vertical emphasis and (v) the provision of enclosed corners at street intersections.	This clause has been addressed previously above, in Clause 2.2 Provision 1 of the City of Sydney Heritage DCP (1996) controls, please see the separate table.
2.8 Views 2.8.1 No development is to encroach on significant views or silhouettes (see Figure 2.39, which states, "Silhouettes of the towers of major heritage buildings	This clause has been addressed previously above, in Clause 2 (d) of the City of Sydney Heritage DCP (1996) controls, please see the separate table.

CENTRAL SYDNEY DCP (1996) SECTION 2 – BUILDING FORM & CHARACTER	THIS PROPOSAL RELATES TO THESE MATTERS AS FOLLOWS:
such as the clock tower of Central Railway Station should continue to be seen from public places").	

6.6 NSW HERITAGE ACT 1977

The site is not subject to any statutory listings under the NSW Heritage Act. The following table addresses the proposal in relation to relevant 'questions to be answered' in the *NSW Heritage Manual* 'Statements of Heritage Impact' guidelines relating to a new development adjacent to a heritage item (including additional buildings and dual occupancies). However, as a site of archaeological potential, Heritage Council Approval under Section 140 of the Heritage Act will be required for below ground disturbance during development. As mentioned earlier in this report, the archaeological matters for the subject site will be managed by Casey & Lowe Associates.

QUESTIONS TO BE ANSWERED	THIS PROPOSAL RELATES TO THESE QUESTIONS AS FOLLOWS:
How is the impact of the new development on the heritage significance of the item or area to be minimised?	• The proposed development is in the vicinity of the following items listed in Schedule 8 of the Sydney LEP - No. 360, the Chamberlain Hotel at 420-428 Pitt Street, No. 361 the Manning Building located at 441-459 Pitt Street, and No. 362 the former Presbyterian Manse at 461 Pitt Street. As mentioned previously in this report, the impact of any above ground development on the currently undeveloped site (ground level car park) will create an impact on the surrounding streetscape. The impact will be minimised by both the setback from the street on the 3 street boundaries opposite the items and also by the sympathetic contemporary, graduated tiered design of the new proposal.
Why is the new development required to	• The location is within the Central Sydney

QUESTIONS TO BE ANSWERED	THIS PROPOSAL RELATES TO THESE QUESTIONS AS FOLLOWS:
be adjacent to a heritage item?	area, in a very busy commercial precinct and a transport corridor. Therefore the site was always intended for development and historically, has been developed since the growth of the city in the 1860s. The new development of the Energy Australia substation is imperative to ensure better energy facilities for the area. The integrated design of the substation and small office tower has been specifically designed by the architects to develop a building that minimises the visual and urban design impact of the substation.
How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?	• The surrounding heritage items are located on busy street corners. The streets themselves contribute to the curtilage around each item. As the new proposal is across the street from each item, the heritage building boundaries, combined with the street itself increases the area of curtilage which assists in retention and appreciation of heritage significance for each item.
How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects?	• These heritage items are located on street corners directly opposite and in the case of 461 Pitt Street, diagonally opposite the subject site. The proposal is for the building to be set back from the western, Pitt Street boundary, with a central recessed atrium and entry facing Pitt Street The ground level entry is itself slightly recessed and bordered on each side by retail outlets. The eastern boundary of the development is also set back from the driveway ramps for the adjacent Central Square building and provides for a paved walkway at ground level along the ground level border of the development. These setbacks position the new

QUESTIONS TO BE ANSWERED	THIS PROPOSAL RELATES TO THESE QUESTIONS AS FOLLOWS:
	development outside of the sightlines to and from the heritage items. There would be impact for any development on the subject site as for so many years it has been a ground level car park. The proposed design and setbacks of the building are considered an appropriate response to the conditions of the site.
Is the development sited on any known, or potentially significant archaeological deposits? If so, have alternative sites been considered? Why were they rejected?	• An Archaeological Assessment has been carried out for the site in October, 1995. While this new development is separate and different to that of the 1995 report the impact is similar. • The archaeology has already been discussed in this report. Briefly, it was related to the Brickfields era (assessed as high significance) and subsequent cattle and produce markets followed by the Hotel Sydney, demolished in the 1960s (items of low significance). That Assessment concluded that there was a high potential for items of low significance to exist and a low potential for items of high significance. • The subsequent archaeological testing in 1996 concluded that: "*the construction of the Hotel Sydney caused extensive disturbance of the site. It is likely that the entire site was cut down.*" The current proposal for bulk excavation of the site will be monitored by the appointed archaeologists Casey & Lowe in accordance with NSW Heritage legislation.
Is the new development sympathetic to the heritage item? In what way (e.g. form, sitting, proportions, design)?	• The new development is designed as a completely contemporary building which in bulk, form and use of exterior glazed curtain walls will sympathise with the adjacent heritage buildings.

QUESTIONS TO BE ANSWERED	THIS PROPOSAL RELATES TO THESE QUESTIONS AS FOLLOWS:
Will the additions visually dominate the heritage item? How has this been minimised?	• The new development will impact visually on the adjacent heritage items. This has been minimised by the setback positioning of the new development on the street frontages, by the use of tinted glazed panels, which will reflect the heritage items and by the gradually increasing height of the building, from 7 levels to 14 levels which reduces the visual impact of the bulk of the building within the streetscape and for the nearby heritage items.
Will the public, and users of the item, still be able to view and appreciate its significance?	• The view corridors along Pitt Street (north and south alignment) will not be impacted upon by the new development. The east – west distance views of the heritage items will be interrupted, however, the close-up views will not be at all affected by the design and position of the new development, thus the public and the users (building visitors and office workers) of the heritage items will still be able to view and appreciate their significance.

7. CONCLUSION AND RECOMMENDATIONS

City Plan Heritage concludes that the new proposal of integrated development for the subject site – consisting of the Energy Australia substation in association with the graduated tiered office tower described in this report is an acceptable development for this particular site.

It was noted that any above ground development on this ground level car park site would create an impact on the heritage of the site and for the surrounding. However, the historical research for the site illustrates its former development as a busy location, from early manufacturing and markets to later hotel. The four historic phases of the subject site nominated in this report are recommended for interpretation within the public access areas of the new development. Information panels displaying pictures and text explaining the former phases, that is, the Hotel Sydney, the Belmore Market Buildings, Cattle Markets and Brickfields in relation to the subject site would be appropriate for the new building.

It is also understood that the recognised archaeological potential of the site is being separately addressed by Casey & Lowe Associates, who have previously undertaken archaeological studies for the site. Any historic relics unearthed during the excavation of the site should also form part of the interpretation mentioned above, on the site.

In conclusion, it is considered by City Plan Heritage that having assessed the proposal in relation to the cultural heritage values of the site and surrounding locality, the proposal is an appropriate response to the site. The proposal is an openly contemporary response to the heritage of the site and of the surrounding heritage items. The design of the proposal is sympathetic to the nearby buildings of heritage value through form, scale, massing and the use of materials. The new building has also been designed in respect to the adjacent Belmore Park for sun shading.

City Plan Heritage supports the subject proposal, and it is recommended that the Director-General of the NSW Department of Planning consider it for approval.

CITY PLAN HERITAGE
MAY 2008

8. ATTACHMENT A – ARCHAEOLOGY SUMMARY

- Executive Summary and Recommendations from Casey & Lowe Associates 1995 Archaeological Assessment Report
- Correspondence from Casey & Lowe to NSW Heritage Office, 1996