

Table 3.2 Details of Underground Storage Tanks

Address	USTs Registered	UST Details
<b>2 – 18 Parramatta Road</b>	1 x UST registered from the 1930s – 1950s. Additional UST potentially registered in 1930s.	Capacity of known UST approximately 5,000L. Used to store oil for air conditioning unit. Location of UST unclear (site sketches only), however potentially located in North-Eastern corner of 2 Parramatta Road.
<b>20 Parramatta Road</b>	3 x USTs registered from 1970s – 1990s. 2 x USTs removed in early 1990s.	Capacity of USTs 10,000L, 20,000L and 20,000L. Registered use for petrol and diesel storage. Location of USTs unclear (site sketches only), however potentially located near western boundary of site.
<b>11 – 13 Columbia Lane</b>	2 x USTs registered from 1960s – 1970s.	No details available.

It is unknown which (if any) of these USTs remain at the site. WSP did not observe any evidence of USTs during site works, with the exception of one UST at 18 Parramatta Road, near the entrance to Southern Cross Mowers.

LPG tanks have also historically been registered at 2 – 18 Parramatta Road.

Refer to Appendix F for details of WorkCover search results.

### 3.5 REVIEW OF AERIAL PHOTOGRAPHS

Aerial photographs were reviewed to assist in identifying the history of the site and the surrounding area. The selected aerial photographs reviewed were from 1930, 1951, 1961, 1970, 1986, 1994, 1995, 2005 and 2011. Copies of all aerial photographs reviewed are included in Appendix G. Table 3.3 presents a summary of the review of each of these photographs.

Table 3.3 Historical Aerial Photo Review

Year of Aerial Photograph	Description of Site	Description of Surrounding Area
<b>1930</b>	Existing small buildings along north boundary with two large buildings in the northeast corner. The west and southern areas of the site appear undeveloped and cleared of vegetation.	Rail corridor exists along eastern and southern boundaries. Residential lots beyond railway line to the east. To the north lie George Street and Railway Street with building developments between. Residential properties along western boundary.
<b>1951</b>	Stormwater channel constructed running north-south through site and along southern boundary. Buildings constructed along eastern edge of site.	Large building constructed to the southwest.
<b>1961</b>	The site is now fully developed apart from the western boundary which is still cleared of vegetation.	Electricity sub-station to the south. Building upgrade on site adjacent to Railway Street to the north. Extension of Columbia Lane south to rail corridor. Large development to the southeast.
<b>1970</b>	Buildings demolished at 14-16 Parramatta Road except for three buildings in south-west corner of lot. Construction of car lot on northern half of 20 Parramatta Road. Southern half of lot appears un-vegetated	More buildings constructed along western boundary.
<b>1986</b>	Construction of building occupying majority area of 14-16 Parramatta Road.	Motorway constructed parallel to Parramatta Road to the north.
<b>1994</b>	No changes to the onsite landuse were observed.	No changes to the surrounding area were observed.

2005	Car park and small buildings developed in north-west corner of site.	No changes to the surrounding area were observed.
2011	No changes to the onsite landuse were observed.	Building to the north between George St and Railway St removed. Area appears vacant with sealed surfaces.

### 3.6 GOVERNMENT DATABASE SEARCHES

WSP reviewed publically available NSW Government databases to determine if the site is subject to any environmental constraints. WSP concludes the following:

- The site is not within land declared to be an investigation area or remediation site under Part 3 of the *Contaminated Land Management Act 1997*;
- The site is not subject to any outstanding orders or notices requiring an investigation order or remediation order;
- The site is not registered as an EPA Contaminated Site; and
- The site does not possess a licence under the *Protection of the Environment Operations Act 1997*.

### 3.7 SENSITIVE ENVIRONMENTS AND POTENTIAL RECEPTORS

The nearest sensitive environments are as follows:

- High-density residential properties adjoining the western site boundary.
- Stormwater channel running north-south through the centre of the site (between 18 and 20 Parramatta Road) and along the south western boundary.
- Site occupants and visitors for the commercial businesses currently located at the site.
- Site workers associated with the proposed redevelopment works at the site.
- Future site occupants.

### 3.8 POTENTIAL CONTAMINATION SOURCES

Based on the desktop investigation and the site inspection, the following potential contamination sources were identified.

- UST which remains at 18 Parramatta Road.
- 2 x USTs which were formerly located at 20 Parramatta Road.
- Three USTs which potentially remain at 2 Parramatta Road and 11-13 Columbia Lane.
- Asbestos building materials in site structures.
- General rubbish onsite (empty containers, plastic bags, brick, wood and plastic materials).
- Potential past spillage from oils and chemical storage at 18 Parramatta Road and 11-13 Columbia Lane.
- Electrical substation, in northeast corner of 6 – 8 Parramatta Road.
- Fill material located across the site.
- Hazardous building materials in surface soils from the historical demolition of buildings at 14-16 Parramatta Road.



## 4 PRELIMINARY SOIL INVESTIGATION

### 4.1 SOIL SAMPLING METHODOLOGY

WSP field personnel conducted intrusive works on 27 and 28 January, 2011.

A total of 54 soil samples (plus collection and analysis of one intra-laboratory duplicate and one inter-laboratory duplicate soil samples for QA/QC purposes) were collected from ten (10) boreholes as part of the investigation. The boreholes were drilled using a truck mounted rotary auger drilling rig.

Due to the preliminary nature of this investigation, the number of sampling locations does not meet the minimum sampling requirements for site characterisation, as defined in the *Sampling Design Guidelines* (NSW EPA, 1995). Sampling locations were chosen to give representative coverage across the site, target future proposed building footprints and where possible, target potential contamination sources identified in Section 3.8. Sampling locations are shown in Figure 6, Appendix A.

At least one sample from each borehole was sealed in a zip lock bag and analysed for organic compounds using a Flame Ionisation Detector (FID) (refer to the bore logs in Appendix B for FID results). One sample from each borehole was submitted for laboratory analysis. The sample was selected according to FID readings, visual and olfactory assessment of soil.

Each sample was collected and placed directly into a laboratory supplied glass sample jar using new disposable nitrile gloves. The samples were then immediately placed into an ice filled Esky and kept below approximately four degrees Celsius for appropriate laboratory preservation. Samples were refrigerated until transferred to the laboratory. A chain of custody was completed and the samples were dispatched to Envirolab (NATA certified), where chemical analysis was performed on the submitted soil samples.

### 4.2 SURFACE SOIL OBSERVATIONS

The following observations were made by WSP personnel on 18 January 2011:

- The majority of the site was currently in use. The site surface was generally sealed with buildings, concrete slabs and asphalt car park.
- Minor soil staining associated with car yards and mechanical repairs at 18-20 Parramatta Road.

### 4.3 FIELD OBSERVATIONS ON SOIL PROFILE

Fill was encountered within borehole locations at depths between 0.3-4.5mbgl. The fill depth was typically less than 1.0mbgl. The western portions of the site showed an increase in fill depth which may be attributed to development works associated with the stormwater channel. The fill was classified as a mixture of brown, black, grey and orange silty clay. Brick and asphalt fragments were noted in some bores. Fill was generally dry to moist with no odour, with the exception of BH9 which had a hydrocarbon odour and black staining at 0.5m depth.

Natural soil material, comprising mostly grey, black and orange non-plastic silty clay was observed beneath the fill material. Ironstone content was noted by red banding, particularly at BH7. The natural soil moisture condition ranged from moist to saturated. No odours were noted in natural soils.

The silty clays were underlain by shale / siltstone bedrock typically encountered between depths of 3 - 6m. Depth to shale appears to be shallowest in the northeast corner of the site and increasing in depth to the southwest. Shale was extremely weathered and light grey in colour.

Auger refusal was encountered at depths between 3.1 - 7.8m in weathered shale.

Refer to Appendix B for bore log details.

#### 4.4 SOIL ASSESSMENT CRITERIA

The analytical suite included asbestos, heavy metals (M8), total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAH), phenolics and Volatile Organic Compounds (VOCs) (which included BTEX and solvents). A broad analytical suite was adopted due to the wide variance in historical site uses.

In accordance with the proposed future mixed use of the site, the applicable soil assessment criteria for the contaminants of concern include the following:

- *The National Environment Protection (Assessment of Site Contamination) Measure, 1999 Schedule B(1)* (NEPM, 1999) Health-based Investigation Level D – residential with minimal access to soil (including high rise apartments), Level F – Commercial/Industrial use and EIL – for the protection of plant species.
- *The NSW Environmental Protection Agency, 1994 Service Station Guidelines* (EPA, 1999) criteria for TPH and BTEX not stated in the NEPM guidelines.

Table 4.1 summarises the soil assessment criteria.

Table 4.1 Soil Assessment Criteria

Parameter	Standard Residential HIL D (mg/kg)	Commercial/Industrial HIL F (mg/kg)	EIL (mg/kg)	Source
<b>Heavy Metals</b>				
Arsenic	400	500	20	NEPM (1999)
Cadmium	80	100	3	NEPM (1999)
Chromium(VI)	400	500	1	NEPM (1999)
Copper	4000	5000	100	NEPM (1999)
Lead	1200	1500	600	NEPM (1999)
Mercury	60	75	1	NEPM (1999)
Nickel	2400	3000	60	NEPM (1999)
Zinc	28000	35000	200	NEPM (1999)
<b>PAHs</b>				
Benzo(a) pyrene	4	5		NEPM (1999)
Total PAHs	80	100		NEPM (1999)
<b>TPH</b>				
TPH C <sub>6</sub> -C <sub>9</sub>	65	65		EPA (1994)
TPH C <sub>10</sub> -C <sub>36</sub>	1000	1000		EPA (1994)
<b>Phenols</b>				
Phenol	34000	42500		NEPM (1999)
<b>BTEX</b>				
Benzene	1	1		EPA (1994)
Toluene	1.4	130		EPA (1994)
Ethylbenzene	3.1	50		EPA (1994)
Total Xylenes	14	25		EPA (1994)
<b>Other VOCs</b>	No guidelines, site specific risk assessment where VOCs (other than BTEX) detected at concentrations greater than the laboratory limit of reporting			
<b>Asbestos</b>	Adopted NSW DECCW level of 'zero asbestos'			

#### 4.5 SOIL ANALYTICAL RESULTS

Laboratory results are summarised in Appendix H with laboratory reports provided in Appendix I.



#### 4.5.1 Heavy Metals

Concentrations of heavy metals in all soil samples submitted for analysis were below the NEPM (1999) guidelines with the following exceptions:

- Concentrations of copper in sample BH4 1.2m (500mg/kg) exceeded the NEPM EIL (1999) guideline of 100mg/kg; and
- Concentrations of zinc in sample BH4 1.2m (420mg/kg) exceeded the NEPM EIL (1999) guideline of 200mg/kg.

#### 4.5.2 Organic Results

Concentrations of organics in all soil samples submitted for analysis were either below the NEPM (1999) and EPA (1994) guidelines or below laboratory detection limits, with the following exception:

- Concentrations of Total TPH (C<sub>10</sub>-C<sub>36</sub>) in sample BH6 1.0m (1,075mg/kg) exceeded the EPA (1994) guideline of 1,000mg/kg.

#### 4.5.3 Asbestos

No asbestos fragments or fibres were detected in the ten soil samples analysed.

### 4.6 DATA QUALITY ASSESSMENT

A comprehensive QA/QC is contained in Appendix J.

An assessment of sample QA/QC found that the chain of custody requirements, sample integrity and holding times, laboratory QA/QC and analytical data check are acceptable and complete.

## 5 PRELIMINARY GROUNDWATER INVESTIGATION

### 5.1 GROUNDWATER WELL INSTALLATION METHODOLOGY

A total of three (3) boreholes were converted into groundwater monitoring wells. Groundwater well construction details are included on the borehole logs presented in Appendix B.

The well screen comprised 4.5-6.0m of 50 mm ID, Class 18, threaded, flush jointed uPVC with machine slots of 0.5 mm to 1.0 mm width. Casing for the well comprised approximately 1.5 m of 50 mm ID, Class 18, threaded, flush jointed uPVC. The screen and casing were joined using Viton™ O-rings which are chemically resistant to petroleum hydrocarbons and chlorinated solvents.

The void was gravel packed with 1-2mm graded sand to approximately 0.5m above the top of the screen followed by a bentonite seal installed above the gravel pack to the surface using bentonite pellets. The top of the well casings are below ground level and covered with steel Class D road boxes which were 'cemented in' flush with the ground surface.

### 5.2 GROUNDWATER OBSERVATIONS

Table 5.1 indicates the depth to groundwater at each borehole location as observed during drilling.

Table 5.1 Depth to groundwater encountered during drilling works

Borehole Location	Depth (mbgl)	Borehole Location	Depth (mbgl)
BH1	-	BH6	-
BH2	2.6	BH7	-
BH3	3.5	BH8	-
BH4	1.9	BH9	-
BH5	2.3	BH10	-

Groundwater wells were installed in BH2 (MW01), BH4 (MW02) and BH10 (MW03). After a period of 7 days, the groundwater level was observed at 3.06, 3.01 and 3.64mbgl respectively.

The Relative Levels (RL) of each well was surveyed with reference to Australian Height Datum (AHD). The RL of each well and calculated RL for groundwater are summarised in Table 5.2.

Table 5.2 Calculated RL for Groundwater

Monitoring Well ID	RL, TOWC (m AHD)	Depth to Groundwater (m)	RL, Groundwater (m AHD)
MW01	5.63	3.06	2.57
MW02	5.02	3.01	2.01
MW03	7.88	3.64	4.24

TOWC = Top Of Well Casing

On the basis of calculated depths to groundwater, the inferred groundwater flow at the site is North-West.

No odours were noted within sampled groundwater.

### 5.3 GROUNDWATER SAMPLING

A total of three (3) groundwater wells were sampled (plus collection and analysis of one duplicate groundwater sample and one rinsate sample for QA/QC purposes) as part of the investigation. Groundwater well locations are shown in Figure 6, Appendix A. Groundwater wells were positioned to assess groundwater conditions at the up and downgradient boundaries of the site.

Development of the wells was conducted following installation using a stainless steel bailer. The stainless steel bailer was cleaned with Decon 90 wash mixture and rinsed with water between sampling events at each well. Between 15 and 30L of sediment and water was removed from the three wells during development. All monitoring wells had a low yield with slow recovery and were consequently developed dry.

Prior to sampling, all wells were gauged with an interface water level meter to determine the depth to groundwater and presence of separate phase product and then purged using a low flow peristaltic pump. Wells were purged until groundwater parameters stabilised to within 10% of the previous reading.

Water quality parameters recorded included pH, redox potential (Eh), electrical conductivity, dissolved oxygen and temperature. Purging equipment was thoroughly decontaminated between purge events with a phosphate free detergent (Decon 90) and rinsed with potable water.

Groundwater samples were placed directly into water sampling containers. Samples for metals were field filtered using a 0.45micron millipore filter unit and placed into HNO<sub>3</sub> preserved bottles.

The samples were then immediately placed into an ice filled Esky and kept below approximately four degrees Celsius for appropriate laboratory preservation. Samples were refrigerated prior to being transferred to the laboratory. A chain of custody was completed and the samples were dispatched to Envirolab (NATA certified), where chemical analysis was performed on the submitted groundwater samples.

Field records of purging and sampling event are provided in Appendix K.

#### 5.4 GROUNDWATER ASSESSMENT CRITERIA

The groundwater samples were analysed for heavy metals, TPH and VOCs. A broad analytical suite was adopted due to the wide variance in historical site uses.

The applicable groundwater assessment criteria comprise the following:

- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 2000* (ANZECC, 2000). The marine 95% level of protection guidelines have been adopted given that the nearest environmental receptors are marine ecosystems that can be classified as slightly – moderately disturbed according to the ANZECC (2000) guidelines;
- *The NSW Environmental Protection Agency, 1994 Service Station Guidelines* (EPA, 1999) criteria for benzene and xylene not stated in the NEPM guidelines;
- *The Dutch Intervention Levels, 2000* (Dutch, 2000) for mineral oil has been adopted as a screening criterion only for TPH.

Table 5.3 presents a summary of groundwater assessment criteria.

Table 5.3 Groundwater Assessment Criteria

Parameter	Trigger Values for Marine Water 95% Level of Species Protection (µg/L <sup>-1</sup> )	Source
<b>Heavy Metals</b>		
Cadmium	0.7	ANZECC (2000)
Chromium	4.4	ANZECC (2000)
Copper	1.3	ANZECC (2000)
Lead	4.4	ANZECC (2000)
Mercury (inorganic)	0.1	ANZECC (2000)
Nickel	7	ANZECC (2000)
Zinc	15	ANZECC (2000)
<b>TPH</b>		
TPH C <sub>10</sub> -C <sub>36</sub>	600	Dutch (2000)
<b>BTEX</b>		
Benzene	500	ANZECC (2000)
Xylene	380	EPA (1994)



<b>Other VOCs</b>	No applicable guidelines, site specific risk assessment where VOCs (other than Benzene / Xylene) detected at concentrations greater than the laboratory limit of reporting
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## 5.5 GROUNDWATER RESULTS

Laboratory results are summarised in Appendix H with laboratory reports provided in Appendix I.

### 5.5.1 Physiochemical Results

Physiochemical results of the groundwater were measured during sampling on 4 February 2011 and are shown in Table 5.4.

Table 5.4 Summary of physiochemical results

Monitoring Well ID	Temp (°C)	pH (pH units)	Dissolved Oxygen (ppm)	Redox / ORP 1 (mV)	Conductivity (µs/cm)
MW1	22.0	6.70	0.35	105	1876
MW2	27.3	6.87	0.23	-47	5.17
MW3	25.2	6.22	1.40	108	17.67

ORP field results converted to Standard Hydrogen electrode (SHE) readings by adding 206mV

- The temperature of the groundwater ranged from 22.0°C to 27.3°C across the three monitoring wells;
- pH ranged from 6.22 to 6.87 pH units indicating neutral groundwater conditions;
- Dissolved oxygen in the groundwater ranged from 0.23ppm to 1.40ppm;
- ORP (oxidation reduction potential) levels measured ranged between -47mV to 108mV. Indicates oxidising and reducing groundwater conditions. ORP (or Redox) is a measure of a water system's capacity to either release or gain electrons in chemical reactions;
- Conductivity levels ranged from 5.17 micro-siemens/cm (µs/cm) to 1876 µs/cm indicating fresh to saline groundwater conditions across the site.

### 5.5.2 Heavy Metals

The concentrations of heavy metals in all groundwater samples submitted for analysis were below the adopted site assessment criteria with the following exceptions:

- Concentrations of cadmium in MW2 (1.3µg/L) exceeded the ANZECC (2000) Marine Water criteria of 0.7µg/L;
- Concentrations of lead in MW2 (7µg/L) exceeded the ANZECC (2000) Marine Water criteria of 4.4µg/L;
- Concentrations of nickel in MW2 (41µg/L) exceeded the ANZECC (2000) Marine Water criteria of 7µg/L; and
- Concentrations of zinc in MW2 (47µg/L) exceeded the ANZECC (2000) Marine Water criteria of 15µg/L.

### 5.5.3 TPH / BTEX

Concentrations of TPH and BTEX in all groundwater samples submitted for analysis were either below the laboratory limit of reporting or below the adopted site assessment criteria.

### 5.5.4 VOCs

Concentrations of VOCs in all groundwater samples submitted for analysis were below the laboratory limit of reporting with the following exceptions:

- Concentrations of cis-1,2-dichloroethane (34µg/L), trichloroethene (1.9µg/L) and vinyl chloride (16µg/L) in MW3, located in the south-western corner of the site. Notification triggers for these contaminants (marine water) are not defined in the *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997*. Groundwater samples obtained from downgradient wells MW1 and MW2 did not report any concentrations of these VOCs.

## 5.6 DATA QUALITY ASSESSMENT

A comprehensive QA/QC is contained in Appendix J.

An assessment of sample QA/QC found that the chain of custody requirements, sample integrity and holding times, laboratory QA/QC and analytical data check are acceptable and complete.

## 6 GEOTECHNICAL INVESTIGATION

### 6.1 GEOTECHNICAL SAMPLING

A preliminary geotechnical investigation was undertaken Auswide Geotechnical. The geotechnical assessment involved resistance testing of the strata within each of the ten boreholes using a 9kg Dynamic Cone Penetrometer. For clay based strata, insitu testing was carried out to determine the undrained shear strength of the strata. Tube samples (U50) were retrieved from 2 metre and 5 metre depths from selected boreholes and laboratory tested for phi and cohesion. Three tube samples were retrieved from BH2, BH8 and BH9 for shrink/swell (ISS) parameter testing by the laboratory.

### 6.2 GEOTECHNICAL ANALYTICAL RESULTS

The geotechnical report compiled by Auswide Geotechnical is provided in Appendix C.



## 7 CONCLUSIONS AND RECOMMENDATIONS

### 7.1 CONCLUSIONS

Based on the findings of the preliminary contamination and geotechnical investigation, WSP makes the following conclusions:

- Through a desktop review and site inspection, a number of potential contamination sources have been identified at the site including current and former USTs, asbestos containing materials in site structures and site soils (from a previous investigation), an electrical substation and fill material.
- Groundwater is located at a depth of approximately 3.0 – 4.0 mbgl and flows north-west. Due to the shallow depth of groundwater, any basement design and construction undertaken as part of the proposed development will need to assess and manage impacts to local groundwater.
- No groundwater bores are registered for beneficial use within a 1km radius of the site.
- The majority of the site is underlain by fill material up to 4.5mbgl.
- EIL exceedences for copper and zinc were recorded for one borehole location (BH4). Environmental Investigations also reported elevated metal (copper and lead) concentrations in fill material across 12 - 18 Parramatta Road. As such, the selection of metal tolerant plant species should be considered for the proposed redevelopment.
- Total TPH (C10-C36) was reported in excess of the adopted criteria for one borehole location (BH6 1.0m). It is likely that this impact is isolated and associated with the heterogeneous fill material. This area is intended for multi-storey residential/commercial use restricting access to the soil and WSP does not consider that the exceedance poses any restrictions on the proposed redevelopment.
- Heavy metal exceedences of ANZECC (2000) Marine Water criteria were recorded at one location (MW2). The elevated metal concentrations are not considered to present a risk to the environment and are likely to be representative of background concentrations.
- cis-1,2-dichloroethane, trichloroethene and vinyl chloride were detected at MW3. MW3 represents upgradient groundwater quality at the site and it is unlikely that the elevated concentrations of these contaminants are a result of site activities. Notification triggers for these contaminants (marine water) are not defined in the *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997*. Groundwater samples obtained from downgradient wells MW1 and MW2 did not report any concentrations of these VOCs.
- Site structures potentially comprise hazardous materials, including asbestos.
- Refer to Appendix C for geotechnical conclusions provided by Auswide Geotechnical.

### 7.2 RECOMMENDATIONS

Based on the findings and conclusions of the preliminary contamination and geotechnical investigation, WSP makes the following recommendations:

- A Remedial Action Plan (RAP) be developed to document the proposed methodologies for the excavation, handling and off-site disposal of fill material. The RAP shall also document an 'unexpected finds protocol' to outline the process for managing unexpected contamination which is encountered during site redevelopment works.
- Fill material excavated as part of the proposed redevelopment is stockpiled on site and subject to waste classification sampling to determine the most appropriate method of off-site disposal.
- A hazardous building materials assessment is undertaken prior to demolition, to assist with the development of site specific hazard controls for the demolition works.
- Up to five USTs potentially remain onsite. WSP recommend that USTs are located, decommissioned, removed and UST locations validated as part of the proposed redevelopment works.

- Consultation will be required with Energy Australia prior to removal / replacement of the substation identified at the site. WSP recommend soil validation sampling and analysis following removal / replacement works at the substation location.
- An additional round of groundwater sampling to further assess the extent of VOC contamination identified in groundwater at the site. Based on the results of the additional groundwater sampling, additional works may be required to identify the source and extent of VOC contamination.
- Where feasible, groundwater monitoring wells installed as part of this investigation are retained on site.
- Refer to Appendix C for geotechnical recommendations provided by Auswide Geotechnical.

Based on the information obtained and reviewed as part of this Preliminary Contamination and Geotechnical Investigation, it is the opinion of WSP that the contamination and geotechnical condition of the site represents a low risk to the proposed residential and commercial redevelopment, noting the recommendations provided in the report.

## 8 REPORT LIMITATIONS

The findings of this report are based on the scope of work outlined in section 1.3. WSP performed its services in a manner consistent with the normal level of care and expertise exercised by members of the environmental assessment profession. No warranties, express or implied are made.

Subject to the scope of work, WSP's assessment was limited strictly to identifying the environmental conditions associated with the subject property and does not include evaluation of any other issues. This report is not a detailed contamination assessment across the entire site and only encompasses a limited intrusive investigation. The absence of any identified hazardous or toxic materials on the subject property should not be interpreted as a guarantee that such materials do not exist on the subject property.

This report does not comment on any regulatory obligations based on the findings. This report relates only to the objectives stated and does not relate to any other work undertaken for the Client.

All conclusions and recommendations regarding the property are the professional opinions of the WSP personnel involved with the project, subject to the qualifications made above. While normal assessments of data reliability have been made, WSP assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements or sources outside of WSP, or developments resulting from situations outside the scope of this project.

WSP is not engaged in environmental assessment and reporting for the purpose of advertising sales promoting, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes. It is acknowledged that this report is for the exclusive use of the client.

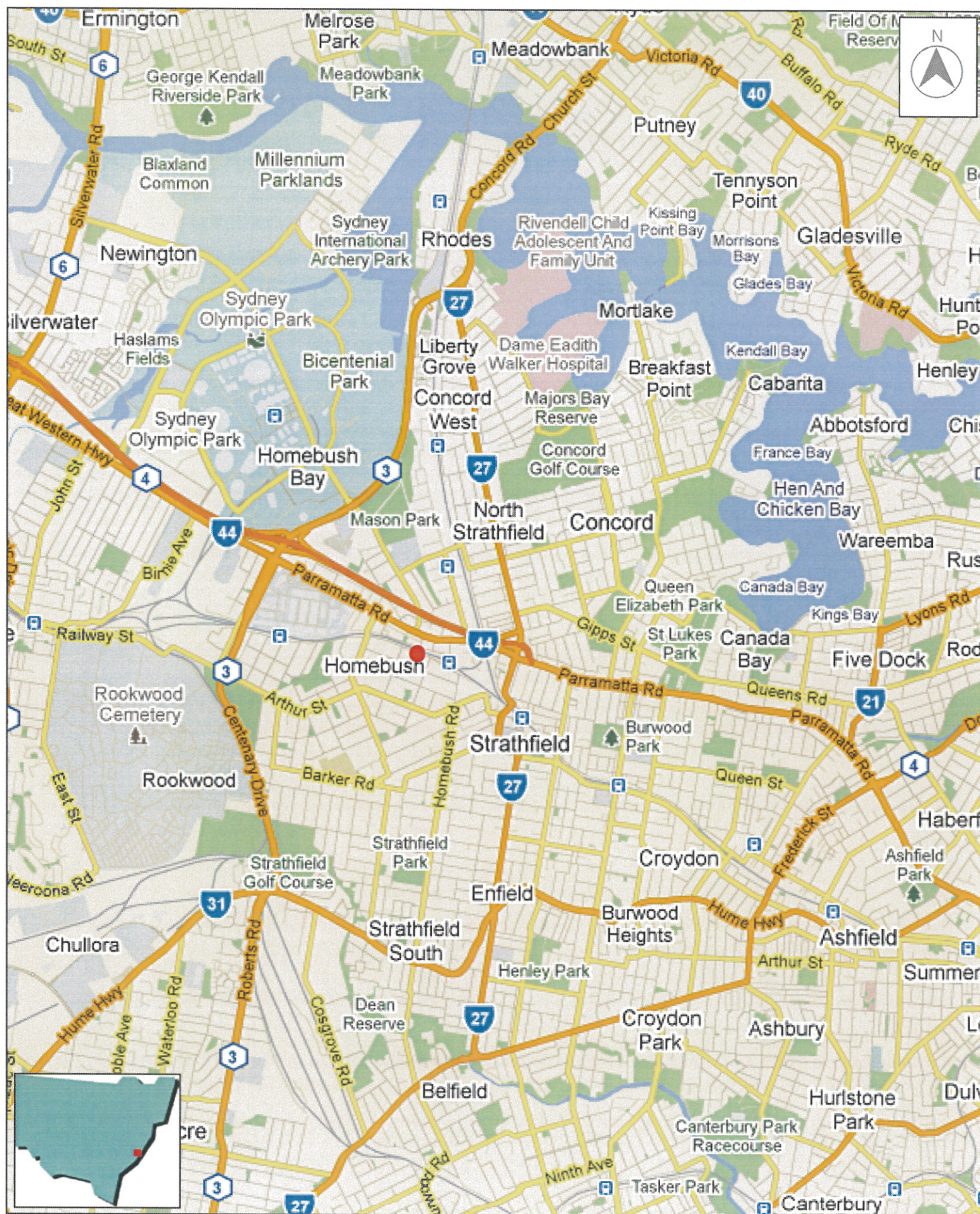


## APPENDIX A

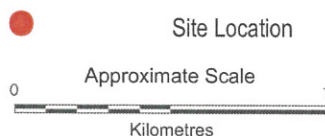
## Figures

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Source: Google Maps (February, 2011)



Site Location

Preliminary Contamination and Geotechnical Investigation, Homebush, NSW

**FIGURE 1**