Douglas Partners
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Integrated Practical Solutions

Report on
Phase 1 Contamination Assessment with Limited Sampling

27 Mitchell Street
Croydon Park

Prepared for
LJB Urban Planning Pty Ltd on behalf of
Flower Power Pty Ltd

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Executive Summary

This report details the methodology and results of a Phase 1 Contamination Assessment with limited sampling undertaken by Douglas Partners Pty Ltd at Flower Power, 27 Mitchell Street, Croydon Park. It is understood that Flower Power is to put forward a planning proposal to Council to rezone the site for a higher residential land use under zoning R1 General Residential. The objective of the investigation is to determine whether there are significant contamination issues which may preclude the rezoning of the site or whether the degree and nature of contamination present, if any, can be remediated to allow for a residential land use in the future. This report is a revision of the October 2012 report to account for changes in the contaminated land assessment guidelines.

The site is located at 27 Mitchell Street, Croydon Park which covers approximately 19,000 m^2 (~1.9 ha) and comprises two Lots; Lot 101 in Deposited Plan 737342 and Lot 23 in Deposited Plan 774159.

From a review of the site historical information, parts of the site appears to have been used, to some extent, as a nursery since 1929 with expansion over the years until the entire site was owned by the same owner in 1988. Prior to unification of all the parts of the site, the site has been used by various building contractors (builders' yard) and industries including for the production of adhesives and the production of yeast.

Soil sampling was undertaken at ten test locations using a track-mounted drilling rig and hand augers on 16 and 17 August 2012. Test Bores 3 and 6 were converted into groundwater monitoring wells which were developed on 17 August and sampled on 21 August. Due to access restraints caused by Sydney Water's contractors working on site, bores in the garden centre (Test Bores 7 to 10) were drilled using a hand auger which limited the drilled depth as obstructions were met at shallow depths.

Natural soils are described as brown or brown and grey clay typically with some silt. Rock was not encountered in any of the Test Bores, although traces of ironstone nodules were noted throughout in the natural clay. The fill tended to vary from location to location, however, the main constituent was clay with some sand and gravel of varying proportions. Some locations showed mainly gravel and sands which is thought to be sub base.

The rezoning may permit a range of residential housing type developments including apartments and townhouses and, therefore, a residential land use has been assumed in assigning site assessment criteria (SAC). The SAC includes health and ecological based investigation and screening levels adapted from the National Environment Protection Measure 1999, as amended 2013.

All analyte concentrations in the soil samples were either less than the laboratory detection limits and/or less than the adopted SAC with the exception of the following:

- One sample (BH1/ 1.0-1.2 m) exceeding the EILs for copper and zinc (marginal).

These are relatively minor exceedances of the EIL which can be addressed at a time when the site is to be redeveloped. A more detailed investigation of the site (refer to Section 13) may identify further exceedances, however, this does not preclude the rezoning of the site.

Asbestos was not detected in any of the samples to the limit of reporting (0.1 g/kg) and no asbestos-based products were observed in the auger returns. No respirable fibres were detected in any of the samples. Although asbestos was not detected in the samples, anthropogenic materials were noted in

the filling, across the site. Asbestos-containing materials are commonly found in fill in conjunction with other building materials and may be present but undetected.

Supplementary testing was carried out on the samples from BH2 (1.8 - 2.0 m and 2.8 – 3.0 m bgl) for ammonia and faecal coliforms due to strong odours detected when drilling. The odour of ammonia is in line with that expected of a leaking sewer or another organic source (e.g. composted materials) therefore testing for faecal coliforms and ammonia was undertaken. The results for faecal coliforms were below the practical quantitation limit (PQL) although the ammonia results returned a reading of 260 mg/kg and 180 mg/kg for the two samples. Phenols were also found in the sample at 2.8 - 3.0 m bgl. Although there are no HIL for ammonia in soil, the *Guidelines for the NSW Site Auditor Scheme* (DECC 2006) state that: *The auditor must check that aesthetic issues have been considered in the assessment of contamination*. Aesthetic issues include the generation of odours from the site and any discolouration of the soil as a result of contamination. The strong odours encountered at Test Bore 2 in the soil will, in the opinion of DP, need to be addressed.

Arsenic, cadmium, copper, nickel and zinc were all detected in the groundwater samples, though copper was only detected in BH3. Chromium, lead and mercury were not detected above the PQL. The concentration of zinc exceeded the GIL at both BH3 and BH 6, however, zinc is commonly elevated in the Sydney area and, in this case, it is not considered significant. The nickel and copper exceedance (one sample for each) are minor and are also not considered significant.

TPH was only detected in the groundwater sample from Test Bore 3 with concentrations of TPH C10-C14 (82 µg/L) and TPH C15-C28 (170 µg/L) above the respective screening GIL (50 µg/L and100 µg/L). A review of the TPH chromatogram reveals little about the nature of the contamination given the low concentrations. PAH was analysed at low concentrations (PQL of 0.01 µg/L) and PAH does not appear to be a component of the TPH. The lack of PAH indicates that these results may be petroleum hydrocarbons or may be other organic matter which elutes in the C10-C36 range. This would require resampling and analysis to confirm the nature of the result.

PAH, VOC (including BTEX), OPP, OCP, PCB and phenols were not detected in the groundwater at either location.

Ammonia was detected at levels exceeding the GIL at Test Bore 3. It is not clear if this is related to the ammonia in the soils at Test Bore 2 as Test Bore 3 appears to be up-gradient of Test Bore 2. Test Bore 6 returned a low level of ammonia which was within the GIL.

The level of ammonia encountered in the groundwater at Test Bore 3 is in exceedance of the GIL, with ammonia detected at Test Bore 2 in the soil which indicates that there is a source of ammonia on site which is, as yet, unidentified. Groundwater results from Test Bore 6 showed low levels of ammonia in this bore which is the closest to the filled land in Henley Park to the north. Given the relative location of the two groundwater bores it appears unlikely that the former quarry is impacting the groundwater on the site but further investigations would be required to confirm this. With ammonia having been found to the south at Test Bore 2 (soil) and Test Bore 3 (groundwater) it suggests an on-site source somewhere south of Test Bore 6.

The following recommendations are made with respect to the site:

- The nature, extent and cause of the odorous soil at Test Bore 2 should be investigated. Ammonia and phenol have been detected at this location and are linked to the odour.
- Confirm through additional groundwater wells that there is no on-site impact from the filling of the former Henley Park quarry;
- Additional testing should be undertaken as part of a Detailed Contamination Assessment prior to commencement of any works on the site.

Notwithstanding the findings of the investigation and the need for further investigation, the data indicates that the site can be made suitable for a residential land use.

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1. Introduction

This report details the methodology and results of a Phase 1 Contamination Assessment with limited sampling undertaken by Douglas Partners Pty Ltd (DP) at Flower Power, 27 Mitchell Street, Croydon Park. The current assessment was commissioned by LJB Urban Planning Pty Limited on behalf of Flower Power Pty Ltd. This report is a revision of the October 2012 report to account for changes in the contaminated land assessment guidelines.

It is understood that LJB Planning, on behalf of Flower Power, is submitting a report to Burwood Council to rezone the site for a residential land use under zoning R1 General Residential. In this regard, State Environmental Planning Policy No. 55 (SEPP 55) states, *inter alia*, that ….. *it would not be appropriate to proceed with rezoning unless the land was proven suitable for that development or it could be demonstrated that the land can, and will be, remediated to make the land suitable*. It also states that *….the rezoning should be treated like a development application in considering contamination issues. It may even be necessary for a detailed investigation to be carried out at the rezoning stage*. The objective of the investigation is, therefore, to determine whether there are significant contamination issues which may preclude the rezoning of the site or whether the degree and nature of contamination present, if any, can be remediated to allow for a residential land use in the future.

The assessment was conducted and reported with reference to relevant guidelines made under the *Contaminated Land Management (CLM*) Act 1997 and included a site inspection, a review of available site history, analysis of soil samples from ten sample locations and groundwater analysis from two piezometers. This report details the findings of the assessment.

It is understood that the site comprises an approximate area of 1.9 hectare and is currently being used by Flower Power for commercial uses as a retail garden centre, pet store, café, and fruit and vegetable supermarket.

2. Scope of Works

The scope of works undertaken for the assessment is as follows:

- Search the current and historical titles and Deposited Plans to identify previous owners that may indicate potentially contaminating activities;
- Review historical aerial photos to identify changes to the site and previous land uses that may indicate a potential for contamination;

- Search the Contaminated Land Register for Notices issued under the *Contaminated Land Management Act* 1997 and conduct a search for registered groundwater bores in the vicinity of the site;
- Search the WorkCover database records for any Dangerous Goods Licence or other approvals that may indicate the current or historical storage of Dangerous Goods or contaminating activities;
- Review Council's records pertaining to the site and to some of the neighbouring sites;
- Obtain and review the Section 149(2) and (5) certificates for the site;
- Search the Department of Water and Energy's (DWE –now NSW Office of Water) groundwater database for information on nearby groundwater bores;
- Review general site information, including geology, topography and hydrogeology;
- Conduct a walkover of the site. Observations were made of any situations that may indicate contamination, including the following:
  - Indications of present and past land uses;
  - Waste disposal practices and indications of any chemical spills;
  - Indications of earthmoving activities and the location of fill imported onto the site;
  - Disturbed or discoloured soil;
  - Disturbed or affected vegetation;
  - Presence of chemical containers, holding tanks, chemical odours;
  - Proximity to surface waters and groundwater;
  - Identification of nearest surface water receptors;
  - Note the presence of possible asbestos-based products on the ground surface (does not constitute a hazardous building material assessment);
  - Note the presence of Dangerous Goods stores;
  - Indicators of any underground fuel tanks or similar storages.
- Dial-Before-You-Dig (DBYD) checks and underground service scanning were conducted prior to drilling to locate detectable services as a precautionary measure.
- Drilling a total of ten bores using a drilling rig to a nominal depth of 3 m below ground level (bgl), 0.5 m into natural soils or prior refusal;
- Collection of soil samples from the bores at broadly regular intervals and based on observations of signs of contamination (staining or olfactory signs). Collection of an additional 10% replicates for QA/QC requirements;
- Screen all soil samples using a calibrated photo-ionisation detector (PID) for the presence of volatile organic compounds;
- Extend two bores up to a depth of 10 m below ground level and construct groundwater monitoring wells;
- Develop and sample the two groundwater monitoring wells using low-flow sampling techniques following stabilisation of field parameters;

- Despatch selected soil samples to a NATA accredited laboratory for quantitative analysis for the following potential contaminants:
  - The priority heavy metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc (15 soil samples);
  - Polycyclic aromatic hydrocarbons (PAH - 15 soil samples);
  - Total petroleum hydrocarbons (TPH) and benzene, toluene, ethyl benzene and xylenes (BTEX) (15 soil samples);
  - Organochlorine pesticides (OCP -10 soil samples);
  - Organophosphorus pesticides (OPP - 10 soil samples)
  - Total phenols (10 soil samples);
  - Ammonia and faecal coliforms (2 samples);
  - Polychlorinated biphenyls (PCB - 10 soil samples);
  - Asbestos (10 soil samples); and
  - Volatile organic compounds (VOC - 4 soil samples).
- Despatch of two groundwater samples to a NATA accredited laboratory for quantitative analysis for the following potential contaminants:
  - The priority heavy metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc);
  - PAH (low level analysis to assess compliance with groundwater investigation levels [GIL]);
  - TPH and BTEX;
  - OCP (trace level analysis to assess compliance with the GIL);
  - PCB (trace level analysis to assess compliance with the GIL);
  - Total phenols;
  - VOC;
  - pH;
- Collection and analysis of the following samples for QA/QC purposes:
  - One intra-laboratory replicate soil sample for heavy metals, TRH and ammonia;
  - One soil trip spike and one soil trip blank for BTEX;
  - One intra-laboratory groundwater sample for heavy metals and TPH;
  - One water trip spike and one water trip blank for BTEX.
- Preparation of a Phase 1 Contamination Assessment with Limited Sampling report detailing the assessment findings and discussion of analytical results and an opinion on the suitability of the site for the intended future residential use of the site, from a contamination perspective.

3. Site Identification, Description, and Proposed Rezoning

3.1 Site Identification

The site is located at 27 Mitchell Street, Croydon Park within the Burwood Council local government area (LGA) and comprises two Lots; Lot 101 in Deposited Plan 737342 and Lot 23 in Deposited Plan 774159, which cover approximately 19,390 m^2 (~1.9 ha).

A site plan and locality map is included as Drawing 1, Appendix A.

3.2 Site Description

A site inspection was carried out on 14 August 2012 by an environmental engineer from DP. The site is essentially a 'T' shape which can be entered from Mitchell Street at the north of the site and from Tangarra Street East at the south of the site. The site is currently being used by Flower Power and other vendors as a business base; Flower Power operate the garden centre at the north and west of the site (photo 1, plate 1) with an adjoining café and gardens which contain an unoccupied house, a further building at the south of the site which contains Flower Power's hardware and garden shop. On the eastern boundary of the site there is a pet shop and to in the south of the site there is a fruit and vegetable supermarket which is adjacent to the hardware sales building with a paved access road between. To the rear (south) of the fruit and vegetable shop is a yard containing various aggregates of sand and gravel, top soil and composts, each contained in separate bays (photo 2, plate 1). The middle of the site is paved with asphalt and is used for customer car parking and delivery of goods. This area comprises approximately 30% of the site.

The main building of the garden centre and café sits roughly in the middle of the site and is built mainly of steel and glass covering an approximate area of 1050 m² (photo 1, plate 1). To the west of this building is an outside retail area where the plants and materials are stored covering 4500 m² (photo 3, plate 2). To the west of this section lies a further retail building twinned with the main building of similar size and design and, running between the two buildings, are covered walkways (photo 3, plate 2). The outside storage area is generally filled with plants, however, on the southern edge of this area there is an access way and storage area. This storage area is mainly used for holding pallets of plant pots and other garden items though this is apparently not the normal area for this as Sydney Water works, currently being undertaken at the site, affected the day to day operation of the site. The access way continues all the way along the south of the area and goes behind the most westerly of the buildings tracing the western boundary. On this western boundary there is a small steel shed (photo 4, plate 3) which houses the fertilisers and pesticides used on site. To the north of the main building and café is an outdoor dining area, an aviary, and an unoccupied house (photo 5, plate 3).

The car park and access from Mitchell Street runs from the north to the south along the eastern edge of the site down to the fruit and vegetable shop covering an area of roughly 5250 m² (photo 6, plate 3). This area is mainly covered with asphalt though at the entrance to the site some of the parking spaces are graveled to either side of the access road. Being paved with asphalt there were no obvious signs of contamination encountered on the site visit. Refuse bins used for storing waste are located in the south west corner of the car park.

The pet shop (300 m²) is constructed of corrugated iron sheeting and block work. A refuse dumpster was located next to the building (photo 7, plate 4). This building was constructed after 1991 and, therefore, the potential for asbestos should be minimal.

The fruit and vegetable business is contained in a brick and corrugated iron building covering roughly 1350 m² in the south of the site. The interior of the building is level concrete and has rows of shelving displaying the fruit and other food items. There were no obvious visual signs of contamination inside the building. To the west of the main building (outside) is an attached toilet block.

On the eastern boundary opposite the fruit and vegetable shop lies Flower Powers hardware and water garden premises (photo 8, plate 4). This is a rendered structure covering 220 m² with external racking for storage. These storage racks are filled with various pallets containing bags of stone, compost, cements and sands (photo 8, plate 4). To the front of the building in the car park area are various garden ornaments. Though the building itself shows no obvious signs of contamination the area used to the rear of the building contained a raised diesel fuel tank, approximately 2 m off of the ground (photo 9, plate 5). This fuel tank is bunded; however the bunding shows some distress with visible cracks in its structure and staining (photo 10, plate 5). The bund is also unlined and made of bricks and mortar (photo 11, plate 6) which over time will potentially leak. Within the bund is chipped wood so the base was not visible though it is assumed the concrete floor extends beneath this structure. It is presumed that the wood chips are used to soak up spillage. In front of this tank (at the time of inspection) was a pallet of chlorine containers.

To the west of above-ground tank are the various storage bays used by the hardware store (photo 2 plate 1). There are 14 bays, the majority of which contain sand or gravel, though the most westerly contained compost and wood chips. Along this area is a stormwater drainage system possibly linked to off-site stormwater drains.

During the site visit it was noted that Sydney Water was undertaking an upgrade (photo 12, plate 6) to a surface sewer line aligned east to west (orientation, not flow direction). The contractor for Sydney Water demanded no restriction to their access to the site on the days of DP's drilling which limited DP's ability to drill as proposed and consequently hand augers were used for four of the 10 bore locations as a result of this.

Test Bore locations are shown on Drawing 1, Appendix A.

A walkover of the site on 23 January 2018 identified no discernible changes to the site features noted above.

4. Geology, Soil Landscape and Hydrogeology

Reference to the 1:100,000 Series geological map for Sydney indicates that the site is underlain by Ashfield Shale of the Wiannamatta Group. Ashfield shale comprises black to dark-grey shale and laminite.

Reference to the 1:100,000 Soils Landscape Sheet for Sydney shows that the site is within the Birrong soil landscape which comprises alluvial soils. The Birrong landscape contains broad valley flats and level to gently undulating alluvial floodplains draining the Wiannamatta Group shales. The soils are

deep (>250 cm) yellow podzolic soils and yellow solodic soils on older alluvial soils (terraces); and deep (>250 cm) solodic soils and yellow solonetzic soils on the current floodplain.

Reference to the Acid Sulfate Soil Risk map for the area shows that the site is within an area of low probability of occurrence of acid sulfate soils. This means that the site is generally not expected to contain acid sulfate soils, although highly localised occurrences may occur. The depth to acid sulfate soil, if present, is expected to be greater than 3 m below the ground surface.

A review of the NSW Groundwater Works database showed that there is one registered bore within a 500 m radius of the site. The work summary of the registered bore is provided in Appendix C. The bore, GW109699, is located approximately 400 m to the south of the site and was installed for domestic purposes. The soil profile was described as a surface layer of topsoil, 0.3 m thick, underlain by clay to a depth of 10.5 m, which was underlain by shale to a depth of 24 m, and, in turn, underlain by sandstone to a depth of 90 m at which depth the bore was discontinued. No water quality data was provided, although the water from the water bearing zone at depth 66 to 66.1 m was described as salty. The standing water level was at 6 m. To the north of the site by around 800 m is a group of wells showing groundwater bearing zones from 2 - 5 m, these bores encountered clay, shale and sandstone. In addition to the registered bores there are three further bores on an adjoining property installed by Douglas Partners in 2011; these bores were drilled to 5.5 m, 6.1 m and 5.0 m showing groundwater to range between 0.96 m and 1.69 m below ground level (bgl). One of these bores exceeded the GIL for TPH C_6-C_9, C_{10}-C_{14} and C_{15}-C_{28}. This is thought to be a localised issue relating to underground storage tanks containing diesel at that site.

The nearest water body is the Cooks River, located 800 m to the south of the site, although an open concrete stormwater drain is located along the western boundary of the site. The drain is underground near the southern boundary and continues as an open drain to the south alongside Rawson Street.

Groundwater is expected to flow generally towards the south in the direction of the Cooks River, although the groundwater flow at the site may be superficially influenced by the concrete stormwater drain along the western and southern boundaries.

5. Site History

A site history review was conducted which included historical title deeds, historical aerial photographs, the Section 149 (2&5) certificate, available Council records, a WorkCover NSW Dangerous Goods search and a regulatory notices search.

5.1 Historical Title Deeds

A historical title deeds search was undertaken to identify the owners or occupants of the property over approximately the last 100 years. This can assist in the identification of previous land uses and hence the identification of previous potentially contaminating activities. The results of the land title search are included in Appendix D.

A summary of the owners is shown in Tables 1a (D.P. 774159) and 1b (D.P. 737342), together with the occupation of the owner given in the title and the possible use of the site or nature of the business at the site. In determining the possible use of the site, other sources of information have been referenced including the aerial photographs.

Table 1a: Summary of Site Owners and Possible Site Use for Lot 23 D.P. 774159

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Possible Land use
For Part 1 on the cadastre for Lot 23 D.P. 774159, Appendix D		
10.06.1913 (1913 to 1919)	John Hines (Builder)	Contractors yard/ residential
20.09.1919 (1919 to 1923)	William Brown (Tobacco Worker)	Residential
28.04.1923 (1923 to 1942)	Joseph Pennick (Small Goodsman)	Residential/ retail
31.10.1942 (1942 to 1966)	Adhesives Proprietary Limited (Now Enfield Products Pty Limited)	Adhesive production/ storage
09.05.1966 (1966 to 1985)	Mauri Brothers & Thomson (Aust) Pty Limited	Yeast manufacture

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Possible Land use
For Part 2, 3, 4 and 5 on the cadastre for Lot 23 D.P. 774159, Appendix D		
10.06.1913 (as regards the parts marked 2, 3 and 4 on the attached cadastre) 06.07.1914 (as regards the part marked 5 on the attached cadastre) (1913 to 1928, as regards the parts marked 2, 3 and 4 on the attached cadastre) (1914 to 1928, as regards the part marked 5 on the attached cadastre)	John Hines (Builder)	Contractors yard/ residential
25.01.1928 (1928 to 1966)	Adhesives Proprietary Limited (Now Enfield Products Pty Limited)	Adhesive production/ storage
09.05.1966 (1966 to 1985)	Mauri Brothers & Thomson (Aust) Pty Limited	Yeast manufacture

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Possible Land use
For Part 6 on the cadastre for Lot 23 D.P. 774159, Appendix D		
02.04.1912 (1912 to 1929)	Elizabeth Lydia Tomkins (Married Woman)	Residential
17.04.1929 (1929 to 1945)	Ernest Joseph Norman Tomkins (Nursery Man)	Residential/ Nursery
17.07.1945 (1945 to 1966)	Adhesives Proprietary Limited (Now Enfield Products Pty Limited)	Adhesive production/ storage
09.05.1966 (1966 to 1985)	Mauri Brothers & Thomson (Aust) Pty Limited	Yeast manufacture
For Part 7 on the cadastre for Lot 23 D.P. 774159, Appendix D		
06.05.1913 (1913 to 1926)	John Hines (Contractor)	Contractors yard
24.12.1926 (1926 to 1966)	Adhesives Proprietary Limited (Now Enfield Products Pty Limited)	Adhesive production/ storage
09.05.1966 (1966 to 1985)	Mauri Brothers & Thomson (Aust) Pty Limited	Yeast manufacture
For Part 8 on the cadastre for Lot 23 D.P. 774159, Appendix D		
04.07.1900 (1900 to ? 1900)	Pietro Marcantelli (Vine Grower)	Residential
1900	Provided in D.P. 3670 as a lane twenty feet wide	
13.05.1970 (1970 to 1985)	Mauri Brothers & Thomson (Aust) Pty Limited (No evidence could be found as to the closure of this lane. This parcel may have been claimed by possession)	Yeast manufacture
Post 1985- All parts of Lot 23 D.P. 774159		
21.10.1985 (1985 to 1988)	Nursery Enterprises Pty Limited	Nursery
16.11.1988 (1988 to 2003)	Jenbend Pty Limited	Nursery
03.11.2003 (2003 to date)	# Syesun Pty Limited	Nursery

# Denotes Current Registered Proprietor

Table 1b: Summary of Site Owners and Possible Site Use for Lot 23 D.P. 737342

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Possible Landuse
For Part 1 on the cadastre for Lot 101 D.P. 737342, Appendix D		
11.11.1910 (1910 to 1921)	Oliver George Murphy (Tanner)	Residential
28.11.1921 (1921 to 1932)	James Tomkins (Nurseryman) Elizabeth Lydia Tomkins (Married Woman)	Residential/ Nursery
06.10.1932 (1932 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	Nursery
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	
For Part 2 on the cadastre for Lot 101 D.P. 737342, Appendix D		
20.05.1913 (1913 to 1914)	Elizabeth Walbrook (Married Woman)	Residential
29.01.1914 (1914 to 1914)	John Hines (Contractor)	Contractors yard
28.10.1914 (1914 to 1919)	Minister for Public Works	Contractors yard
30.12.1919 (1919 to 1932)	James Alexander Watkins (Builder)	Contractors yard
21.09.1932 (1932 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	Nursery
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Nursery
For Part 3 on the cadastre for Lot 101 D.P. 737342, Appendix D		
10.06.1913 (1913 to 1916)	John Hines (Builder)	Contractors yard
01.11.1916 (1916 to 1919)	Ernest William Warren (Solicitor)	Residential/ office
01.09.1919 (1919 to 1928)	John Hines (Contractor)	Contractors yard
25.01.1928 (1928 to 1945)	Adhesives Proprietary Limited	Adhesive production/ storage
06.06.1945 (1945 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	Nursery
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Nursery
For Parts 4 & 5 on the cadastre for Lot 101 D.P. 737342, Appendix D		
10.06.1913 (1913 to 1928)	John Hines (Builder)	Residential/ contractors yard
25.01.1928 (1928 to 1945)	Adhesives Proprietary Limited	Adhesive production/ storage
06.06.1945 (1945 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	Nursery
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Nursery

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Possible Landuse
For Part 6 on the cadastre for Lot 101 D.P. 737342, Appendix D		
10.06.1913 (1913 to 1928)	John Hines (Builder)	NA
25.01.1928 (1928 to 1945)	Adhesives Proprietary Limited (Now Enfield Products Pty Limited)	NA
06.06.1945 (1945 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	NA
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	NA
For Part 7 on the cadastre for Lot 101 D.P. 737342, Appendix D		
04.07.1900 (1900 to ? 1900)	Pietro Marcantelli (Vine Grower)	Access
1900	Provided in D.P. 3670 as a lane twenty feet wide	
01.12.1986 (1986 to 1988)	Tomkins Enfield Nurseries Pty Limited	Access
For Part 8 on the cadastre for Lot 101 D.P. 737342, Appendix D		
02.04.1912 (1912 to 1929)	Elizabeth Lydia Tomkins (Married Woman)	Residential
17.04.1929 (1929 to 1984)	Ernest Joseph Norman Tomkins (Nursery Man)	Nursery
31.10.1984 (1984 to 1985)	Norman William Tomkins Ian Hamilton Tomkins James Ernest Tomkins	Nursery
09.05.1985 (1985 to 1986)	Nursery Enterprises Pty Limited	Nursery
16.10.1986 (1986 to 1988)	Tomkins Enfield Nurseries Pty Limited	Nursery
For Part 9 on the cadastre for Lot 101 D.P. 737342, Appendix D		
02.04.1912 (1912 to 1929)	Elizabeth Lydia Tomkins (Married Woman)	Residential
17.04.1929 (1929 to 1946)	Ernest Joseph Norman Tomkins (Nursery Man)	Nursery
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Nursery
For Part 10 on the cadastre for Lot 101 D.P. 737342, Appendix D		
26.07.1920 (1920 to 1920)	William Henry Richard Lalor (Builder)	Contractors yard/ Residential
20.08.1920 (1920 to 1920)	Alfred Andrew Payten (Gentleman)	Contractors yard/ Residential
25.11.1920 (1920 to 1927)	Isabella Icke (Married Woman)	Contractors yard/ Residential
08.11.1927 (1927 to 1937)	James Leckie (Joinery Merchant)	Contractors yard
28.09.1937 (1937 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	Nursery

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Possible Landuse
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Nursery
For Part 11 on the cadastre for Lot 101 D.P. 737342, Appendix D		
26.07.1920 (1920 to 1920)	William Henry Richard Lalor (Builder)	Contractors yard/ Residential
20.08.1920 (1920 to 1920)	Alfred Andrew Payten (Gentleman)	Residential/ Contractors yard
25.11.1920 (1920 to 1927)	Isabella Icke (Married Woman)	Contractors yard/ Residential
08.11.1927 (1927 to 1959)	James Leckie (Joinery Merchant)	Contractors yard
19.03.1959 (1959 to 1961)	William Alan Leckie (Builder) Robert Bruce Leckie (Builder) (Section 94 Application not investigated)	Contractors yard
22.09.1961 (1961 to 1988)	Tomkins Enfield Nurseries Pty Limited	Nursery
For Part 12 on the cadastre for Lot 101 D.P. 737342, Appendix D		
26.07.1920 (1920 to 1920)	William Henry Richard Lalor (Builder)	Contractors yard/ Residential
20.08.1920 (1920 to 1920)	Alfred Andrew Payten (Gentleman)	Contractors yard/ Residential
25.11.1920 (1920 to 1927)	Isabella Icke (Married Woman)	Contractors yard/ Residential
08.11.1927 (1927 to 1959)	James Leckie (Joinery Merchant)	Contractors yard
19.03.1959 (1959 to 1959)	William Alan Leckie (Builder) Robert Bruce Leckie (Builder) (Section 94 Application not investigated)	Contractors yard
26.10.1959 (1959 to 1963)	Gover-Carr Pty Limited	Contractors yard
26.07.1963 (1963 to 1988)	Tomkins Enfield Nurseries Pty Limited	Nursery
For Part 13 on the cadastre for Lot 101 D.P. 737342, Appendix D		
02.04.1912 (1912 to 1925)	Elizabeth Lydia Tomkins (Married Woman)	Residential
12.10.1925 (1925 to 1927)	William Richard Henry Lalor (Builder)	Contractors yard/ Residential
08.09.1927 (1927 to 1953)	James Leckie (Contractor)	Contractors yard
01.05.1953 (1953 to 1959)	James Leckie & Sons Pty Limited	Contractors yard
26.10.1959 (1959 to 1963)	Gover-Carr Pty Limited	Contractors yard
26.07.1963 (1963 to 1988)	Tomkins Enfield Nurseries Pty Limited	Nursery

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Possible Landuse
For Part 14 on the cadastre for Lot 101 D.P. 737342, Appendix D		
02.04.1912 (1912 to 1925)	Elizabeth Lydia Tomkins (Married Woman)	Residential
12.10.1925 (1925 to 1927)	William Richard Henry Lalor (Builder)	Contractors yard/ Residential
08.09.1927 (1927 to 1953)	James Leckie (Contractor)	Contractors yard
01.05.1953 (1953 to 1961)	James Leckie & Sons Pty Limited	Contractors yard
22.09.1961 (1961 to 1988)	Tomkins Enfield Nurseries Pty Limited	Nursery
For Part 15 on the cadastre for Lot 101 D.P. 737342, Appendix D		
27.11.1917 (1917 to 1935)	Minister for Public Works	Storage yard / Contractors yard
14.02.1935 (1935 to 1935)	Metropolitan Water Sewerage and Drainage Board	Storage yard /Storage yard
07.08.1935 (1935 to 1946)	Ernest Joseph Norman Tomkins (Nursery Man)	Nursery
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Nursery
Post 1988- All parts of Lot 101 D.P. 737342		
16.11.1988 (1988 to 2003)	Jenbend Pty Limited	Nursery
03.11.2003 (2003 to date)	# Syesun Pty Limited	Nursery

# Denotes Current Registered Proprietor

The site was owned by various individuals and companies from 1912, the owners of the individual parts of land varied from builders, contractors and most notably Elizabeth Lydia Tomkins, the probable ancestor of Ernest Joseph Norman Tomkins (Nursery man) who began the nursery business on the site. Other than the indication of contractors and builders owning portions of the land, the earliest obvious source of potential contamination comes from Adhesive Proprietary Limited who appear on the records in 1926 and further expand the ownership of the site in 1928. In 1945 it appears Adhesive Pty Ltd moved within the current site boundary and in 1966 Adhesive Pty Ltd is no longer mentioned on the records. The two remaining parts owned by Adhesive Pty Ltd are taken over Mauri Brothers and Thompson (Aust) Pty Ltd who are believed to have begun production of yeast at the site. The aerial photos in 1950 and 1971 show a significant increase of industrial buildings on the site and the Council record search showed a drawing in 1984 referring to a yeast factory (Drawing 2, Appendix D) just south of the suspected adhesive factory.

James Leckie & Sons Pty Limited owned various parts of the site from 1927 to 1961. James Leckie is recorded as a joinery merchant and is known to have owned and operated a builders' yard on an adjacent property (refer to Appendix D). The site was probably taken over by his descendants William Alan and Robert Bruce Leckie who are identified as builders. Much of the site was probably used as a joinery and a builders' yard as shown on in Drawing 2, Appendix D.

Gover-Carr Pty Limited are noted as the owner of a portion of the site from 1959 to 1963, the company's operations are unknown; however, given the relatively short period of ownership, this part of the site was probably either used as a contractor's yard or depot, or perhaps developed during this time.

As mentioned earlier, in 1912 Elizabeth Lydia Tomkins was the owner of a portion of Lot 9 in D.P. 737342, Part 9. Her descendant Ernest Joseph Norman Tomkins (Nursery man) took on this part in 1929 and began expanding outwards into neighbouring parts until 1946 when the ownership changed to Tomkins Enfield Nursery Pty Ltd. The expansion under Tomkins Enfield Nursery Pty Ltd continued with parts added in 1961 and 1963. Part 8 of Lot 737342 was owned in 1984-85 by three of Ernest Joseph Norman Tomkins descendants prior to becoming Nursery Enterprises Pty Ltd and then Tomkins Enfield Nurseries Pty Ltd. In 1985 Nursery Enterprises Pty Ltd owned the entirety of Lot 23 D.P. 774159 which in 1988 was bought by Jenbend Pty Ltd who also took ownership of the entirety of Lot 101 in D.P. 737342. This was the case until 2003 when Syesun Pty Ltd took over ownership of the entire site as it is now found. Syesun Pty Ltd is the management company for the Flower Power group.

5.2 Historical Aerial Photographs

Aerial photographs ranging from 1930 to 2018 were reviewed in order to assess the historical land uses of the site and the surrounding land. The aerial photographs are provided in Appendix D.

1930 Image

The 1930 image shows that the site appears to be used for residential and business/ light industrial storage space. These businesses vary from small goods to possible adhesive production. The image shows that there is a relatively large building in the area owned by Adhesive Proprietary Limited and it could be assumed this building was used for the production and/ or storage of the adhesives.

To the north of the site, across Mitchell Street, some form of quarrying activity was being undertaken with an obvious pit in Henley Park. Directly adjoining the site to the north and east are residential properties.

1943 Image

The 1943 aerial photograph shows that the site continued to be used for business; the areas owned by Adhesive Proprietary Limited appear to have expanded. Further to this development, much of the northern part of the site (that identified in D.P. 737342) appears to have had movement towards the current use of the site as a nursery with visible rows, probably plants, covering much of the site. This fits in with the ownership detailed in Tables 1a and 1b. To the west of the nursery area there were linear structures which could have been green houses or sheds.

The quarrying operation in Henley Park looks to have continued with addition of some extra buildings at the site.

1951 Image

The 1951 aerial photograph shows that the site continued to be used as a nursery and by Adhesive Proprietary Limited. The aerial image shows little change from 1943 other than the inclusion of some small shed type structures on the nursery property. From the title deeds it is clear that the nursery business had purchased some land from Adhesive Proprietary Limited

The land to adjoining the north, west and south of the site remained similar to that in 1943.

1970 Image

The 1970 aerial photograph shows that the site had undergone little significant change since 1951 in the area that was already established as a nursery, however the area does show there to have been a greater number of small buildings in this area, probably sheds or green houses.

The southern area of the site formerly owned by Adhesive Proprietary Limited has shown significant change with the introduction of two new buildings. The ownership had also passed to Mauri Brothers & Thompson (Aust) Pty Limited which may indicate a change of use, however, this cannot be inferred from the information available.

The quarried area to the north of the site had been expanded though the buildings on the site were removed.

1991 Image

The 1991 aerial photograph shows significant change over the entire site. The layout is much as the site is presently with the garden centre built. This development began in the 1984 with the demolition of the existing buildings on site (inferred from Council's records). The building, thought to have been related to adhesive production and/ or storage, was now no longer present and a large bitumen sealed car park was present as far as the original entrance at the north of the site.

The quarried area to the north of Mitchell Street had been filled creating the open space now present in Henley Park.

2008 Image

The 2008 aerial photograph shows that the site was relatively unchanged since 1991 though the two remaining buildings from the Mauri Brother & Thompson (Aust) Pty Limited area established in 1971 have been demolished and replaced with one new building which is now the fruit and vegetable shop on site.

2018 Image

The 2018 aerial photograph shows that the site is relatively unchanged since 2008.

5.3 WorkCover, NSW Records

A search was undertaken for the site with WorkCover NSW in 2012 and no records were found to match the searched properties 25 - 29 Mitchell Street and 2 Tangarra Street.

5.4 Section 149(2 & 5) Certificate

The site, Lot 101 DP 771459 Lot 23, is currently zoned *Residential 2(a)* and *Industrial Light 4(b)*.

The Section 149 (2&5) Planning Certificate dated 30 November 2011, lists matters arising under the *Contaminated Land Management Act* 1997. The certificate states, *inter alia*, that the property:

- Is not significantly contaminated land;
- Is not subject to a management order;
- Is not subject of an approved voluntary management proposal;
- Is not subject to an ongoing maintenance order, and
- Is not subject of a site audit statement.

The site, Lot 101 DP 737342 lot 101, is currently zoned *Residential 2(a), residential 2(c1)* and *Industrial Light 4(b)*.

The Section 149 (2&5) Planning Certificate dated 30 November 2011, lists matters arising under the *Contaminated Land Management Act* 1997. The certificate states that the property:

- Is not significantly contaminated land;
- Is not subject to a management order;
- Is not subject of an approved voluntary management proposal;
- Is not subject to an ongoing maintenance order, and
- Is not subject of a site audit statement.

A copy of these certificates is provided in Appendix D.

5.5 Available Council Records

Available Council records for the site and some of the surrounding properties were reviewed on 10 August 2012. A summary of the findings for the site is as follows:

- 1984 - Letter from the Alderman Phillip Taylor indicates to residents demolition of the old buildings had begun to make way for the existing nursery. The notice of proposed development (ordinance No. 107) has an attached sketch plan of the proposed development site. On this there is reference to a yeast factory which is not seen elsewhere. This is based in the current car park area.

- 1986 - Taylor Thompson Whitting Pty Ltd undertook a survey of the storm drain installations on site for the new nursery buildings and confirmed that they complied with the required regulations. This included an open culvert and a bridge to cross this culvert.
- 1987 - A letter from the town clerk sent to Tompkins Gardens quotes as-'*all soil from the excavation or dumping, all waste building materials and any overgrown vegetation shall be removed from the Stiles Street allotment*.
- 1991- Permission was sought to upgrade existing building to a fruit barn.
- 1995 - Approval granted for new pet shop building.
- 2008 - Environmental Management Plan submitted to cover the issues occurring on site such as noise pollution and production of dust. Numerous complaints were found regarding these issues in the records. This covers dust suppression, hours of work and waste management.

5.6 Regulatory Notices Search

The Office of Environment and Heritage NSW (OEH) publishes records of contaminated sites under Section 58 of the *Contaminated Land Management Act 1997* on a public database accessed via the internet. The Notices relate to investigation and/or remediation of contaminated sites considered to be significantly contaminated under the definition in the CLM Act. Although the NSW EPA is now a part of the OEH, certain statutory functions and powers continue to be exercised in the name of the EPA. More specifically, the Notices cover the following:

- actions taken by the EPA under Section 15, 17, 19, 231, 23, 26 or 28 of the CLM Act;
- actions taken by the EPA under Section 35 or 36 of the Environmentally Hazardous Chemicals Act 1985;
- site audit statements provided to the EPA under Section 52 of the CLM Act on sites subject to an in-force declaration or order.

A search of the public database revealed that the subject site is not listed. There are also no listed sites within close proximity to the site.

The OEH also issues environmental protection licences to the owners or operators of various industrial premises under the *Protection of the Environment Operations* Act 1997 (POEO Act). Licence conditions relate to pollution prevention and monitoring, and cleaner production through recycling and reuse and the implementation of best practice.

The OEH has made available a public register of licences under Section 308 of the *Protection of the Environment Operations Act 1997* (POEO Act). The register contains:

- environment protection licences;
- applications for new licences and to transfer or vary existing licences;
- environment protection and noise control notices;
- convictions in prosecutions under the POEO Act;
- the results of civil proceedings;
- licence review information;

- exemptions from the provisions of the POEO Act or Regulations;
- approvals granted under clause 9 of the POEO (Control of Burning) Regulation; and
- approvals granted under clause 7A of the POEO (Clean Air) Regulation.

A search of the public register did not locate any listing for the subject site, however, there is one contaminated site within 1 kilometre notified to the EPA. Based on the information made available to the EPA to date, the contamination of this site is not considered by the EPA to be significant enough to warrant regulatory intervention. Douglas Partners do not believe that given the ground conditions (clay), the distance and the severity of the environmental contamination that it will affect the subject site.

5.7 Anecdotal evidence

According to the site manager, there are no underground storage tanks on site. All chemicals which are opened are stored in the shed in the far west of the site and there are no known chemical or fuel spills at the site.

6. Potential for Contamination

Based on the current and previous site uses and DP's site observations the potential contamination sources are summarised in Table 2 below.

Table 2: Potential sources of contamination

Description of Potential Contaminating Activity	Potential Contaminants
The placement of contaminated filling to form or level the site.	Heavy metals, TPH, BTEX, PAH, PCB, OCP, VOC, phenol and asbestos.
Leaks from the fuel storage tank and associated pumps and pipes.	TPH, BTEX, lead, phenol, and PAH.
Nursery use of pesticides and herbicides	OCP and OPP
Nursery storage of wood chips/compost	Ammonia
Leaks/spills from chemicals stored at the site.	TPH, BTEX, PAH and VOCs.
The historic presence of a yeast manufacturer	TPH
The historic presence of an adhesive manufacturer.	Heavy metals, TPH, BTEX, PAH, PCB, OCP, VOC and phenol.
Filling of the quarried area to the north of the site in Henley Park. Possible putrescible landfill.	Heavy metals, TPH, VOC and ammonia in groundwater.

The anticipated potential contaminants from general anthropogenic sources from past and present site activities therefore include heavy metals, TPH, BTEX, PAH, OCP, PCB, phenol, VOC, asbestos and ammonia.

7. Fieldwork and Analysis

7.1 Data Quality Objectives and Project Quality Procedures

The data qualitative objectives (DQO) are qualitative and quantitative statements that specify the quality of the data required for the assessment, as stipulated in the NSW EPA reporting guidelines. The DQO must ensure that the data obtained are sufficient to achieve the objectives of the assessment.

The DQO were developed for this Contamination Assessment in accordance with the Australian Standards "*Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 1: Non-volatile and semi-volatile compounds*" (AS4482.1-2005) and "*Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 2: Volatile substances*" (AS4482.2-1999).

The seven step DQO process is as follows:

a) State the Problem

b) Identify the Decision

c) Identify Inputs to the Decision

d) Define the Boundary of the Assessment

e) Develop a Decision Rule

f) Specify Acceptable Limits on Decision Errors

g) Optimise the Design for Obtaining Data.

7.1.1 Stating the Problem

Flower Power is preparing a submission to Burwood Council for rezoning the site for general residential purposes. The proposal will include apartments and townhouses. The problem to be addressed by the assessment is to determine whether there are significant contamination issues which may preclude the rezoning of the site or whether the degree and nature of contamination present, if any, can be remediated to allow for a residential land use in the future.

7.1.2 Identifying the Decisions

The decisions to be made in completing the assessment are as follows:

- Are there any signs of elevated soil or groundwater contamination within the site;
- Does the site, or is the site likely to, present a risk to human health or the environment under the proposed rezoning;
- Are there likely to be any significant contamination issues that would pose restrictions on the proposed rezoning;
- Does the site require further investigation, remediation and/or validation to ensure suitability for the proposed rezoning;
- Is there any contamination requiring notification to NSW EPA?

7.1.3 Identify Inputs to the Decision

The inputs into the decision process are as follows:

- Historical information regarding past land uses and features;
- Site operations and observation details;
- Soil profile information obtained through the sampling phase;
- Screening results;
- Chemical test data on analysed soil samples;
- Assessment of test data against applicable site assessment criteria; and
- Details of the proposed rezoning.

7.1.4 Define the Boundary of the Assessment

The boundary of the assessment is the boundary of the Flower Power operation, as shown on Drawing 1, Appendix A.

7.1.5 Develop a Decision Rule

The information obtained through this assessment has been used to make an assessment regarding the suitability of the site (from a contamination standpoint) for the proposed rezoning. The decision rule in conducting this assessment is as follows:

- Sampling will primarily target potential sources of contamination as the sampling density does not meet the recommended minimum sampling density for a site of 1.9 hectares in area (as stipulated in the NSW EPA's *Contaminated Sites: Sampling Design Guideline, 199*5);
- Laboratory test results have been assessed individually, and/or statistically where appropriate;
- The site assessment criteria (SAC) have been endorsed by the NSW EPA or, for analytes where there are no NSW EPA endorsed criteria, other relevant Australian or internationally recognised standards have been referred to as screening thresholds;
- The soil and groundwater analytical results have provided an indication of the likely potential for contamination at the site and/or target areas on a broad scale;
- Relevant site information, observations and exceedances of the SAC have been used to evaluate whether the site is suitable for the proposed rezoning, from a contamination standpoint; and
- Further investigations and/or remediation works will be recommended, if required.

Laboratory test results were accepted and considered useable for this assessment based on the following conditions:

- All laboratories used are accredited by National Association of Testing Authorities (NATA) for the analyses undertaken;
- All practical quantitation limits (PQL) set by the laboratories fall below the assessment criteria adopted;

- The reported concentrations of analytes in the replicate sample pairs are within accepted limits; and
- The quality assurance/quality control (QA/QC) protocols and results reported by the laboratories comply with the requirements of the National Environment Protection Measure (NEPM) 1999 "*Guideline on Laboratory Analysis of Potentially Contaminated Soils*" and Australian and New Zealand Environment and Conservation Council (ANZECC) 1996 "*Guidelines for the Laboratory Analysis of Contaminated Soils*".

7.1.6 Specify Acceptable Limits on Decision Errors

The limits on decision errors for this assessment are as follows:

- Ten sampling locations were adopted for this assessment to generally target potential sources of contamination in areas accessible to a drilling rig. This does not meet the minimum number of sampling points required for site characterisation according to the NSW EPA's *Sampling Design Guidelines,* 1995, however, a firm indication of the site's characteristics will be indicated and recommendations can be made from this. Note that Test Bores 7, 8, 9 and 10 were drilled using hand auger methods after access was denied by the client's representative on site due to a clash in work programmes with Sydney Water. Of these three bores (7, 8 and 9) were discontinued on buried obstructions before reaching their target depth;
- The analyte selection is based on the potential for contamination discussed in Section 6 of this report;
- The SAC adopted from the guidelines stated in Section 9 have risk probabilities already incorporated;
- The acceptable limits for replicate comparisons are outlined in Appendix F;
- The acceptance limits for laboratory QA/QC parameters are based on the laboratory reported acceptance limits and those stated in the NEPM 1999 "*Guideline on Laboratory Analysis of Potentially Contaminated Soils*" and ANZECC 1996 "*Guidelines for the Laboratory Analysis of Contaminated Soils*".

7.1.7 Optimise the Design for Obtaining Data

The rationale behind the location of sampling points was to generally target potential sources of contamination and is described in Section 7.3.

Procedures for the collection of environmental samples, as described in Section 7.4, were developed prior to undertaking the assessment phase of works. These are in line with NSW EPA's guidelines and current industry practice.

To optimise the selection of samples for chemical analysis, all samples collected were screened using a calibrated photo-ionisation detector (PID). The results of the PID readings are provided in the Bore Logs (Appendix G). The interpretation of PID values allowed for better assessment of the samples in order to determine the analytical programme and the need, if any, for further investigation. Further, DP employed NATA accredited analytical laboratories to conduct sample analysis.

7.2 Data Quality Indicators

The performance of the assessment in achieving the DQO was assessed through the application of Data Quality Indicators (DQI), defined as follows:

Precision: A quantitative measure of the variability (or reproducibility) of data;

Accuracy: A quantitative measure of the closeness of reported data to the "true" value;

Representativeness: The confidence (expressed qualitatively) that data are representative of each media present on the site;

Completeness: A measure of the amount of useable data from a data collection activity;

Comparability: The confidence (expressed qualitatively) that data can be considered equivalent for each sampling and analytical event.

An evaluation of the DQI is presented in Section 8 of this report.

7.3 Sample Location and Rationale

The rationale behind the positioning of the seven Test Bores is provided in Table 3.

Table 3: Details of Sample Location Rationale

Bore Location	Rationale
1	Near above-ground fuel tank with cracked bund and some minor staining.
2	To provide for site coverage.
3	In or in the vicinity of the old Adhesive Pty Ltd premises (soil bore and ground water well).
4	To provide for site coverage/ in the vicinity of the Adhesive Pty Ltd premises.
5	To provide for site coverage.
6	Up gradient Groundwater well location-Potential off site contamination from the filled land opposite in Henley Park.
7	To provide for site coverage.
8	To provide for site coverage.
9	Targeting potential contamination related the storage of pesticides and fertilisers in shed.
10	To provide for site coverage.

Sampling locations are shown on Drawing 1, Appendix A.

7.4 Fieldwork Methodology

7.4.1 Soil Sampling

Soil sampling was undertaken using a track-mounted drilling rig on 16 and 17 August 2012. Soil samples from Test Bores 1, 2, 3, 4, 5 and 6 were collected using a 100 mm diameter solid flight auger attachment. Soil samples from Test Bores 7, 8, 9 and 10 were collected using a hand auger as access with the drill rig was not permitted at the time of drilling. All sample locations were cleared for services and underground pipes by a services locator and review of DBYD plans. Soil samples were collected at intervals based on field observations, including changes in strata and signs of contamination.

All sampling data was recorded on DP borehole logs with samples also recorded on the chain-of-custody sheets. The general sampling procedure adopted for the collection of environmental samples is summarised below:

- Collect soil samples directly from the auger attachment or hand auger using disposable sampling equipment;
- Transfer samples into laboratory-prepared glass jars, completely filled to ensure the headspace within the sample jar is minimised, and capping immediately to minimise loss of volatiles;
- 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.

Samples designated for analysis were dispatched to Envirolab Services (a NATA accredited laboratory) for analysis of primary samples and intra-laboratory replicate samples.

7.4.2 Piezometer Installation and Groundwater Sampling Technique

Test Bores 3 and 6 were converted into groundwater monitoring wells (piezometers). Well construction details are provided on the borehole logs in Appendix G. The piezometers were constructed of 50 mm diameter acid washed class 18 PVC casing and machine slotted well screen intervals. Joints were screw threaded, thereby avoiding the use of glues and solvents which may contaminate the groundwater. The wells were completed with a gravel pack and then a bentonite plug above the screen of at least 0.5 m thickness. The wells were finished flush with the ground surface by means of a Gatic cover with a further 0.5 m bentonite plug at the surface.

The water levels in piezometers were recorded prior to development and prior to sampling using an electronic interface probe which can detect the presence of separate phase liquid in the water column [such as light non-aqueous phase liquids (LNAPL) including petroleum hydrocarbons].

The wells were developed on 17 August 2012 using disposable bailers by a DP engineer with sampling undertaken on 21 August 2012 using a low-flow geo-pump (peristaltic pump) and disposable tubing, following stabilisation of field parameters.

Field parameters were obtained using a calibrated YSI Professional Plus (Pro Plus) multi parameter instrument, with probes placed inside a flow-through cell. The field parameters included temperature, dissolved oxygen, conductivity, pH and oxidation reduction potential.

Samples were collected in laboratory prepared bottles and vials. The groundwater samples collected for heavy metal testing were filtered in the field through a 45 µm membrane filter into nitric acid preserved bottles.

Collection of groundwater samples was carried out in accordance with the methodology prescribed in the DP *Field Procedures Manual*. Sample handling and transport was as set out below:-

- Sample containers (supplied by the laboratory) were labelled with individual and unique identification, including project number and sample number;
- Collection of an inter -laboratory replicate sample for QA/QC purposes;
- Samples were placed in insulated coolers and maintained at a temperature of approximately 4°C until transported to the analytical laboratory, and
- Chain-of-custody documentation was maintained at all times and countersigned by the receiving laboratory on transfer of samples.

Samples designated for analysis were dispatched to Envirolab Services, a NATA accredited laboratory, for analysis of primary samples and intra-laboratory replicates.

7.5 Field Quality Assurance and Quality Control

The field QC procedures for sampling were as prescribed in Douglas Partners' *Field Procedures Manual.*

Field replicates were recovered and analysed for a limited suite of contaminants by means of intra-laboratory analysis. This is in accordance with standard industry practice and guidelines. The comparative results are outlined in Appendix F. A soil trip blank and soil trip spike were taken to the field and subjected to the same conditions as the collected soil samples. Similarly, a water trip spike and water trip blank were taken to the field and subjected to the same conditions as the collected groundwater samples. Trip spikes and blanks were analysed at Envirolab Services.

7.6 Analytical Scheme and Rationale

The analytical scheme was designed to obtain an indication of the potential presence and possible distribution of contaminants that may be attributable to past and present activities and features within the site, as discussed in Section 6. A significant proportion of recovered soil samples was analysed for the primary contaminants of concern, heavy metals, PAH, TPH / BTEX, phenols whilst a reduced number were analysed for less likely potential contaminants including OCP, PCB, VOC and asbestos. Two samples taken from Test Bore 2 were also tested for ammonia and faecal coliforms because of an odour detected in the samples. These tests were undertaken to determine whether the odours were caused by leakage from the sewers in the vicinity which can generate ammonia odours though other sources are possible. This is discussed further in Section 12. Most of the analysed samples

targeted the filling which is considered to have the greatest potential for contamination. Natural soil samples was analysed from Test Bore 10. The analytical scheme for soil samples is listed in Table 4.

Table 4: Analytical Scheme for Soil Samples

Sample ID (Location – Depth)	Soil Type	Heavy Metals	BTEX	TPH	PAH	OPP	OCP	PCB	Phenols	VOC	Asbestos	Ammonia & Faecal coliforms
BH1 0.4-0.5	Filling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH1 1.0-1.2	Filling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH2 1.8-2.0	Filling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH2 2.8-3.0	Filling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH3 1.2-1.5	Filling	✓	✓	✓	✓	✓	✓	✓	✓		✓	
BH4 0.4-0.6	Filling	✓	✓	✓	✓		✓	✓	✓		✓	
BH5 0.3-0.5	Filling	✓	✓	✓	✓	✓	✓	✓	✓		✓	
BH6 0.2-0.4	Filling	✓	✓	✓	✓	✓	✓	✓	✓		✓	
BH6 1.5-1.7	Filling	✓	✓	✓	✓	✓	✓	✓	✓		✓	
BH7 0.2-0.4	Filling	✓	✓	✓	✓		✓	✓	✓		✓	
BH8 0.3-0.4	Filling	✓	✓	✓	✓		✓	✓	✓		✓	
BH9 0.0-0.2	Filling	✓	✓	✓	✓	✓	✓	✓	✓		✓	
BH9 0.4-0.5	Filling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH10 0.0-0.2	Filling	✓	✓	✓	✓		✓	✓	✓		✓	
BH10 0.4-0.5	Natural	✓	✓	✓	✓		✓	✓	✓			
BD4/160812	Filling	✓	✓							✓		
BD10/160812	Filling	✓	✓									

Note: BD4/160812 Blind replicate of BH1/0.4-0.5 & BD10-160812 Blind replicate of BH3/1.2-1.5

A groundwater sample from each piezometer was analysed for full list of the identified potential contaminants (except asbestos and faecal coliforms). The intra-laboratory replicate groundwater sample was analysed for heavy metals and TPH and BTEX. The inter-laboratory replicate groundwater sample was analysed for TPH and BTEX only. Trip spikes and blanks (soil and water) were analysed for BTEX only.

7.7 Laboratory QA/QC

Analytical laboratories, accredited by NATA, are required to conduct in-house QA/QC procedures. These are normally incorporated into every analytical run and include reagent blanks, spike recovery, surrogate recovery and duplicate samples. These results are included in the laboratory reports in Appendix E.

The results of the DP assessment of laboratory QA/QC are shown in Appendix F, with the full laboratory reports included in Appendix E.

8. QA/QC Data Evaluation

Table 5 provides a list of the data quality indicators (refer to Section 7.2) adopted for this Contamination Assessment and the methods adopted so that the data quality indicators were met. Reference should be made to other report sections and referenced appendices for specific details.

Table 5: QA/QC Evaluation

Data Quality Indicator	Method(s) of Achievement
Data Precision and Accuracy	Use of trained and qualified field staff; for sampling and investigation. Appropriate sampling method used, minimising the opportunity for cross-contamination. Use of analytical laboratories (Envirolab) experienced in the analyses undertaken, with appropriate NATA accreditation. NATA accreditation requires use of adequately trained and experienced analytical staff. Appropriate and validated laboratory test methods used. Adequate laboratory performance based on results of the blank samples, matrix spike samples, control samples, duplicates and surrogate spike samples.
Data Representativeness	Coverage of the identified potential contaminants, based on history, site activities and site features. Adequate laboratory internal quality control and quality assurance methods, complying with the NEPM.
Documentation Completeness	Preparation of bore logs, sample location plan and chain of custody records. Laboratory sample receipt information received confirming receipt of samples intact and appropriateness of the chain-of-custody. NATA accredited laboratories results certificates provided.
Data Completeness	Review of documented information pertaining to site history. Analysis for potential contaminants.
Data Comparability	Using appropriate techniques for sample recovery given access and sampling limitations. Experienced sampler used. Using appropriate sample storage and transportation methods. Use of NATA accredited laboratories. Test methods consistent for each sample.

Based on the above, the current assessment has generally achieved the quality assurance and quality control data quality indicators. As such, it is concluded that the laboratory test data obtained are reliable and useable for this assessment.

9. Site Assessment Criteria

9.1 Site Assessment Criteria - Soil

Analytical results were assessed (as a Tier 1 assessment) against the SAC comprising the investigation and screening levels of Schedule B1, *National Environment Protection (Assessment of Site Contamination) Measure* 1999, as amended 2013 (NEPC, 2013). The NEPC (2013) guidelines are endorsed by the NSW EPA under the CLM Act 1997. Petroleum based health screening levels for direct contact have been adopted from the *Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE) Technical Report no.10 Health screening levels for petroleum hydrocarbons in soil and groundwater* (2011) as referenced by NEPC (2013).

The investigation and screening levels are applicable to generic land use settings and include consideration of, where relevant, the soil type and the depth of contamination. The investigation and screening levels are not intended to be used as clean up levels. Rather, they establish concentrations above which further appropriate investigation (e.g. Tier 2 assessment) should be undertaken. They are intentionally conservative and are based on a reasonable worst-case scenario.

If the site is rezoned as R1 General Residential as proposed by LJB Urban Planning in their planning submission, the main form of proposed development in this zone will be multi-unit dwellings. As the possible rezoning may permit a range of residential housing type developments including apartments and townhouses, two potential land use scenarios have been considered including:

- residential land use with gardens and accessible soil including day-care centres, preschools, townhouses, villas; and
- residential with minimal access to soil including high-rise apartments and flats.

9.1.1 Health Investigation and Screening Levels

The Health Investigation Levels (HIL) and Health Screening Levels (HSL) are scientifically-based, generic assessment criteria designed to be used in the first stage (Tier 1) of an assessment of potential human health risk from chronic exposure to contaminants.

HIL are applicable to assessing health risk arising *via* all relevant pathways of exposure for a range of metals and organic substances. The HIL are generic to all soil types and apply generally to a depth of 3 m below the surface for residential use. Site-specific conditions may determine the depth to which HIL apply for other land uses.

HSL are applicable to selected petroleum compounds and fractions to assess the risk to human health via inhalation and direct contact pathways. HSL have been developed for different land uses, soil types and depths to contamination.

The generic HIL and HSL are considered to be appropriate for the assessment of contamination at the site. Given the proposed land use the adopted HIL and HSL are:

- **HIL - A** – residential A;
- **HIL** – B – residential B; and

- **HSL - AB** – residential AB.

In addition, the HSL adopted are predicated on the inputs summarised in Table 6.

Table 6: Inputs to the Derivation of HSLs

Variable	Input	Rationale
Potential exposure pathway	Soil vapour intrusion (inhalation) / Direct contact *	There is a potential for vapour intrusion into buildings and direct contact with soil.
Soil Type	Clay	Clay is the dominant soil type at the site.
Depth to contamination	0 m to <1 m	Fill and near surface soils are identified as the most likely horizon to be impacted. This depth is also considered most suitable to provide an initial screen, any exceedances detected deeper in the profile will be assessed against the relevant depth range thresholds.

** Developed by CRC CARE (2011)*

The adopted soil HIL and HSL for the potential contaminants of concern are presented in Table 7.

Table 7: Health Investigation and Screening Levels (HIL and HSL) in mg/kg

Contaminants		HIL A	HIL- B and HSL- AB Direct Contact	HSL- AB Vapour Intrusion
Metals	Arsenic	100	500	-
	Cadmium	20	150	-
	Chromium (VI)	100	500	-
	Copper	6,000	30,000	-
	Lead	300	1,200	-
	Manganese	3,800	14,000	-
	Mercury (inorganic)	40	120	-
	Nickel	400	1,200	-
	Zinc	7,400	60,000	-
PAH	Benzo(a)pyrene TEQ[1]	3	4	-
	Naphthalene	-	2,200	3
	Total PAH	300	400	-
TRH	C6 – C10 (less BTEX) [F1]	-	5,600	45
	>C10-C16 (less Naphthalene) [F2]	-	4,200	110
	>C16-C34 [F3]	-	5,800	-
	>C34-C40 [F4]	-	8,100	-
BTEX	Benzene	-	140	0.5
	Toluene	-	21,000	160
	Ethylbenzene	-	5,900	55
	Xylenes	-	17,000	40

Contaminants		HIL A	HIL- B and HSL- AB Direct Contact	HSL- AB Vapour Intrusion
Phenol	Pentachlorophenol (used as an initial screen)	100	130	-
OCP	Aldrin + Dieldrin	6	10	-
	Chlordane	50	90	-
	DDT+DDE+DDD	240	600	-
	Endosulfan	270	400	-
	Endrin	10	20	-
	Heptachlor	6	10	-
	HCB	10	15	-
	Methoxychlor	300	500	-
OPP	Chlorpyrifos	160	340	-
PCB [2]		1	1	-
VOC		PQL as initial screening concentration. Reference to national or international standards above the PQL.		

Notes:

1 sum of carcinogenic PAH

2 non dioxin-like PCBs only.

3 The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would results in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limited' or 'NL'.

9.1.2 Ecological Investigation Levels

Ecological Investigation Levels (EIL) have been derived for selected metals and organic compounds and are applicable for assessing risk to terrestrial ecosystems (NEPC, 2013). EIL depend on specific soil physiochemical properties and land use scenarios and generally apply to the top 2 m of soil, which corresponds to the root zone and habitation zone of many species. The EIL is determined for a contaminant based on the sum of the ambient background concentration (ABC) and an added contaminant limit (ACL). The ABC of a contaminant is the soil concentration in a specific locality that is the sum of naturally occurring background levels and the contaminants levels that have been introduced from diffuse or non-point sources (e.g. motor vehicle emissions). The ACL is the added concentration (above the ABC) of a contaminant above which further appropriate investigation and evaluation of the impact on ecological values is required.

The EIL is calculated using the following formula:

EIL = ABC + ACL,

The ABC is determined through direct measurement at an appropriate reference site (preferred) or through the use of methods defined by Olszowy et al *Trace element concentrations in soils from rural and urban areas of Australia*, Contaminated Sites monograph no. 4, South Australian Health Commission, Adelaide, Australia 1995 (Olszowy, 1995) or Hamon et al, *Geochemical indices allow estimation of heavy metal background concentrations in soils*, Global Biogeochemical Cycles, vol. 18, GB1014, (Hamon, 2004). ACL is based on the soil characteristics of pH, CEC and clay content.

EIL (and ACLs where appropriate) have been derived in NEPC (2013) for only a short list of contaminants comprising As, Cu, Cr (III), DDT, naphthalene, Ni, Pb and Zn. The *Interactive (Excel) Calculation Spreadsheet* provided in the ASC NEPM Toolbox available on the SCEW (Standing Council on Environment and Water) website (http://www.scew.gov.au/node/941) has been used for calculating site-specific EIL for these contaminants for this project.

The adopted EIL, derived from Tables 1B(1) to 1B(5), Schedule B1 of NEPC (2013) and the *Interactive (Excel) Calculation Spreadsheet* are shown in the following Table 8. The following site specific data and assumptions have been used to determine the EILs:

- a protection level of 80% has been adopted;
- the EILs will apply to the top 2 m;
- given the likely source of soil contaminants (i.e. historical site use/fill) the contamination is considered as "aged" (>2 years);
- ABCs have been derived using the *Interactive (Excel) Calculation Spreadsheet* using input parameters of NSW for the State in which the site is located, and low for traffic volumes. Note: no background concentration is assumed for lead, which is considered to be conservative;
- A common pH value of 6.5 or 7 has been used to calculate the input parameter for the *Interactive (Excel) Calculation Spreadsheet;*
- An assumed clay content value has been used as input parameters in the *Interactive (Excel) Calculation Spreadsheet*. A conservative clay content of 10% was adopted based on the soil description of filling soils, which generally comprised clayey soils;
- An assumed CEC value has been used as input parameters in the *Interactive (Excel) Calculation Spreadsheet*. A conservative CEC value of 10% was adopted based on the soil description of filling soils, which generally comprised clayey silty sand topsoil.

Table 8: Ecological Investigation Levels (EIL) in mg/kg

Analyte		EIL	Comments
Metals	Arsenic	100	Based on data discussed in above dot points
	Copper	190	
	Nickel	170	
	Chromium III	400	
	Lead	1,100	
	Zinc	400	
PAH	Naphthalene	170	
OCP	DDT	180	

9.1.3 Ecological Screening Levels – Petroleum Hydrocarbons

Ecological Screening Levels (ESL) are used to assess the risk of selected petroleum hydrocarbon compounds, BTEX and benzo(a)pyrene (BaP) to terrestrial ecosystems. ESL apply to the top 2 m of the soil profile as for EIL.

ESL have been derived in NEPC (2013) for petroleum fractions F1 to F4 as well as BTEX and BaP. Site specific data and assumptions as summarised in Table 9 have been used to determine the ESL. The adopted ESL, from Table 1B(6), Schedule B1 of NEPC (2013) are shown in Table 10.

Table 9*:* Inputs to the Derivation of ESL

Variable	Input	Rationale
Depth of ESL application	Top 2 m of the soil profile	The top 2 m depth below ground level corresponds to the root zone and habitation zone of many species.
Land use	Urban residential	Proposed residential development
Soil Texture	Fine	Soils at the site generally clayey.

Table 10: Ecological Screening Levels (ESL) in mg/kg

Analyte		ESL	Comments
TRH	C6 – C10 (less BTEX) [F1]	180*	All ESLs are low reliability apart from those marked with * which are moderate reliability
	>C10-C16 [F2]	120 *	
	>C16-C34 [F3]	1,300	
	>C34-C40 [F4]	5,600	
BTEX	Benzene	65	
	Toluene	105	
	Ethylbenzene	125	
	Xylenes	45	
PAH	Benzo(a)pyrene	0.7	

9.1.4 Management Limits – Petroleum Hydrocarbons

In addition to appropriate consideration and application of the HSL and ESL, there are additional considerations which reflect the nature and properties of petroleum hydrocarbons, including:

- Formation of observable light non-aqueous phase liquids (LNAPL);
- Fire and explosion hazards;
- Effects on buried infrastructure e.g. penetration of, or damage to, in-ground services.

Management Limits to avoid or minimise these potential effects have been adopted in NEPC (2013) as interim Tier 1 guidance. Management Limits have been derived in NEPC (2013) for the same four petroleum fractions as the HSL (F1 to F4). The adopted Management Limits, from Table 1B(7), Schedule B1 of NEPC (2013) are shown in the following Table 11. The following site specific data and assumptions have been used to determine the Management Limits:

- the Management Limits will apply to any depth within the soil profile;

- the Management Limits for residential, parkland and public open space apply;
- Management Limits for both “coarse” and “fine” soil texture has been adopted for the sandy filling and underlying clays respectively.

Table 11: Management Limits in mg/kg

Analyte		Management Limit
		Fine
TRH	$C_6 – C_{10}$ (F1) #	800
	$>C_{10}$-C_{16} (F2) #	1,000
	$>C_{16}$-C_{34} (F3)	3,500
	$>C_{34}$-C_{40} (F4)	10,000

Separate management limits for BTEX and naphthalene are not available hence these have not been subtracted from the relevant fractions to obtain F1 and F2

9.1.5 Asbestos in Soil

The presence of detectable asbestos was considered significant for the current investigation as a screening threshold. If asbestos is detected, further assessment could allow the use of threshold levels in accordance with NEPC (2013).

9.2 Groundwater Investigation Levels

The applicable guidelines for groundwater are the NSW DECC (2007) *Guidelines for the Assessment and Management of Contaminated Groundwater*. The DECC (2007) guidelines state that ‘the concentrations must be compared against the existing generic GIL [Groundwater Investigation Levels], if available, which protect the following environmental values’:

- Drinking Water (Australian Drinking Water Guidelines (NHMRC & NRMMC, 2004)
- Aquatic ecosystems (ANZECC & ARMCANZ, 2000).

Groundwater at the site is expected to generally flow in the direction of the Cooks River which is approximately 800m to the south of the site. The appropriate trigger values applicable to the protection of aquatic ecosystems are, therefore, considered to be the ANZECC *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (2000) trigger values for toxicants in fresh water for the protection of 95% of species. The GIL adopted for the site are shown in Table 12. Where there is insufficient data for trigger values for fresh water, adopted GIL have been adopted from other sources including those for marine water (noted in Table 12).

Table 12: Groundwater Investigation Levels

Substance	Groundwater Investigation Levels [a] (GILs) («g/L)
Arsenic	24 [b]
Cadmium	0.2 [b]
Chromium(III)	27.4[e]
Copper	1.4 [b]
Lead	3.4 [b]
Mercury (total)	0.6 [b]
Nickel	11 [b]
Zinc	8[b]
TPH: C_6-C_9	10[c]
TPH: C_{10}-C_{14}	50
TPH: C_{15}-C_{28}	100
TPH: C_{29}-C_{36}	100
Benzene	950 [b]
Toluene	180 [d]
Ethylbenzene	80 [d]
o-xylene	350 [b]
p-xylene	200 [b]
m-xylene	75 [e]
Isopropylbenzene	30 [e]
Benzo(a)pyrene	0.2 [e]
Naphthalene	16 [b]
Anthracene	0.4 [e]
Phenanthrene	2 [e]
Fluoranthene	1.4 [e]
Total Phenolics	50 [f]
Aroclor 1242	0.6 [b]
Aroclor 1254	0.03 [b]
Chlordane	0.08 [b]
DDT	0.01 [b]
Dieldrin	0.01 [e]

Substance	Groundwater Investigation Levels [a] (GILs) («g/L)
Heptachlor	0.09 [b]
Ammonia	0. 900 [b]

Notes:

a. Primarily derived from Australian and New Zealand Environment and Conservation Council '*Australian and New Zealand Guidelines for Fresh and Marine Water Quality – October 2000'.*

b. Trigger values for a 95% Level of Protection of Species in Fresh.

c. ANZECC threshold not available. It is noted there is a 'low reliability' Interim Working Value (Section 8.3.7) final chronic value of 7 µg/L for petroleum hydrocarbon but that commercial laboratories are not generally able to achieve the necessary detection limits to demonstrate compliance. For reference purposes, DP has used the practical quantitation limit of the laboratory method as 'screening levels' only. Further investigation is required if exceeded (VOC, PAH etc.).

d. Low reliability trigger value ANZECC (2000) sourced from Table 8.3.14: Toxicity data from short-term tests considered for guideline derivation of BTEX for Fresh Waters.

e. Low reliability trigger value (indicative interim working level) for Fresh Water in the absence of a high or moderately reliable trigger values.

f. Adopted as a 'screening level' for total phenols. Sourced from NSW Environmental Protection Authority *Guidelines for Assessing Service Station Sites,* 1994 as ANZECC trigger values are currently provided for speciated phenols.

10. Fieldwork Results

10.1 Field Observations - Soil

The test bores in the car park (bores 1 to 6) all had asphalt or concrete surfaces except for Test Bore 3 which had both and Test Bore 6 which had a decorative stone surface. The Test Bores in the garden centre or its garden encountered either a decorative stone at the surface or topsoil. Depth to the base of filling was variable across the site, ranging from 0.4 m at Test Bore 10 to 3.0 m at Test Bore 2. The depth of filling was not reached at all locations as shown in Table 8, below. Refusal on buried obstructions was encountered when using the hand auger at Bores 7, 8 and 9. The type of filling varied from location to location, however, the main component comprised largely of clay with some sand and gravels of varying proportions. Some locations showed mainly gravel and sands, this is thought to be sub base. At Test Bore 8 dark grey clay was encountered at 0.7 m which may have been reworked natural material, however, the bore was did not extend deep enough to confirm this due to obstructions and was therefore classed as fill. Filling at Test Bores 1, 2, 3 and 4 all encountered signs of construction materials, possibly from demolition of former buildings and/ or regrading of the site. Test Bore 3 may have encountered a historic building floor or footing as the bore encountered asphalt, fill and then concrete. It should be noted that the determination of the fill and natural soil interface can be difficult using auger techniques and the actual depth to the base of filling may vary from that recorded.

Natural soils are described as brown or brown and grey clay typically with some silt. Rock was not encountered in any of the Test Bores, although traces of ironstone nodules were noted throughout in the natural clay.

Borehole logs are provided in Appendix G. The subsurface profile at the sampling locations is summarised in Table 13.

Table 13: Summary of Subsurface Profile at Sampling Locations (m below ground level)

Sampling Location	Asphalt / Concrete	Filling	Natural soil
1	0 - 0.16	0.16 – 1.7	1.7 – 3.0
2	0 – 0.16	0.16 – 3.0	Not encountered
3	0 – 0.1 & 0.3-0.5	0.01 – 0.3 & 0.5-3.4	3.4 - 9.0
4	0.0 - 0.1	0.1 - 1.5	1.5 - 3.0
5	0.0 - 0.2	0.2 - 0.6	0.6 - 3.0
6	Not encountered	0.0 - 0.5	0.5 - 7.0
7	Not encountered	0.0 0.6	Not encountered
8	Not encountered	0.0 - 1.2	Not encountered
9	Not encountered	0.0 - 0.7	Not encountered
10	Not encountered	0.0 - 0.4	0.4 - 1.2

10.2 Field Testing Results

Replicate soil samples collected in plastic bags were allowed to equilibrate under ambient temperatures before screening for Total Photo-ionisable Compounds (TOPIC) using a calibrated photo-ionisation detector (PID). The PID readings for the majority soil samples were <1ppm and typical of Australian soil background levels. The PID readings in Test Bores 2 and 6 were slightly elevated (5.8 and 1.7 ppm respectively) these are considered to be low.

10.3 Field Observations – Groundwater

Groundwater levels were recorded on the day of development on 17 August 2012. Prior to sampling on 21 August the water levels were recorded again including a post sampling level. No free product or separate phase liquids were detected in any of the wells prior to sampling.

For well development, Test Bore 3 was bailed dry with approximately 15L of brown, turbid water removed from this well and Test Bore 6 was purged of greater >60 litres of slightly discoloured turbid water. Table 14 shows the groundwater levels measured prior to development and prior to sampling and Table 15 shows the stabilised field parameters prior to sampling.

Table 14: Approximate water levels

Piezometer No.	Surface level (m AHD)	Depth to water prior to development (m) (17/8/11)	Water level prior to development (m AHD) (17/8/11)	Depth to water prior to sampling (m) (19/12/11)	Water level prior to sampling (m AHD) (19/12/11)
3	13.21	7.5	5.71	2.68	10.53
6	16.18	4.00	12.18	2.13	14.05

Note: Water well locations surveyed

Table 15: Summary of Stabilised Groundwater Field Parameters

Piezometer No.	Temperature (^{0}C)	Dissolved Oxygen (mg/L)	Specific Conductance (µS/cm)	pH	Oxidation Redox Potential (mV)
3	20.8	41.1	3966	6.91	-14.4
6	18.1	47	8162	6.42	11.5

11. Laboratory Testing

The results of the laboratory analysis undertaken on the soil samples are presented in the following tables:

- Table 16 – Analytical results for soil samples; and
- Table 17 – Analytical results for groundwater samples.

The full laboratory reports for the current assessment together with the chain-of-custody and sample receipt information is presented in Appendix E.

Table 16: Results of Soil Analysis (All results in mg/kg unless otherwise stated)

Sample ID [Sample location / Depth(m bgl)]	Sampling Date	Soil Type	Heavy Metals								Polycyclic Aromatic Hydrocarbons (PAH)		Total Recoverable Hydrocarbons (TRH)		Monocyclic Aromatic Hydrocarbons (BTEX)				Total Polychlorinated Biphenyls (PCB)	Organochlorine Pesticides (OCP)	Organophosphorus Pesticides (OPP)	Phenols	Volatile Organic Compounds (VOC)	Ammonia	Foecal Coliforms	Asbestos
			Arsenic	Cadmium	Chromium [3]	Copper	Lead	Mercury	Nickel	Zinc	Benzo(a)pyrene	Total PAH [6]	C6-C9	C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylene								
BH1 0.4-0.5	16/8/12	Fill	7	1.2	24	150	150	0.3	32	330	0.75	6.85	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	NAD
BH1 1.0-1.2	16/8/12	Fill	22	3.2	16	**1100**	130	0.5	33	**480**	0.19	2.19	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	NAD
BH2 1.8-2.0	16/8/12	Fill	9	<PQL	6	4	5	<PQL	2	12	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	260	<PQL	NAD
BH2 2.8-3.0	16/8/12	Fill	6	<PQL	5	3	2	<PQL	2	4	<PQL	<PQL	<PQL	180	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	150	<PQL	180	<PQL	NAD
BH3 1.2-1.5	17/8/12	Fill	10	0.5	20	5	28	<PQL	3	13	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	NAD
BH4 0.4-0.6	16/8/12	Fill	4	<PQL	11	11	62	0.1	7	52	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	-	-	-	-
BH5 0.3-0.5	16/8/12	Fill	11	0.5	26	14	17	<PQL	5	18	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	NAD
BH6 0.2-0.4	16/8/12	Fill	6	<PQL	20	30	25	<PQL	35	38	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	NAD
BH6 1.5-1.7	16/8/12	Fill	<PQL	<PQL	2	12	5	<PQL	<PQL	12	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	NAD
BH7 0.2-0.4	17/8/12	Fill	4	<PQL	10	40	9	<PQL	30	28	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	-	-	-	-
BH8 0.3-0.4	17/8/12	Fill	<PQL	<PQL	10	17	21	<PQL	11	12	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	-	-	NAD
BH9 0.0-0.2	17/8/12	Fill	<PQL	<PQL	10	19	12	<PQL	9	29	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	NAD
BH9 0.4-0.5	17/8/12	Fill	5	<PQL	11	23	59	<PQL	10	77	0.07	0.47	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	NAD
BH10 0.0-0.2	17/8/12	Fill	8	<PQL	21	16	42	<PQL	34	40	0.06	0.26	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	-	-	-	-
BH10 0.4-0.5	17/8/12	Natural	10	<PQL	23	10	18	0.1	6	23	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	-	-	-	-
BD4/160812	16/8/12	Fill	9	1.1	23	110	120	0.3	36	320	0.17	1.57	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	NAD
BD10/160812	16/8/12	Fill	7	<PQL	13	4	22	<PQL	2	8	0.09	0.79	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	NAD
TB/160812	16/8/12	-	-	-	-	-	-	-	-	-	-	-	-	-	<PQL	<PQL	<PQL	<PQL	-	-	-	-	-	-	-	-
TS/160812	16/8/12	-	-	-	-	-	-	-	-	-	-	-	-	-	98%	97%	96%	96%	-	-	-	-	-	-	-	-
Site Assessment Criteria [1]																										
HIL A (clay soil)			100	20	100	6000	300	40	400	7400	3 [2]	300	--	--	--	--	--	--	1	Not Listed	Not Listed	Not Listed	--	--	--	NAD
HIL B (clay soil)			500	150	500	30000	1200	120	1200	60000	4 [2]	400	--	--	--	--	--	--	1	Not Listed	Not Listed	Not Listed	--	--	--	NAD
EIL			100	--	400	190	1100	--	170	400	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--
HSL / ESL / Management Limits			--	--	--	--	--	--	--	--	--	--	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	--	--		--	--	--	--	--

Notes

1	National Environment Protection Measure 1999, as amended 2013 (NEPC, 2013)
2	As Benzo(a)pyrene TEQ
-	Not Tested
--	No guideline value
NAD	No Asbestos detected at the reporting limit of 0.1g/kg
Not Listed	Not listed as all results less than PQL. Refer Section 9 of report for individual SAC
<PQL	Less than Practical Quantitation Limit
BOLD	Exceedance of HIL / HSL or Management Limits
BOLD	Exceedance of EIL
BD4/160812	Blind replicate of BH1/0.4-0.5

Table 17: Results of Water Analysis (All results in µg/L unless otherwise stated)

Sample ID	Test Bore	Heavy Metals								PAH 2										TPH				VOCs (including BTEX)						PCB	OCP	OPP	Total Phenolics	pH	Ammonia as N
		As	Cd	Cr1	Cu	Pb	Hg	Ni	Zn	Naphthalene	Benzo(a)pyrene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	All other PAH	C6-C9	C10-C14	C15-C28	C29-C36	Benzene	Toulene	Ethyl-benzene	o-xylene	m+p-xylene	All other VOCS	All PCB	All OCP	All OPP			
BH3-210812	3	1	0.3	<PQL	**3**	<PQL	<PQL	2	**46**	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	**82**	**170**	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	7.2	**1800**
BH6-210812	6	2	0.1	<PQL	<PQL	<PQL	<PQL	**18**	14	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	6.6	64
BD1-210812	-	2	0.2	<PQL	<PQL	<PQL	<PQL	**19**	**27**	-	-	-	-	-	-	-	-	-	-	<PQL	<PQL	<PQL	<PQL	-	-	-	-	-	-	-	-	-	-	-	64
TS 210812	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	106%	84%	97%	102%	101%	-	-	-	-	-	-	-
TB 210813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<PQL	<PQL	<PQL	<PQL	<PQL	-	-	-	-	-	-	-
Groundwater Investigation Levels (GIL)		24	0.5	8.3	1.4	3.4	0.6	11.0	8.0	16	0.2	-	-	-	2	0.4	1.4	-	-	PQL10	PQL (50)	PQL (100)	PQL (100)	950	180	80	350	75+200	-	-	0.08	<PQL[2]	50	-	900

Notes:

1	All Chromium are assumed to exist in the stable Cr(III) oxidation state, as Cr(VI) will be too reactive and unstable under the normal environment
2	All analytes were returned below the PQL please refer to Appendix E for full results
-	not defined/ not analysed/ not applicable
Bold	Exceeds GIL
PQL	Practical Quantitation Limit
BD1-210812	Blind replicate of BH6-210812

12. Discussion

12.1 Site History

From a review of the historical information, portions of the site appear to have been used as a nursery from 1925 with real expansion of the nursery in the 1940s, 1960s and 1980s. The site also had varying other uses, possibly including a builder's yard and a yeast factory. Most notable from a contamination perspective was the ownership of a large portion of the now car park area by Adhesive Pty Ltd who it could be inferred from the company name, produced or stored adhesives. During the site's evolution there has also been production of yeast by Mauri Brothers and Thompson (Aust) Pty Ltd, though yeast production does not necessarily indicate contamination itself, a factory environment often will often have associated contamination sourced from machinery and fuel supply for delivery vehicles. From 1988, ownership of the site as it is now has been held as one entity. The site from this period underwent development to bring it to the site's current appearance and the use of the site has remained the same.

A search was undertaken for the site with WorkCover NSW and no records for the storage of dangerous goods were found to match the searched properties 25 - 29 Mitchell Street and 2 Tangarra Street.

Available Council records for the site show the development of the nursery as we see it loosely as follows:

- 1984- Demolition of the old buildings had begun to make way for the existing nursery;
- 1991- Permission was sought to upgrade existing building to a fruit;
- 1995- Approval granted for new pet shop building.

12.2 Contaminants in Soil

All analyte concentrations in the soil samples were either less than the laboratory detection limits and/or less than the adopted SAC with the exception of the following:

- One sample (BH1/ 1.0-1.2 m) exceeding the EILs for copper and zinc (marginal).

These are relatively minor exceedances of the EIL which can be addressed at a time when the site is to be redeveloped. A more detailed investigation of the site (refer to Section 13) may identify further exceedances, however, this does not preclude the rezoning of the site.

Asbestos was not detected in any of the samples to the limit of reporting (0.1 g/kg) and no asbestos-based products were observed in the auger returns. No respirable fibres were detected in any of the samples. Although asbestos was not detected in the samples, anthropogenic materials were noted in the filling, across the site. Asbestos-containing materials are commonly found in fill in conjunction with other building materials and may be present but undetected.

Supplementary testing was carried out on the samples from BH2 (1.8 - 2.0 m and 2.8 – 3.0 m bgl) for ammonia and faecal coliforms due to strong odours detected when drilling. The returns from the drilling were described as grey silty sands which were saturated. Due to the odours detected the bore

was discontinued prior to reaching natural material. The odour of ammonia is in line with that expected of a leaking sewer or another organic source (e.g. composted materials) therefore testing for faecal coliforms and ammonia was undertaken. The results for faecal coliforms were below the practical quantitation limit (PQL) although the ammonia results returned concentrations of 260 mg/ kg and 180 mg/ kg for the two samples. As noted above, phenols were also found in the sample at 2.8-3.0 m bgl. There are no criteria provided in the HIL or PPIL to assess ammonia but it is potentially a concern for olfactory reasons given the proposed residential redevelopment.

12.3 Contaminants in Groundwater

Arsenic, cadmium, copper, nickel and zinc were all detected in the groundwater samples, though copper was only detected in BH3. Chromium, lead and mercury were not detected above the PQL. The concentration of zinc exceeded the GIL at both BH3 and BH 6, however, zinc is commonly elevated in the Sydney area and, in this case, it is not considered significant. The nickel and copper exceedance (one sample for each) are minor and are also not considered significant.

TPH was only detected in the groundwater sample from Test Bore 3 with concentrations of TPH C_{10}-C_{14} (82 µg/L) and TPH C_{15}-C_{28} (170 µg/L) above the respective screening GIL (50 µg/L and100 µg/L). A review of the TPH chromatogram reveals little about the nature of the contamination given the low concentrations that are present. PAH was analysed at low concentrations (PQL of 0.01 µg/L) and PAH does not appear to be a component of the TPH. The lack of PAH indicates that these results may be petroleum hydrocarbons or may be other organic matter which elutes in the C_{10}-C_{36} range. This would require resampling and analysis to confirm the nature of the result.

PAH, VOC (including BTEX), OPP, OCP, PCB and phenols were not detected in the groundwater at either location.

Ammonia was detected at levels exceeding the GIL at Test Bore 3. It is not clear if this is related to the ammonia in the soils at Test Bore 2 as Test Bore 3 appears to be up-gradient of Test Bore 2. Test Bore 6 returned a low level of ammonia which was within the GIL.

The level of ammonia encountered in the groundwater at Test Bore 3 is in exceedance of the GIL, with ammonia detected at Test Bore 2 in the soil which indicates that there is a source of ammonia on site which is, as yet, unidentified. Groundwater results from Test Bore 6 showed low levels of ammonia in this bore which is the closest to the filled land in Henley Park to the north. Given the relative location of the two groundwater bores it appears unlikely that the former quarry is impacting the groundwater on the site but further investigations would be required to confirm this. With ammonia having been found to the south at Test Bore 2 (soil) and Test Bore 3 (groundwater) it suggests an on-site source somewhere south of Test Bore 6. Although there are no HIL for ammonia in soil, the *Guidelines for the NSW Site Auditor Scheme* (DECC 2006) state that: *The auditor must check that aesthetic issues have been considered in the assessment of contamination. Aesthetic issues include the generation of odours from the site and any discolouration of the soil as a result of contamination*. The strong odours encountered at Test Bore 2 in the soil will, in the opinion of DP, need to be addressed.

13. Recommendations and Conclusion

The following recommendations are made with respect to the site:

- The nature, extent and cause of the odorous soil at Test Bore 2 should be investigated. Ammonia and phenol have been detected at this location and are linked to the odour;
- Confirm through additional groundwater wells that there is no on-site impact from the filling of the former Henley Park quarry;
- Additional testing should be undertaken as part of a Detailed Contamination Assessment prior to commencement of any development works on the site.

Notwithstanding the findings of the investigation and the need for further investigation, the data indicates that the site can be made suitable for a residential land use, and is therefore considered to be suitable for the proposed rezoning.

14. Limitations

Douglas Partners (DP) has prepared this report for a project at 27 Mitchell Street, Croydon Park in accordance with DP's proposal dated 7 November 2017 and acceptance received from Miss Larissa Brennan of LJB Urban Planning on behalf of Flower Power. The report is provided for the exclusive use of Flower Power for this project only and for the purpose(s) described in the report. It should not be used for other projects or by a third party. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions only at the specific sampling or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of anthropogenic influences. Such changes may occur after DP's field testing has been completed.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be limited by undetected variations in ground conditions between sampling locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

This report must be read in conjunction with all of the attached notes and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion given in this report.

Douglas Partners Pty Ltd

Appendix A

Drawing

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT: Flower Power	Borehole Locations and Site Features	PROJECT No: 73112.00
	Location Sydney		PLATE No: A1
	DATE: Aug 2012		REVISION: A

Appendix B

Site Photographs

Photo 1 – Flower Power front elevation

Photo 2 – Storage bays

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Contamination Assessment** **27 Mitchell Street, Croydon Park**	PROJECT: 73112 PLATE No: 1 REV: 0
	CLIENT: Flower Power	DATE: Sept 2012

Photo 3 – Flower Power Out-door retail area and walkways

Photo 4 – Storage shed

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **Contamination Assessment** **27 Mitchell Street, Croydon Park**	PROJECT:	73112
		PLATE No:	2
		REV:	0
	CLIENT: Flower Power	DATE:	Sept 2012

Photo 5– Listed house in garden

Photo 6 – Fruit and vegetable shop

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **Contamination Assessment** **27 Mitchell Street, Croydon Park**	PROJECT: 73112 PLATE No: 3 REV: 0
	CLIENT: Flower Power	DATE: Sept 2012

Photo 7– Pet shop bins

Photo 8 – Hardware and water garden shop

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Contamination Assessment** **27 Mitchell Street, Croydon Park**	PROJECT: 73112 PLATE No: 4 REV: 0
	CLIENT: Flower Power	DATE: Sept 2012

Photo 9– Fuel tank and chlorine pallet

Photo 10 – Cracks in fuel tank bund

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **Contamination Assessment** **27 Mitchell Street, Croydon Park**	PROJECT: 73112 PLATE No: 5 REV: 0
	CLIENT: Flower Power	DATE: Sept 2012

Photo 11– Brick lining of bund and further cracks

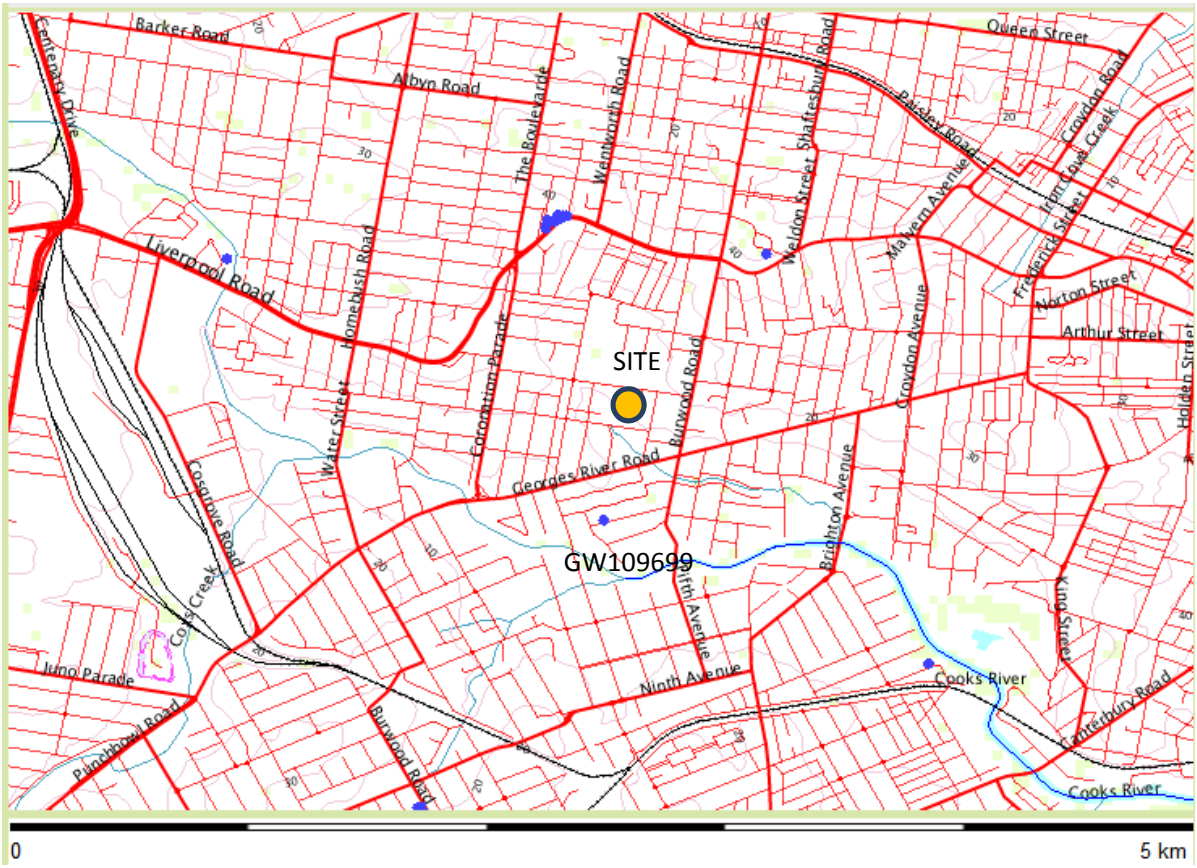
Photo 12 – Sydney Water site

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **Contamination Assessment** **27 Mitchell Street, Croydon Park**	PROJECT: 73112 PLATE No: 6 REV: 0
	CLIENT: Flower Power	DATE: Sept 2012

Appendix C

Registered Groundwater Bore Summary

Results of Groundwater Bore Search – NSW Government (http://waterinfo.nsw.gov.au/gw)



Key:

- Location of groundwater well

NSW OFFICE OF WATER
Work Summary

GW109699

Licence : 10BL165434
Licence Status Active
Authorised Purpose(s) DOMESTIC
Intended Purpose(s) DOMESTIC
Work Type : Bore
Work Status :
Construct. Method : Rotary Air
Owner Type : Private

Commenced Date :
Completion Date : 11-Dec-2008
Final Depth : 90.00 m
Drilled Depth : 90.00 m

Contractor Name : Britt's Water Solutions
Driller : 1923 BRITT, Darren James
Assistant Driller's Name :

Property : - RICKETTS
GWMA : -
GW Zone : -
Standing Water Level : 6.00 m
Salinity : Salty
Yield : 0.07 L/s

Site Details

Site Chosen By Driller
County
Form A : CUMBERLAND
Licensed : CUMBERLAND
Parish
Form A : CONCORD
Licensed : CONCORD
Portion/Lot DP
Form A : 116//12912
Licensed : 116 12912

Region : 10 - SYDNEY SOUTH COAST
River Basin :
Area / District :
CMA Map :
Grid Zone :
Scale :

Elevation :
Elevation Source :
Northing : 6247225
Easting : 323935
Latitude (S) : 33° 54' 2"
Longitude (E) : 151° 5' 45"

GS Map :
MGA Zone : 56
Coordinate Source :

Construction

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;PL-Placement of Gravel Pack;PC-Pressure Cemented;S-Sump;CE-Centralisers

H	P	Component	Type	From (m)	To (m)	OD (mm)	ID (mm)	Interval	Details
1		Hole	Hole	0.00	18.00	200			Rotary Air
1		Hole	Hole	18.00	90.00	156			Rotary Air
1	1	Casing	P.V.C.	-0.30	24.00	156			Glued; Driven into Hole

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
66.00	66.10	0.10		6.00		0.18		1.00	Salty
88.00	88.05	0.05		6.00		0.07		1.00	

Drillers Log

From (m)	To (m)	Thickness(m)	Drillers Description	Geological Material	Comments
0.00	0.30	0.30	TOPSOIL	Topsoil	
0.30	3.00	2.70	CLAY ORANGE	Clay	
3.00	10.50	7.50	CLAY GREY	Clay Loam	
10.50	24.00	13.50	SHALE BLACK	Shale	
24.00	27.00	3.00	SANDSTONE GREY	Sandstone	
27.00	90.00	63.00	SANDSTONE WHITE	Sandstone	

Remarks

***** End of GW109699 *****

NSW OFFICE OF WATER
Work Summary

GW105185

Licence : 10BL161850
Licence Status Active
Authorised Purpose(s) MONITORING BORE
Intended Purpose(s) MONITORING BORE
Work Type : Bore
Work Status :
Construct. Method : Auger - Solid Flight
Owner Type :

Commenced Date :
Completion Date : 19-Nov-2002
Final Depth : 2.20 m
Drilled Depth : 2.20 m

Contractor Name : DRILL TEST
Driller : 1722 MILLER, Douglas Stephen
Assistant Driller's Name :

Property : - MOBIL OIL
GWMA : -
GW Zone : -
Standing Water Level :
Salinity :
Yield :

Site Details

Site Chosen By

	County	Parish	Portion/Lot DP
Form A :	CUMBERLAND	CONCORD	LT 2 DP 208597
Licensed :	CUMBERLAND	CONCORD	2 208597

Region : 10 - SYDNEY SOUTH COAST
River Basin : 213 - SYDNEY COAST - GEORGES RIVER
Area / District :
CMA Map : 9130-3S BOTANY BAY
Grid Zone : 56/1
Scale : 1:25,000

Elevation : 0.00
Elevation Source : (Unknown)
Northing : 6248912
Easting : 323727
Latitude (S) : 33° 53' 8"
Longitude (E) : 151° 5' 38"

GS Map :
MGA Zone : 56
Coordinate Source :

Construction

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;PL-Placement of Gravel Pack;PC-Pressure Cemented;S-Sump;CE-Centralisers

H	P	Component Type	From (m)	To (m)	OD (mm)	ID (mm)	Interval	Details
1		Hole	0.00	2.20				

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)

(No Water Bearing Zone Details Found)

Drillers Log

From (m)	To (m)	Thickness(m)	Drillers Description	Geological Material	Comments
0.00	0.50	0.50	FILL,YELLOW SAND	Fill	
0.50	2.10	1.60	CLAY,L/GREY/MOIST,SOFT	Clay	
2.10	2.20	0.10	SHALE,BROWN,WEATHERED	Shale	

Remarks

***** End of GW105185 *****

NSW OFFICE OF WATER
Work Summary

GW105180

Licence : 10BL161850 **Licence Status** Active

	Authorised Purpose(s)	Intended Purpose(s)
	MONITORING BORE	MONITORING BORE

Work Type : Bore
Work Status :
Construct. Method : Auger - Solid Flight
Owner Type :

Commenced Date : **Final Depth :** 2.00 m
Completion Date : 19-Nov-2002 **Drilled Depth :** 2.00 m

Contractor Name : DRILL TEST
Driller : 1722 MILLER, Douglas Stephen
Assistant Driller's Name :

Property : - MOBIL OIL **Standing Water Level :**
GWMA : - **Salinity :**
GW Zone : - **Yield :**

Site Details

Site Chosen By	County	Parish	Portion/Lot DP
	Form A : CUMBERLAND	CONCORD	LT 2 DP 208597
	Licensed : CUMBERLAND	CONCORD	2 208597

Region : 10 - SYDNEY SOUTH COAST **CMA Map :** 9130-3S BOTANY BAY
River Basin : 213 - SYDNEY COAST - GEORGES RIVER **Grid Zone :** 56/1 **Scale :** 1:25,000
Area / District :

Elevation : 0.00 **Northing :** 6248885 **Latitude (S) :** 33° 53' 8"
Elevation Source : (Unknown) **Easting :** 323687 **Longitude (E) :** 151° 5' 36"

GS Map : **MGA Zone :** 56 **Coordinate Source :**

Construction

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;PL-Placement of Gravel Pack;PC-Pressure Cemented;S-Sump;CE-Centralisers

H	P	Component Type	From (m)	To (m)	OD (mm)	ID (mm)	Interval	Details
1		Hole	0.00	2.00				

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)

(No Water Bearing Zone Details Found)

Drillers Log

From (m)	To (m)	Thickness(m)	Drillers Description	Geological Material	Comments
0.00	1.00	1.00	CLAY,RED AND GREY MOTTLED	Clay	
1.00	2.00	1.00	SHALE,BROWN,DRY,LOOSE/CLAY LAYERS	Shale	

Remarks

***** End of GW105180 *****

NSW OFFICE OF WATER
Work Summary

GW107463

Licence : 10BL165674 **Licence Status** Active

	Authorised Purpose(s)	Intended Purpose(s)
Work Type : Bore	MONITORING BORE	MONITORING BORE
Work Status :		
Construct. Method :		
Owner Type :		

Commenced Date : **Final Depth :** 6.20 m
Completion Date : 09-May-2005 **Drilled Depth :** 6.20 m

Contractor Name :
Driller : 1776 TRIPPETT, Geoff
Assistant Driller's Name :

Property : - AMPOL LIMITED **Standing Water Level :** 3.90 m
GWMA : - **Salinity :**
GW Zone : - **Yield :**

Site Details

Site Chosen By	County	Parish	Portion/Lot DP
Other	**Form A :** CUMBERLAND	CONCORD	1 949600
	Licensed : CUMBERLAND	CONCORD	1 949600

Region : 10 - SYDNEY SOUTH COAST **CMA Map :**
River Basin : **Grid Zone :** **Scale :**
Area / District :

Elevation : **Northing :** 6248886 **Latitude (S) :** 33° 53' 8"
Elevation Source : **Easting :** 323645 **Longitude (E) :** 151° 5' 35"

GS Map : **MGA Zone :** 56 **Coordinate Source :**

Construction

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;PL-Placement of Gravel Pack;PC-Pressure Cemented;S-Sump;CE-Centralisers

H	P	Component	Type	From (m)	To (m)	OD (mm)	ID (mm)	Interval	Details
1	1	Opening	Slots - Horizontal	0.00	0.00	50			PVC Class 18; A: 4mm
1		Annulus	(Unknown)	0.00	0.00				Graded; GS: 3.2-6.2mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
3.50	6.20	2.70		3.90					

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.20	0.20	FILL	Fill	
0.20	1.50	1.30	CLAY	Clay	
1.50	6.20	4.70	SHALE	Shale	

Remarks

Form A Remarks:
Low yield.

***** End of GW107463 *****

Appendix D

Site History Documents

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT: Flower Power	**1930 Aerial Photograph**	PROJECT No: 73112.00
	OFFICE: Sydney	**Phase 1 Contamination Assessment**	PLATE No: D1
	DATE: Aug 2012	**27 Mitchell St, Croydon Park**	REVISION: A

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT: Flower Power	**1943 Aerial Photograph**	PROJECT No: 73112.00
	OFFICE: Sydney	**Phase 1 Contamination Assessment**	PLATE No: D2
	DATE: Aug 2012	**27 Mitchell St, Croydon Park**	REVISION: A

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT: Flower Power	**1951 Aerial Photograph**	PROJECT No: 73112.00
	OFFICE: Sydney	**Phase 1 Contamination Assessment**	PLATE No: D3
	DATE: Aug 2012	**27 Mitchell St, Croydon Park**	REVISION: A

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT: Flower Power	**1970 Aerial Photograph**	PROJECT No: 73112.00
	OFFICE: Sydney	**Phase 1 Contamination Assessment**	PLATE No: D4
	DATE: Aug 2012	**27 Mitchell St, Croydon Park**	REVISION: A

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT: Flower Power	**1991 Aerial Photograph**	PROJECT No: 73112.00
	OFFICE: Sydney	**Phase 1 Contamination Assessment**	PLATE No: D5
	DATE: Aug 2012	**27 Mitchell St, Croydon Park**	REVISION: A

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT: Flower Power	**2008 Aerial Photograph**	PROJECT No: 73112.00
	OFFICE: Sydney	**Phase 1 Contamination Assessment**	PLATE No: D6
	DATE: Aug 2012	**27 Mitchell St, Croydon Park**	REVISION: A

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D12/105766
Your Ref: David Walker

6 August 2012

Attention: David Walker
Douglas Partners Pty Ltd
96 Hermitage Rd
West Ryde NSW 2114

Dear Mr Walker,

RE SITE: 27 or 25-29 Mitchell St or 2 Tangarra St East, Croydon Park NSW

I refer to your site search request received by WorkCover NSW on 2 August 2012 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 NSW has not located any records pertaining to the above mentioned premises.

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

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Team

10 AUG 2012

Burwood Council

heritage ▪ progress ▪ pride

PLANNING CERTIFICATE UNDER SECTION 149(2) & (5)
ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979

Douglas Partners Pty Ltd
PO Box 472
WEST RYDE NSW 1685

Certificate Number:	8353	**Certificate Date:**	07/08/2012
Receipt Number:	403779	**Certificate Fee:**	$133.00
Property Number:	8395	**Applicant's Reference:**	2 Tangarra Street East, Croydon Park

DESCRIPTION OF PROPERTY

Property: 2 Tangarra St East CROYDON PARK 2133
Title Particulars: DP 774159 Lot 23

LAND TO WHICH CERTIFICATE RELATES

The land to which this certificate relates, being the lot or one of the lots described in the corresponding application, is shown in the Council's records as being situated at the street address described on page 1 of this certificate. The information contained in this certificate relates only to the lot described on the certificate. Where the street address comprises more that one lot in one or more deposited plans or strata plans, separate planning certificates can be obtained upon application for the other lots. Those certificates may contain different information than is contained in this certificate.

SECTION 149(2) DETAILS

In accordance with section 149(2) of the *Environmental Planning and Assessment Act 1979*, at the date of this certificate the following information is provided in respect of the prescribed matters to be included in a planning certificate.

1(1). ENVIRONMENTAL PLANNING INSTRUMENTS

The following environmental planning instruments apply to the carrying out of development on the land:

Deemed Local Environmental Plans:

Burwood Planning Scheme Ordinance 1979 (as amended)

Local Environmental Plans:

Burwood Local Environmental Plan No. 8 - Gazetted 12 October 1984

Burwood Local Environmental Plan No. 9 - Gazetted 4 May 1984

The provisions of all gazetted Local Environment Plan Amendments have been incorporated into the Burwood Planning Scheme Ordinance 1979.

State Environmental Planning Policies (SEPPs):

SEPP No. 1 – Development Standards
SEPP No. 4 – Development without Consent and Miscellaneous Complying Development
SEPP No. 6 – Number of Storeys in a Building
SEPP No. 19 – Bushland in Urban Areas
SEPP No. 21 – Caravan Parks
SEPP No. 22 – Shops and Commercial Premises
SEPP No. 30 – Intensive Agriculture
SEPP No. 32 – Urban Consolidation (Redevelopment of Urban Land)
SEPP No. 33 – Hazardous and Offensive Development
SEPP No. 50 – Canal Estate Development
SEPP No. 55 – Remediation of Land
SEPP No. 60 – Exempt and Complying Development
SEPP No. 64 – Advertising and Signage
SEPP No. 65 – Design Quality of Residential Flat Development
SEPP No. 70 – Affordable Housing (Revised Schemes)
SEPP (Building Sustainability Index: BASIX) 2004
SEPP (Housing for Seniors or People with a Disability) 2004
SEPP (Major Developments) 2005
SEPP (Infrastructure) 2007
SEPP (Temporary Structures and Places of Public Entertainment) 2007
SEPP (Mining, Petroleum and Extractive Industries) 2007
SEPP (Repeal of Concurrence and Referral Provisions) 2008
SEPP (Exempt and Complying Development Codes) 2008
SEPP (Affordable Rental Housing) 2009

Deemed State Environmental Planning Policies:

There are no Deemed SEPPs applying to the land.

Note: Any enquiries regarding State Environmental Planning Policies or Deemed State Environmental Planning Policies should be directed to the Department of Planning on (02) 9228 6111 or its website, www.planning.nsw.gov.au .

1(2). PROPOSED ENVIRONMENTAL PLANNING INSTRUMENTS

The following proposed environmental planning instruments will apply to the carrying out of development on the land and are or have been the subject of community consultation or public exhibition under the *Environmental Planning and Assessment Act 1979*:

Note: Proposed environmental planning instruments include a planning proposal for a Local Environmental Plan or a draft environmental planning instrument.

Proposed Local Environmental Plans:

Draft Burwood Local Environmental Plan (BLEP) 2012 - A comprehensive Local Environmental Plan for the whole Burwood Council area has been publicly exhibited in accordance with the Act.

Proposed State Environmental Planning Policies:

Draft State Environmental Planning Policy No. 66 – Integrating Land Use and Transport - Exhibited 14.09.01 to 14.12.01

Draft State Environmental Planning Policy (Application of Development Standards) 2004 - Exhibited 10.5.04 to 18.6.04

Proposed Deemed State Environmental Planning Policies:

There are no proposed Deemed SEPPs applying to the land.

1(3). DEVELOPMENT CONTROL PLANS

The following development control plans apply to the carrying out of development on the land:

Council on 31 January 2006 resolved to adopt a Burwood Consolidated Development Control Plan (DCP). This DCP consolidates all DCPs which previously applied to land within the Burwood local government area (LGA), in accordance with the new requirements of Part 3 of the *Environmental Planning and Assessment Act 1979*. The Consolidated DCP covers all land within the Burwood LGA. The provisions of some Parts of this Consolidated DCP apply to the whole Burwood LGA, whilst the provisions of other Parts of this Consolidated DCP apply only to specific sites or zones within the Burwood LGA. The table below sets out the application of the various Parts of the Consolidated DCP.

PART	FORMERLY	APPLICATION OF PART
Part 1 - Grosvenor Street	DCP No. 1	Applies to all land bounded by Grosvenor St/Young St/ Boundary St/Webb St.
Parts 2 and 3	-	These Parts are blank and have no application.
Part 4 - Appian Way	DCP No. 4	Applies to all land within Appian Way Conservation Area.
Part 5 - Malvern Hill	DCP No. 5	Applies to all land within the Malvern Hill Conservation Area.
Part 6 - Notification of Development Applications	DCP No. 6	Applies to all land within the Burwood local government area.
Parts 7 and 8	-	These Parts are blank and have no application.
Part 9 - Advertising Signs	DCP No. 9	Applies to all land within the Burwood local government area.
Parts 10 and 11	-	These Parts are blank and have no application.
Part 12 - Exempt and Complying Development	DCP No. 12	Applies to all land within the Burwood local government area.
Part 13	-	This Part is blank and has no application.
Part 14 - Liverpool Rd / Byer St	DCP No. 14	Applies to 260-286 Liverpool Rd and Nos. 8-28,1-3A, 7-23 Byer Street.
Part 15	-	This Part is blank and has no application.
Part 16 - Lucas Road / Cheltenham Road.	DCP No. 16	Applies to 12-66 Lucas Road and 1-51 Cheltenham Road.

PART	FORMERLY	APPLICATION OF PART
Part 17 - Waste Management	DCP No. 17	Applies to all land within the Burwood local government area.
Part 18 - Residential Flat Buildings	DCP No. 18	Applies to all land within the Burwood local government area zoned Residential 2(b2), Residential 2(c1), Residential 2(c2).
Parts 19 and 20	-	These Parts are blank and have no application.
Part 21 - Dual Occupancy	DCP No. 21	Applies to all land within the Burwood local government area.
Part 22 - Car Parking	DCP No. 22	Applies to all land within the Burwood local government area.
Parts 23, 24 and 25	-	These Parts are blank and have no application.
Part 26 - Child Care Centres	DCP No. 26	Applies to all land within the Burwood local government area.
Parts 27 - 33	-	These Parts are blank and have no application.
Part 34 – Development in Special Uses 5B (Railways) Zone	DCP No. 34	Applies to all land zoned Special Uses 5B (Railways) within the Burwood Town Centre.
Part 35 – Public Works	DCP No. 35	Applies to all land within the Burwood local government area.
Part 36 – Burwood Town Centre	Adopted by Administrator 10.11.09	Applies to all land within the Burwood Town Centre.
Part 37 – Shared Accommodation (including Boarding Houses and Backpacker Accommodation)	Adopted by Council 26.09.06	Applies to all land within the Burwood local government area.
Part 38 – Single Dwelling Houses and Ancillary Structures	Adopted by Council 01.12.09	Applies to all land within the Burwood local government area.

2. ZONING AND LAND USE

The identity of the zone under the relevant environmental planning instrument:

Residential 2(a)

Industrial Light 4(b)

Permissible with consent - Residential 2(a) - Any purpose other than those permissible without consent or prohibited.

Permissible with consent - Industrial 4(b) - Any purpose other than those prohibited.

Permissible without consent - Nil.

Prohibited - Residential 2(a) - advertising structures; amusement parks; boarding houses; bulk stores; caravan parks; car parking (other than that connected with or subsidiary to any purpose that is permissible with consent); car repair stations; clubs; commercial premises; commercial signs exceeding 0.3 square metres in area; gas holders; generating works; hospitals; hotels; industries; institutions; junk yards; liquid fuel depots; mines; motels; motor caravan or boat showrooms; places of assembly; places of public worship; refreshment rooms; residential flat buildings (other than units, not exceeding 2 storeys, for aged persons); roadside stalls; sawmills; service stations; shops; stock and sale yards; taverns; transport terminals; warehouses.

Prohibited - Industrial 4(b) - Amusement parks; boarding houses; caravan parks; clubs; commercial premises (other than rag collecting or dealing); dwelling houses or residential flat buildings (other than those used in conjunction with industry and situated on the same land as the industry); educational establishments; extractive industries; hospitals; hotels; institutions; industries referred to in Schedule 5; junk yards; liquid fuel depots; mines; motels; roadside stalls; shops (other than those referred to in Schedule 3); stock and sale yards; taverns.

Whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed:

Yes. Clause 52 of the Burwood Planning Scheme Ordinance 1979 provides that a dwelling-house shall not be erected unless the allotment is (a) hatchet-shaped and has an area of not less than 660 square metres; or (b) not hatched-shaped and has an area of not less than 560 square metres and is not less than 15 metres wide at the front alignment of the dwelling-house. The Planning Scheme Ordinance should be consulted in relation to specific exception provisions.

Whether the land includes or comprises critical habitat:

No

Whether the land is in a conservation area:

No

Whether an item of environmental heritage is situated on the land:

No

3. COMPLYING DEVELOPMENT

Whether complying development may be carried out under each of the codes for complying development in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 in accordance with one or more of the requirements under clause 1.19 of that Policy:

General Housing Code:

Complying development under the General Housing Code may be carried out on the land.

Rural Housing Code:

Complying development under the Rural Housing Code may be carried out on the land.

Housing Alterations Code:

Complying development under the Housing Alterations Code may be carried out on the land.

General Development Code:

Complying development under the General Development Code may be carried out on the land.

General Commercial and Industrial Code:

Complying development under the General Commercial and Industrial Code may be carried out on the land.

Subdivision Code:

Complying development under the Subdivision Code may be carried out on the land.

Demolition Code:

Complying development under the Demolition Code may be carried out on the land.

Note: The policy also requires that the development be permissible with consent in the relevant land use zone and satisfy all other requirements of the Policy in relation to complying development.

4. COASTAL PROTECTION

Is the land affected by the operation of section 38 or 39 of the *Coastal Protection Act 1979*, but only to the extent that Council has been so notified by the Department of Public Works?

No

Whether an order has been made under Part 4D of the *Coastal Protection Act 1979* in relation to emergency coastal protection works on the land (or on public land adjacent to that land), except where the council is satisfied that such an order has been fully complied with:

No

Whether the council has been notified under section 55X of the *Coastal Protection Act 1979* that emergency coastal protection works have been placed on the land (or on public land adjacent to that land), and if works have been so placed, whether the council is satisfied that the works have been removed and the land restored in accordance with that Act:

No

Is there any such information as is required by the regulations under section 56B of the *Coastal Protection Act 1979* to be included in the planning certificate and of which the council has been notified pursuant to those regulations:

No

Whether the owner (or any previous owner) of the land has consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works:

No

Note. "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the *Local Government Act 1993*.

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5. MINE SUBSIDENCE

Is the land proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act 1961*?

No

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6. ROAD WIDENING AND ROAD REALIGNMENT

Whether the land is land affected by any road widening or road realignment under:
(a) Division 2 of Part 3 of the *Roads Act 1993*; or
(b) any environmental planning instrument; or
(c) any resolution of the Council:

No

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7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Is the land affected by a policy adopted by the Council or adopted by any other public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the Council, that restricts the development of the land because of the likelihood of land slip, bushfire, flooding, tidal inundation, subsidence, acid sulphate soils or any other risk?

No

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

Whether development on the land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related development controls:

No

Whether development on the land or part of the land for any other purpose is subject to flood related development controls:

No

Note: Words and expressions under this heading have the same meanings as in the instrument set out in the Schedule to the *Standard Instrument (Local Environmental Plans) Order 2006.*

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8. LAND RESERVED FOR ACQUISITION

Is there an environmental planning instrument or proposed environmental planning instrument applying to the land which makes provision for the acquisition of the land by a public authority, as referred to in section 27 of the *Environmental Planning and Assessment Act 1979*?

No

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9. CONTRIBUTIONS PLANS

The following Contributions Plans apply to the land:

Section 94 Contributions Plan - Open Space, Community Facilities and Carparking
Section 94 Contributions Plan - Roads and Traffic Facilities

10. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997

Section 59(2) of the *Contaminated Land Management Act 1997* prescribes that the following matters are to be specified in a Section 149 Planning Certificate:

(a) Is the land to which this certificate relates significantly contaminated land, and if so, the date the certificate was issued?

No

Note: A declaration of significantly contaminated land includes declarations of an investigation area or remediation site issued prior to 1 July 2009.

(b) Is the land to which this certificate relates subject to a management order, and if so, the date the certificate was issued?

No

Note: A management order includes an investigation order or remediation order issued prior to 1 July 2009.

(c) Is the land to which this certificate relates the subject of an approved voluntary management proposal, and if so, the date the certificate was issued?

No

Note: An approved voluntary management proposal includes a voluntary investigation proposal or voluntary remediation proposal issued prior to 1 July 2009.

(d) Is the land to which this certificate relates subject to an ongoing maintenance order, and if so, the date the certificate was issued?

No

Note: An ongoing maintenance order includes a notice for maintenance of remediation issued prior to 1 July 2009.

(e) Is the land to which this certificate relates the subject of a site audit statement, if a copy of such a statement has been provided at any time to the local authority issuing the certificate?

No

11. BUSHFIRE PRONE LAND

The land is not bushfire prone land as defined in the *Environmental Planning and Assessment Act 1979*.

12. PROPERTY VEGETATION PLANS

The Council has not been notified that the property is subject to a vegetation plan under the *Native Vegetation Act 2003.*

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Whether an order has been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land (but only if the Council has been notified of the order):

No

14. DIRECTIONS UNDER PART 3A

Whether there is a direction by the Minister in force under section 75P(2)(c1) of the *Environmental Planning and Assessment Act 1979* that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect:

No

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

If the land is land to which State Environmental Panning Policy (Housing for Seniors or People with a Disability) 2004 applies, whether there is a current site compatibility certificate (of which the Council is aware) issued under clause 25 of that Policy in respect of proposed development on the land, and if so, the period for which the certificate is current, and any terms of a kind referred to in clause 18(2) of that Policy that have been imposed as a condition of consent to a development application granted after 11 October 2007:

No

Note: A copy of a site compatibility certificate may be obtained from the head office of the Department of Planning.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Whether there is a valid site compatibility certificate (of which the Council is aware), issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007 in respect of proposed development on the land, and if so, the period for which the certificate is valid:

No

Note: A copy of a site compatibility certificate may be obtained from the head office of the Department of Planning.

17. SITE COMPATIBILITY CERTIFICATES FOR AFFORDABLE RENTAL HOUSING

Whether there is a current site compatibility certificate (of which the Council is aware), issued for affordable rental housing in respect of proposed development on the land, and if so, the period for which the certificate is current and the conditions under which it has been issued:

No

Note: A copy of a site compatibility certificate may be obtained from the head office of the Department of Planning.

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18. BIOBANKING AGREEMENTS

Whether there is a biobanking agreement entered into under section 127D of the *Threatened Species Conservation Act 1995* relating to the land of which the Council has been notified by the Director-General of the Department of Environment, Climate Change and Water:

No

SECTION 149 (5)

The following advice on other matters affecting the subject land of which Council is aware is supplied in pursuance to sub-section 5 of Section 149.

1. The land is not affected by a Residential District Proclamation.
2. The land is affected by a Tree Preservation Order.
3. Register of consents may be examined at Council's Offices for particulars relating to a development consent which may have been issued for use or development of the land.
4. Council has adopted a Burwood Town Centre Master Plan and Vision Document for the whole of the Burwood Council area.
5. Council has adopted a Streetscape Upgrade Policy relating to the provision of public works required to be carried out in the Burwood Council area as a result of new development.
6. Council on 26 May 2009 resolved to prepare a Comprehensive Local Environmental Plan for the whole of the Burwood Local Government Area, to replace the existing Burwood Planning Scheme Ordinance 1979.

Brian Olsen
MANAGER BUILDING & DEVELOPMENT
Per: Robert Coaher

Burwood Council
heritage ▪ progress ▪ pride

10 AUG 2012

PLANNING CERTIFICATE UNDER SECTION 149(2) & (5)
ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979

Douglas Partners
PO Box 472
WEST RYDE NSW 1685

Certificate Number:	8359	**Certificate Date:**	08/08/2012
Receipt Number:	403779	**Certificate Fee:**	$133.00
Property Number:	5737	**Applicant's Reference:**	73112

DESCRIPTION OF PROPERTY

Property: 25-29 Mitchell Street CROYDON PARK 2133
Title Particulars: DP 737342 Lot 101

LAND TO WHICH CERTIFICATE RELATES

The land to which this certificate relates, being the lot or one of the lots described in the corresponding application, is shown in the Council's records as being situated at the street address described on page 1 of this certificate. The information contained in this certificate relates only to the lot described on the certificate. Where the street address comprises more that one lot in one or more deposited plans or strata plans, separate planning certificates can be obtained upon application for the other lots. Those certificates may contain different information than is contained in this certificate.

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Deemed State Environmental Planning Policies:

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Draft State Environmental Planning Policy (Application of Development Standards) 2004 - Exhibited 10.5.04 to 18.6.04

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Part 38 – Single Dwelling Houses and Ancillary Structures	Adopted by Council 01.12.09	Applies to all land within the Burwood local government area.

2. ZONING AND LAND USE

The identity of the zone under the relevant environmental planning instrument:

Residential 2(a)

Residential 2(c1)

Industrial Light 4(b)

Permissible with consent - Residential 2(a) - Any purpose other than those permissible without consent or prohibited.

Permissible with consent - Residential 2(c1) - Boarding houses; car parking connected with or subsidiary to any purpose referred to as permissible with consent; child care centres; commercial

signs; drainage; dwelling houses; educational establishments; home occupations; hospitals; open space; places of public worship; professional consulting rooms; public buildings; residential flat buildings; roads; utility installations (other than gas holders or generating works).

Permissible with consent - Industrial 4(b) - Any purpose other than those prohibited.

Permissible without consent - Nil.

Prohibited - Residential 2(a) - advertising structures; amusement parks; boarding houses; bulk stores; caravan parks; car parking (other than that connected with or subsidiary to any purpose that is permissible with consent); car repair stations; clubs; commercial premises; commercial signs exceeding 0.3 square metres in area; gas holders; generating works; hospitals; hotels; industries; institutions; junk yards; liquid fuel depots; mines; motels; motor caravan or boat showrooms; places of assembly; places of public worship; refreshment rooms; residential flat buildings (other than units, not exceeding 2 storeys, for aged persons); roadside stalls; sawmills; service stations; shops; stock and sale yards; taverns; transport terminals; warehouses.

Prohibited - Residential 2(c1) & 2(c2) - Any purpose other than that permissible with consent.

Prohibited - Industrial 4(b) - Amusement parks; boarding houses; caravan parks; clubs; commercial premises (other than rag collecting or dealing); dwelling houses or residential flat buildings (other than those used in conjunction with industry and situated on the same land as the industry); educational establishments; extractive industries; hospitals; hotels; institutions; industries referred to in Schedule 5; junk yards; liquid fuel depots; mines; motels; roadside stalls; shops (other than those referred to in Schedule 3); stock and sale yards; taverns.

Whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed:

Yes. Clause 52 of the Burwood Planning Scheme Ordinance 1979 provides that a dwelling-house shall not be erected unless the allotment is (a) hatchet-shaped and has an area of not less than 660 square metres; or (b) not hatched-shaped and has an area of not less than 560 square metres and is not less than 15 metres wide at the front alignment of the dwelling-house. The Planning Scheme Ordinance should be consulted in relation to specific exception provisions.

Whether the land includes or comprises critical habitat:

No

Whether the land is in a conservation area:

No

Whether an item of environmental heritage is situated on the land:

No

3. COMPLYING DEVELOPMENT

Whether complying development may be carried out under each of the codes for complying development in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 in accordance with one or more of the requirements under clause 1.19 of that Policy:

General Housing Code:

Complying development under the General Housing Code may be carried out on the land.

Rural Housing Code:

Complying development under the Rural Housing Code may be carried out on the land.

Housing Alterations Code:

Complying development under the Housing Alterations Code may be carried out on the land.

General Development Code:

Complying development under the General Development Code may be carried out on the land.

General Commercial and Industrial Code:

Complying development under the General Commercial and Industrial Code may be carried out on the land.

Subdivision Code:

Complying development under the Subdivision Code may be carried out on the land.

Demolition Code:

Complying development under the Demolition Code may be carried out on the land.

Note: The policy also requires that the development be permissible with consent in the relevant land use zone and satisfy all other requirements of the Policy in relation to complying development.

4. COASTAL PROTECTION

Is the land affected by the operation of section 38 or 39 of the *Coastal Protection Act 1979*, but only to the extent that Council has been so notified by the Department of Public Works?

No

Whether an order has been made under Part 4D of the *Coastal Protection Act 1979* in relation to emergency coastal protection works on the land (or on public land adjacent to that land), except where the council is satisfied that such an order has been fully complied with:

No

Whether the council has been notified under section 55X of the *Coastal Protection Act 1979* that emergency coastal protection works have been placed on the land (or on public land adjacent to that land), and if works have been so placed, whether the council is satisfied that the works have been removed and the land restored in accordance with that Act:

No

Is there any such information as is required by the regulations under section 56B of the *Coastal Protection Act 1979* to be included in the planning certificate and of which the council has been notified pursuant to those regulations:

No

Whether the owner (or any previous owner) of the land has consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works:

No

Note. "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the *Local Government Act 1993.*

---

5. MINE SUBSIDENCE

Is the land proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act 1961*?

No

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6. ROAD WIDENING AND ROAD REALIGNMENT

Whether the land is land affected by any road widening or road realignment under:
(a) Division 2 of Part 3 of the *Roads Act 1993*; or
(b) any environmental planning instrument; or
(c) any resolution of the Council:

No

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7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Is the land affected by a policy adopted by the Council or adopted by any other public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the Council, that restricts the development of the land because of the likelihood of land slip, bushfire, flooding, tidal inundation, subsidence, acid sulphate soils or any other risk?

No

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

Whether development on the land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related development controls:

No

Whether development on the land or part of the land for any other purpose is subject to flood related development controls:

No

Note: Words and expressions under this heading have the same meanings as in the instrument set out in the Schedule to the *Standard Instrument (Local Environmental Plans) Order 2006*.

---

8. LAND RESERVED FOR ACQUISITION

Is there an environmental planning instrument or proposed environmental planning instrument applying to the land which makes provision for the acquisition of the land by a public authority, as referred to in section 27 of the *Environmental Planning and Assessment Act 1979*?

No

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9. CONTRIBUTIONS PLANS

The following Contributions Plans apply to the land:

Section 94 Contributions Plan - Open Space, Community Facilities and Carparking
Section 94 Contributions Plan - Roads and Traffic Facilities

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10. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997

Section 59(2) of the *Contaminated Land Management Act 1997* prescribes that the following matters are to be specified in a Section 149 Planning Certificate:

(a) Is the land to which this certificate relates significantly contaminated land, and if so, the date the certificate was issued?

No

Note: A declaration of significantly contaminated land includes declarations of an investigation area or remediation site issued prior to 1 July 2009.

(b) Is the land to which this certificate relates subject to a management order, and if so, the date the certificate was issued?

No

Note: A management order includes an investigation order or remediation order issued prior to 1 July 2009.

(c) Is the land to which this certificate relates the subject of an approved voluntary management proposal, and if so, the date the certificate was issued?

No

Note: An approved voluntary management proposal includes a voluntary investigation proposal or voluntary remediation proposal issued prior to 1 July 2009.

(d) Is the land to which this certificate relates subject to an ongoing maintenance order, and if so, the date the certificate was issued?

No

Note: An ongoing maintenance order includes a notice for maintenance of remediation issued prior to 1 July 2009.

(e) Is the land to which this certificate relates the subject of a site audit statement, if a copy of such a statement has been provided at any time to the local authority issuing the certificate?

No

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11. BUSHFIRE PRONE LAND

The land is not bushfire prone land as defined in the *Environmental Planning and Assessment Act 1979.*

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12. PROPERTY VEGETATION PLANS

The Council has not been notified that the property is subject to a vegetation plan under the *Native Vegetation Act 2003.*

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13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Whether an order has been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land (but only if the Council has been notified of the order):

No

---

14. DIRECTIONS UNDER PART 3A

Whether there is a direction by the Minister in force under section 75P(2)(c1) of the *Environmental Planning and Assessment Act 1979* that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect:

No

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15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

If the land is land to which State Environmental Panning Policy (Housing for Seniors or People with a Disability) 2004 applies, whether there is a current site compatibility certificate (of which the Council is aware) issued under clause 25 of that Policy in respect of proposed development on the land, and if so, the period for which the certificate is current, and any terms of a kind referred to in clause 18(2) of that Policy that have been imposed as a condition of consent to a development application granted after 11 October 2007:

No

Note: A copy of a site compatibility certificate may be obtained from the head office of the Department of Planning.

---

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Whether there is a valid site compatibility certificate (of which the Council is aware), issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007 in respect of proposed development on the land, and if so, the period for which the certificate is valid:

No

Note: A copy of a site compatibility certificate may be obtained from the head office of the Department of Planning.

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17. SITE COMPATIBILITY CERTIFICATES FOR AFFORDABLE RENTAL HOUSING

Whether there is a current site compatibility certificate (of which the Council is aware), issued for affordable rental housing in respect of proposed development on the land, and if so, the period for which the certificate is current and the conditions under which it has been issued:

No

Note: A copy of a site compatibility certificate may be obtained from the head office of the Department of Planning.

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18. BIOBANKING AGREEMENTS

Whether there is a biobanking agreement entered into under section 127D of the *Threatened Species Conservation Act 1995* relating to the land of which the Council has been notified by the Director-General of the Department of Environment, Climate Change and Water:

No

SECTION 149 (5)

The following advice on other matters affecting the subject land of which Council is aware is supplied in pursuance to sub-section 5 of Section 149.

1. The land is not affected by a Residential District Proclamation.
2. The land is affected by a Tree Preservation Order.
3. Register of consents may be examined at Council's Offices for particulars relating to a development consent which may have been issued for use or development of the land.
4. Council has adopted a Burwood Town Centre Master Plan and Vision Document for the whole of the Burwood Council area.

5. Council has adopted a Streetscape Upgrade Policy relating to the provision of public works required to be carried out in the Burwood Council area as a result of new development.

6. Council on 26 May 2009 resolved to prepare a Comprehensive Local Environmental Plan for the whole of the Burwood Local Government Area, to replace the existing Burwood Planning Scheme Ordinance 1979.

Brian Olsen
MANAGER BUILDING & DEVELOPMENT

Service First Registration Pty Ltd
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Ph: 02 9233 1314
Fax: 9233 2878
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Sydney 2000
PO Box 1539 Sydney 2000
DX 189 Sydney

Summary of Owners Report

LPI **Sydney**

Address: - 25 Mitchell Street, Croydon Park

Description: - Lot 101 D.P. 737342

As regards that part marked (1) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
11.11.1910 (1910 to 1921)	Oliver George Murphy (Tanner)	Vol 2116 Fol 136
28.11.1921 (1921 to 1932)	James Tomkins (Nurseryman) Elizabeth Lydia Tomkins (Married Woman)	Vol 2116 Fol 236
06.10.1932 (1932 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	Vol 2116 Fol 236 Now Vol 5956 Fol 74
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 5956 Fol 74 Now 101/737342

As regards that part marked (2) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
20.05.1913 (1913 to 1914)	Elizabeth Walbrook (Married Woman)	Vol 2385 Fol 142
29.01.1914 (1914 to 1914)	John Hines (Contractor)	Vol 2385 Fol 142
28.10.1914 (1914 to 1919)	Minister for Public Works	Vol 2385 Fol 142 Now Vol 2834 Fol 137
30.12.1919 (1919 to 1932)	James Alexander Watkins (Builder)	Vol 2834 Fol 137 Now Vol 3010 Fol 148
21.09.1932 (1932 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	Vol 3010 Fol 148 Now Vol 5956 Fol 74
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 5956 Fol 74 Now 101/737342

Easements: -

- 30.12.1919. Easement for Sewer 8 feet wide (A 525925)

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As regards that part marked (3) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
10.06.1913 (1913 to 1916)	John Hines (Builder)	Vol 2372 Fol 100
01.11.1916 (1916 to 1919)	Ernest William Warren (Solicitor)	Vol 2372 Fol 100 Now Vol 2716 Fol 218
01.09.1919 (1919 to 1928)	John Hines (Contractor)	Vol 2716 Fol 218 Now Vol 4018 Fol 179
25.01.1928 (1928 to 1945)	Adhesives Proprietary Limited	Vol 4018 Fol 179 Now Vol 5107 Fol 22
06.06.1945 (1945 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	Vol 5107 Fol 22 Now Vol 5956 Fol 74
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 5956 Fol 74 Now 101/737342

As regards the parts marked (4) and (5) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
10.06.1913 (1913 to 1928)	John Hines (Builder)	Vol 2372 Fol 100 Now Vol 4018 Fol 179
25.01.1928 (1928 to 1945)	Adhesives Proprietary Limited	Vol 4018 Fol 179 Now Vol 5107 Fol 22
06.06.1945 (1945 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	Vol 5107 Fol 22 Now Vol 5956 Fol 74
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 5956 Fol 74 Now 101/737342

As regards the part marked (6) on the attached cadastre, being a strip of land 1 ¾ inches wide

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
10.06.1913 (1913 to 1928)	John Hines (Builder)	Vol 2372 Fol 100 Now Vol 4018 Fol 179
25.01.1928 (1928 to 1945)	Adhesives Proprietary Limited (Now Enfield Products Pty Limited)	Vol 4018 Fol 179 Now Vol 5107 Fol 22
06.06.1945 (1945 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	Vol 5107 Fol 22 Now Vol 5956 Fol 74
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 5956 Fol 74 Now 101/737342

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As regards the part marked (7) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
04.07.1900 (1900 to ? 1900)	Pietro Marcantelli (Vine Grower)	Vol 1320 Fol 250
1900	Provided in D.P. 3670 as a lane twenty feet wide	
01.12.1986 (1986 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 1320 Fol 250 Now 101/737342

As regards that part numbered (8) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
02.04.1912 (1912 to 1929)	Elizabeth Lydia Tomkins (Married Woman)	Vol 2241 Fol 38 Now Vol 3906 Fol 122
17.04.1929 (1929 to 1984)	Ernest Joseph Norman Tomkins (Nursery Man)	Vol 3906 Fol 122 Now Vol 5273 Fol 127
31.10.1984 (1984 to 1985)	Norman William Tomkins Ian Hamilton Tomkins James Ernest Tomkins	Vol 5273 Fol 127
09.05.1985 (1985 to 1986)	Nursery Enterprises Pty Limited	Vol 5273 Fol 127
16.10.1986 (1986 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 5273 Fol 127 Now 101/737342

Easements: -

- 29.10.1915. Easement to the Minister for Public Works (A 213256)

As regards that part numbered (9) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
02.04.1912 (1912 to 1929)	Elizabeth Lydia Tomkins (Married Woman)	Vol 2241 Fol 38 Now Vol 3906 Fol 122
17.04.1929 (1929 to 1946)	Ernest Joseph Norman Tomkins (Nursery Man)	Vol 3906 Fol 122 Now Vol 5956 Fol 74
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 5956 Fol 74 Now 101/737342

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As regards that part numbered (10) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
26.07.1920 (1920 to 1920)	William Henry Richard Lalor (Builder)	Vol 3080 Fol 150
20.08.1920 (1920 to 1920)	Alfred Andrew Payten (Gentleman)	Vol 3080 Fol 8 Now Vol 3131 Fol 8
25.11.1920 (1920 to 1927)	Isabella Icke (Married Woman)	Vol 3131 Fol 8
08.11.1927 (1927 to 1937)	James Leckie (Joinery Merchant)	Vol 3131 Fol 8 Now Vol 4094 Fol 233
28.09.1937 (1937 to 1946)	Ernest Joseph Norman Tomkins (Nurseryman)	Vol 4094 Fol 233 Now Vol 4884 Fol 177
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 4884 Fol 177 Now 101/737342

Easements: -

- 21.08.1915. Easement to the Minister for Public Works (A 200514)

As regards that part numbered (11) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
26.07.1920 (1920 to 1920)	William Henry Richard Lalor (Builder)	Vol 3080 Fol 150
20.08.1920 (1920 to 1920)	Alfred Andrew Payten (Gentleman)	Vol 3080 Fol 8 Now Vol 3131 Fol 8
25.11.1920 (1920 to 1927)	Isabella Icke (Married Woman)	Vol 3131 Fol 8
08.11.1927 (1927 to 1959)	James Leckie (Joinery Merchant)	Vol 3131 Fol 8 Now Vol 4094 Fol 233
19.03.1959 (1959 to 1961)	William Alan Leckie (Builder) Robert Bruce Leckie (Builder) (Section 94 Application not investigated)	Vol 4094 Fol 233
22.09.1961 (1961 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 4094 Fol 233 Now 101/737342

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As regards that part numbered (12) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
26.07.1920 (1920 to 1920)	William Henry Richard Lalor (Builder)	Vol 3080 Fol 150
20.08.1920 (1920 to 1920)	Alfred Andrew Payten (Gentleman)	Vol 3080 Fol 8 Now Vol 3131 Fol 8
25.11.1920 (1920 to 1927)	Isabella Icke (Married Woman)	Vol 3131 Fol 8
08.11.1927 (1927 to 1959)	James Leckie (Joinery Merchant)	Vol 3131 Fol 8 Now Vol 4094 Fol 233
19.03.1959 (1959 to 1959)	William Alan Leckie (Builder) Robert Bruce Leckie (Builder) (Section 94 Application not investigated)	Vol 4094 Fol 233
26.10.1959 (1959 to 1963)	Gover-Carr Pty Limited	Vol 4094 Fol 233 Now Vol 9521 Fol 208
26.07.1963 (1963 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 9521 Fol 208 Now 101/737342

As regards that part numbered (13) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
02.04.1912 (1912 to 1925)	Elizabeth Lydia Tomkins (Married Woman)	Vol 2241 Fol 38 Now Vol 3878 Fol 136
12.10.1925 (1925 to 1927)	William Richard Henry Lalor (Builder)	Vol 3878 Fol 136
08.09.1927 (1927 to 1953)	James Leckie (Contractor)	Vol 3878 Fol 136
01.05.1953 (1953 to 1959)	James Leckie & Sons Pty Limited	Vol 3878 Fol 136
26.10.1959 (1959 to 1963)	Gover-Carr Pty Limited	Vol 3878 Fol 136 Now Vol 9521 Fol 208
26.07.1963 (1963 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 9521 Fol 208 Now 101/737342

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As regards that part numbered (14) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
02.04.1912 (1912 to 1925)	Elizabeth Lydia Tomkins (Married Woman)	Vol 2241 Fol 38 Now Vol 3878 Fol 136
12.10.1925 (1925 to 1927)	William Richard Henry Lalor (Builder)	Vol 3878 Fol 136
08.09.1927 (1927 to 1953)	James Leckie (Contractor)	Vol 3878 Fol 136
01.05.1953 (1953 to 1961)	James Leckie & Sons Pty Limited	Vol 3878 Fol 136
22.09.1961 (1961 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 3878 Fol 136 Now 101/737342

As regards that part numbered (15) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
27.11.1917 (1917 to 1935)	Minister for Public Works	Vol 986 Fol 62 Now Vol 2910 Fol 164
14.02.1935 (1935 to 1935)	Metropolitan Water Sewerage and Drainage Board	Vol 2910 Fol 164
07.08.1935 (1935 to 1946)	Ernest Joseph Norman Tomkins (Nursery Man)	Vol 2910 Fol 164 Now Vol 4884 Fol 177
03.06.1946 (1946 to 1988)	Tomkins Enfield Nurseries Pty Limited	Vol 4884 Fol 177 Now 101/737342

Easements: -

- 07.08.1935. Easement for purposes 15 feet wide (C 365011) reserved to the Metropolitan Water Sewerage and Drainage Board

Search continued as regards the whole of Lot 101 D.P. 737342

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
16.11.1988 (1988 to 2003)	Jenbend Pty Limited	101/737342
03.11.2003 (2003 to date)	# Syesun Pty Limited	101/737342

# Denotes current registered proprietor

Easements continued: - NIL

Leases: - NIL

Yours Sincerely
Mark Groll
6 August 2012
(Ph: 0412 199 304)

Email: grolly1@bigpond.net.au

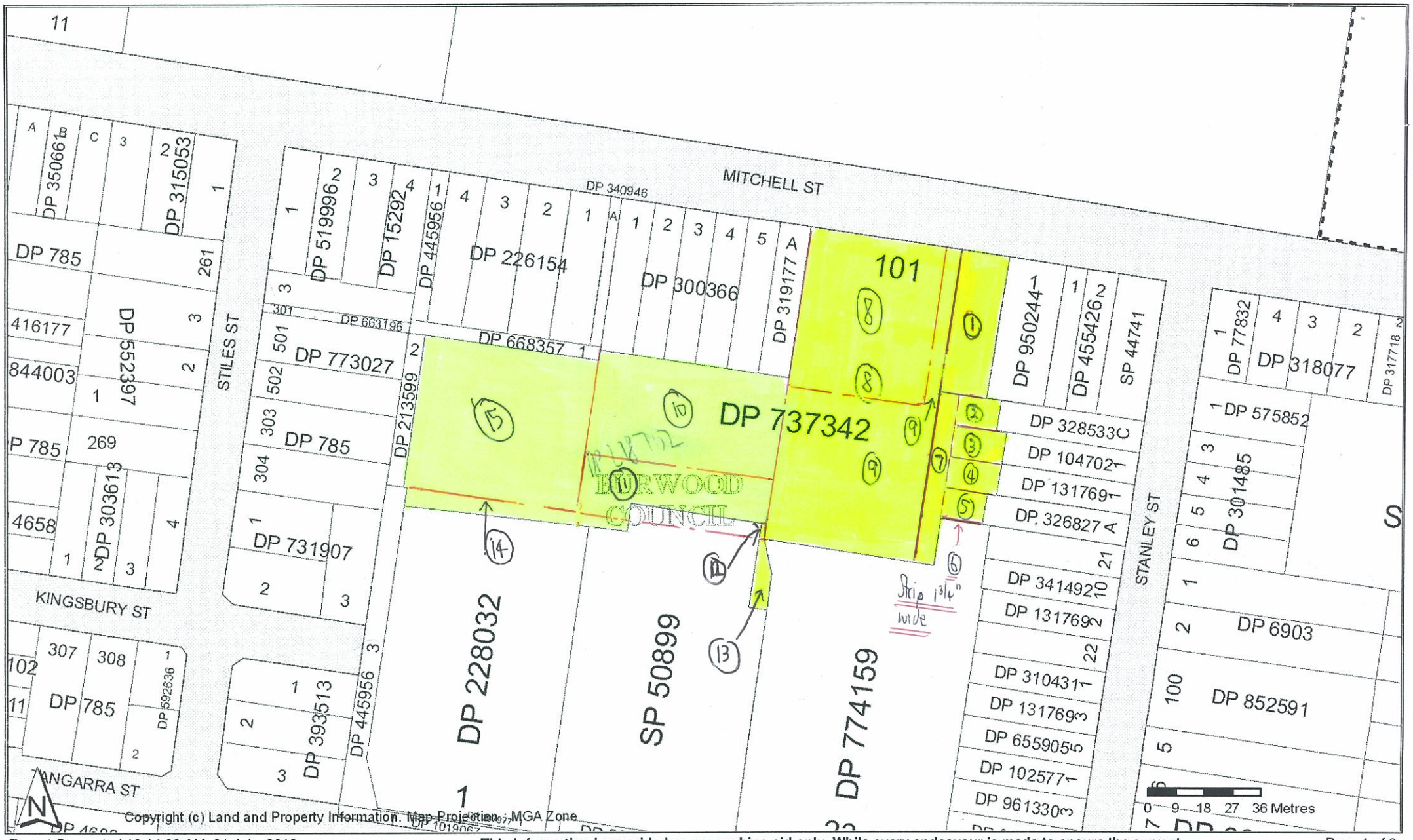
NSW Land & Property Information
A division of the Department of Finance & Services

Cadastral Records Enquiry Report

Ref : 29

Requested Parcel : Lot 101 DP 737342 **Identified Parcel :** Lot 101 DP 737342

Locality : CROYDON PARK **LGA :** BURWOOD **Parish :** CONCORD **County :** CUMBERLAND



PLAN FORM 2 — Plan Drawing only to appear in this space — *OFFICE USE ONLY

Signatures and seals only.

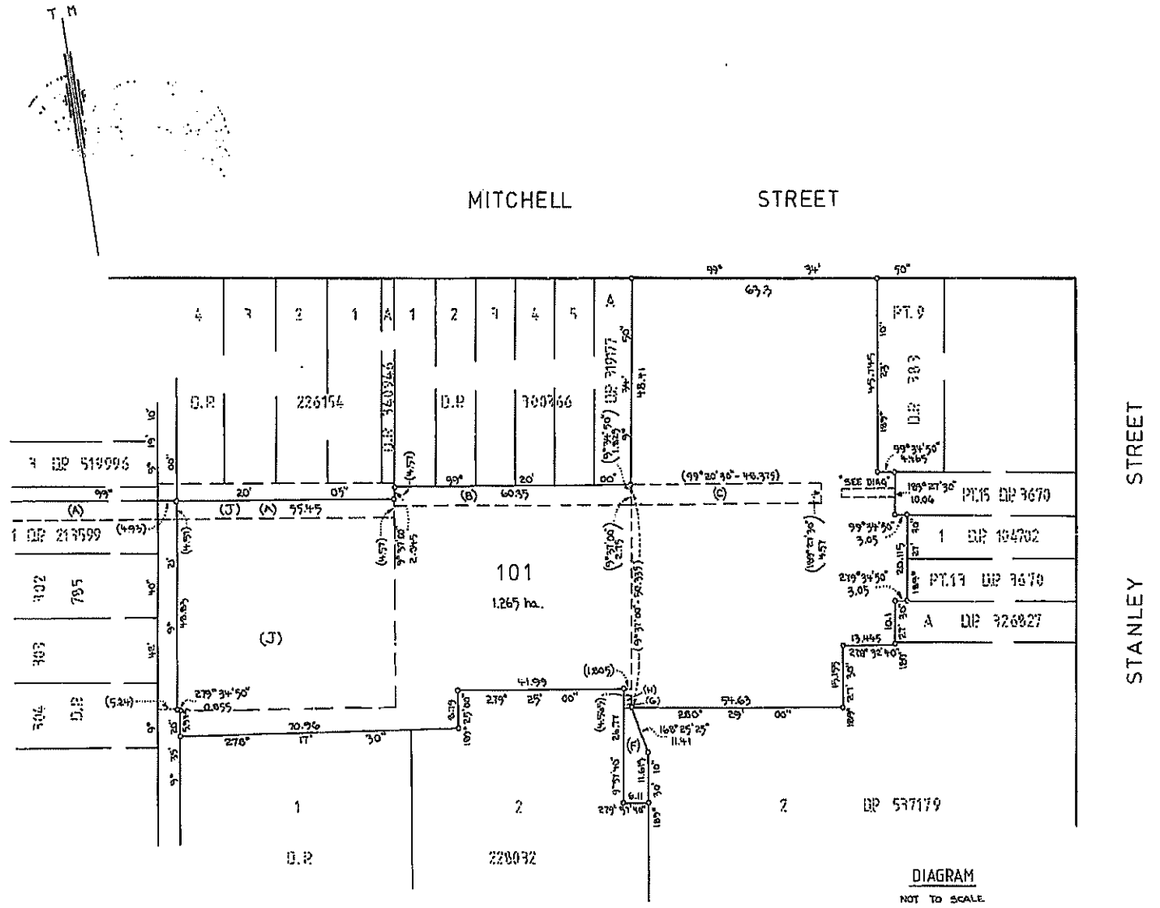
JOHN ENFIELD NURSERIES PTY. LIMITED Common Seal

THE COMMON SEAL of BENEFICIAL FINANCE CORPORATION LIMITED was hereunto affixed by authority of its Board of Directors in the presence of:

Director

Secretary

Db 123145



(A) SITE OF EASEMENT 4.57 WIDE CREATED BY TRANSFER N° C 365011
(B) " " " " " " " " " A 200514
(C) RIGHT OF ENTRY " " " " " A 213256
(D) " " " 2.44 " " " " A 525925
(E) COVENANT " " " " A 525925
(F) COVENANT " " " " J 509804
(G) COVENANT " " " " H351022
(H) COVENANT " " " " H363356
(J) LAND EX. MINERALS - A405007

D.P. 737342 *

Registered: 1-12-1986

C.A.: 155/27/D - 130/85 & S - 10/85 OF 14-11-1985

Title System: TORRENS

Purpose: CONSOLIDATION

Ref. Map: U0045 - 64#

Last Plan: DP 343421 DP 328533 DP 366805 . DP 366806 DP 218702 . DP 213599

PLAN OF CONSOLIDATION OF LOT A & PART LOT B IN D.P. 343421, PART LOT 9 IN D.P. 383, LOT A IN D.P. 328533, LOT A IN D.P. 366805, LOT A IN D.P. 366806, LOTS 1 & 4 IN D.P. 218702, LOT 3 IN D.P. 213599 AND THAT PART OF LANE 6.095 WIDE SHOWN ON D.P. 3670 CONTAINED IN C.T. Vol. 1320 Fol. 250

Reduction Ratio 1: 800
Lengths are in metres.

Mun./Shire/City: BURWOOD

Locality: ENFIELD

Parish: CONCORD

County: CUMBERLAND

~~This survey~~ ~~I of my opinion~~ ~~there~~ (Delete if inapplicable).

I, GEOFFREY CHARLES FORSHAW of 25 ALDYN STREET, BEXLEY

A surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in this plan ...was ~~was not~~ completed

~~a survey and has been made (1) by me (2) under my immediate supervision in accordance with the Survey Practice Regulations, 1933, and was completed on~~ 24TH JANUARY 1985

Signature

Surveyor registered under Surveyors Act, 1929, as amended. Datum Line of (1) Azimuth. *Strike out either (1) or (2). Insert date of survey.

Panel for use only for statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements or restrictions as to user.

Council Clerk'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 requirement of section 349 of the Metropolitan Water, Sewerage and Drainage Act, 1924, as amended, Hunter District Water, Sewerage, and Drainage Act, 1938, as amended~~

have been complied with by the applicant in relation to the proposed CONSOLIDATED LOT (Insert "new road", "subdivision" or "consolidated lot") set out hereon

Subdivision No. 155/27/D - 130/85 & S - 10/85

Date 14TH NOVEMBER, 1985

(Signature) Council Clerk

*This part of 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 area of operations of the Metropolitan Water Sewerage and Drainage Board and the Hunter District Water Board. (Delete if inapplicable.

Table of mm: 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390

MPD

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

SURVEYOR'S REFERENCE 5400

This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day.

2nd December, 1986

Form 2—This form must NOT be used where any Dedication, Drainage Reserve or Public Garden and Recreation Space is provided.—See Form 3. WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION.

(3)

MITCHELL STREET

T.M. / M.M.

Note: Bearings are to T.M.

D. P. 213599

1 2 3 4 5 6

A 609 351

99' 20' 00' 198' 0'

D52612

1

279' 25' 00' 143' 8¼'

99' 34' 50' 178' 4⅛'

1R. 1½P.

2

(B) 122' 3⅞" 122' 3⅝" #

(A)

1½P.

232' 9⅝" 98' 17' 30' 248' 2⅛'

D965065

4

4¾P.

20'0⅞" 279'57'40"

3

1A. 1R. 29¾P.

M.P.S. (R.P.) 34571

KINGSBURY ST.

44778 Q

150' 7½" 35' 9"

390' 0⅞" 279' 37' 20'

A H 351022

(A) – COVENANT H351022
(B) – COVENANT H363356

M.P.D.

WARNING. Plan Drawing only to appear in this space.

DP218702

Registered: A. 20-1-1941

C.A. 20/63 of 26·6·68

Title System: Torrens

Purpose: Subdivision

Ref. Map: Enfield Sh 3#

Last Plans: H351022 & H363356

OFFICE USE ONLY.

PLAN OF
subdivision of Lots B & C in H351022 & Lots D & E in H363356

Scale: 30 feet to an inch

Mun./Shire Cities: Burwood

Localities: Enfield

Parishs: Concord

County: Cumberland

I, EDWARD ROGER FIRTH

of J.T.S. RYAN & Co. 802 Pacific Highway, GORDON

a surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in this plan has been completed From information in H351022 H363356 is accurate and has been made * (1) by me (2)-under my immediate supervision in accordance with the Survey Practice Regulations, 1933, and was completed on † 10.4.1941

Signature: [signature]

Surveyor registered under Surveyors Act, 1929, as amended.
Datum line of Azimuth.

Statements of Proposed Easements.

Note:
It is intended to consolidate Lots 2 & 3 and Lots 1 & 4

Amended in R.G.O. at Surveyor's request.

Approved by the Council and I hereby certify that the requirements of the Local Government Act, 1919 (other than the requirements for registration of plans), have been complied with by the applicant in relation to the proposed subdivision set out hereon.

Subdivision No. 20/63 Date 26-6-63

Council Clerk: [signature]

* Strike out either (1) or (2). † Insert date of survey.

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 218702

FEET	INCHES	METRES
2	11 1/8	0.892
5	11 1/8	1.807
14	11 5/8	4.562
15	4 1/2	4.686
15	5 3/4	4.718
19	6	5.944
20	0 5/8	6.112
28	6 3/8	8.696
28	10	8.788
37	5 1/4	11.411
38	1 1/4	11.614
47	2 5/8	14.386
61	3 3/4	18.688
87	9 7/8	26.768
97	4 3/4	29.686
122	3 3/8	37.271
143	0 1/4	43.796
150	7 1/2	45.911
178	4 1/8	54.359
196	-	60.350
232	9 5/8	70.958
248	2 1/8	75.644
390	0 7/8	118.894

AC	RD	P	SQ M
-	-	1 1/2	37.9
-	-	4 3/4	120.1
-	1	11 1/2	1303
1	1	29 3/4	5811

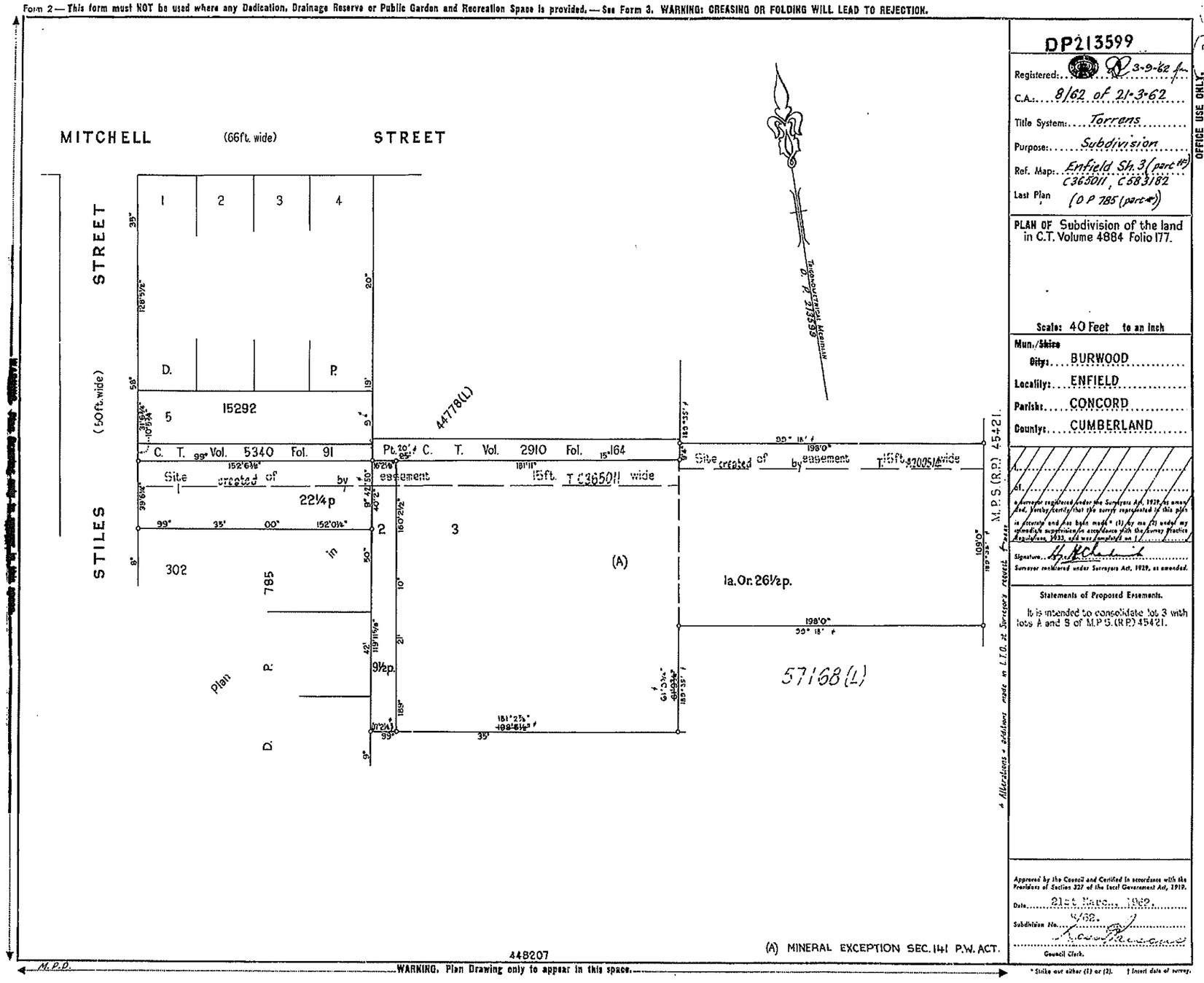
AMENDMENTS OR ADDITIONS NOTED ON PLAN IN REGISTRAR GENERAL'S OFFICE

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 3rd day of May, 1977

[signature]

1

Form 2 — This form must NOT be used where any Dedication, Drainage Reserve or Public Garden and Recreation Space is provided. — See Form 3. WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION.



DP213599

OFFICE USE ONLY

Registered: 3-9-62 fm

C.A.: 8/62 of 21-3-62

Title System: Torrens

Purpose: Subdivision

Ref. Map: Enfield Sh. 3 (part #) C365011, C583182

Last Plan (D P 785 (part #))

PLAN OF Subdivision of the land in C.T. Volume 4884 Folio 177.

Scale: 40 Feet to an inch

Mun./~~Shire~~

~~City~~: BURWOOD

Locality: ENFIELD

Parish: CONCORD

County: CUMBERLAND

A.

SI.

a Surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in this plan is accurate and has been made * (1) by me (2) under my immediate supervision in accordance with the Survey Practice Regulations, 1933, and was completed on †

Signature:

Surveyor registered under Surveyors Act, 1929, as amended.

Statements of Proposed Easements.

It is intended to consolidate lot 3 with lots A and B of M.P.S.(R.P.) 45421.

* Alterations + additions made on L.T.O. at Surveyor's request.

Approved by the Council and Certified in accordance with the Provisions of Section 327 of the Local Government Act, 1919.

Date: 21st March, 1962.

Subdivision No.: 8/62.

Council Clerk.

* Strike out either (1) or (2). † Insert date of survey.

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 213599

FEET	INCHES	METRES
9	-	2.743
9	4	2.845
10	5 3/4	3.194
15	-	4.572
16	2 1/8	4.931
17	2 1/4	5.239
31	6 3/4	9.620
39	6 1/4	12.046
40	2	12.243
50	-	15.240
61	5 3/4	18.688
65	-	20.117
66	6	20.269
109	-	33.223
119	11 5/8	36.566
128	5 1/2	39.154
152	0 1/4	46.336
152	6 1/8	46.485
152	6 3/8	46.492
160	2 1/2	48.832
181	2 7/8	55.242
181	11	55.448
198	-	60.350

AC	RD	P	SQ M
-	-	9 1/2	240.3
-	-	22 1/4	562.8
1	-	26 1/2	4717

AMENDMENTS OR ADDITIONS NOTED ON PLAN IN REGISTRAR GENERAL'S OFFICE.

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 12th day of April, 1977

1

ENFIELD

DP3670 "A"

PLAN OF THE TRAM TERMINUS ESTATE. ENFIELD.

PARISH OF CONCORD, COUNTY OF CUMBERLAND.

P Marcauletti
Doc. 513 Fol 733.
Castlereagh Bk. F. 1.1.1

3670

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 3670.

FEET	INCHES	₰	METRES
-	0	5/8	0.015
4	2	3/8	1.28
8	6		2.59
12	-		3.66
20	-		6.095
21	-		6.4
30	4	1/2	9.26
33	-		10.06
42	-		12.8
49	6		15.09
146	0	1/2	44.515
146	4	1/4	44.61
150	1		45.745
194	1	1/4	59.16
214	1	1/4	65.26
297	10	1/4	90.79
298	3	7/8	90.95

AC	RD	P	SQ M
-	-	.6	15.2
-	-	21 1/2	543.8
-	-	23 1/2	594.4
1	-	-	4047

MITCHELL (Aligned) STREET

99" 34' 50" / 214' 1¼"

9" 27' 30" / 150.1

99" 34' 50" / 194' 1¼"

20' WIDE LANE

33' 23½ per. 15

14

13

12

11

10

9

8

7

6

5

4

3

33' 23½ per. 2

30.4½ 21½ per. 99" 34' 50" 194' 1¼" 1

20' LANE 20 FEET WIDE

ONE FOOT 214' 1¼" RESERVED 5/8p.

23½ perches each

STANLEY STREET (Aligned)

9" 27' 30" 33.0

5" 30"

16

1A. 0R. 0P.

Note.- This block edged carmine is not included in this Deposited Plan.

ENFIELD TRAMWAY TERMINUS

To Ashfield

Note,- All bearings are given from True North.

This is the plan marked "A" referred to in my declaration dated 5th March 1900.

Ernest A Conney
Lic. Surveyor
5. 3. 1900

Scale 50 feet to an Inch.

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 28th day of August, 1979

M

NEW SOUTH WALES

(For Grant and title reference prior to first edition see Deposited Plan.)

TIFICATE OF TITLE

PERTY ACT, 1900, as amended.

Vol. 9521 Fol. 205

1st Edition issued 11-9-1963.

Fol. 205 Vol. 9521 (Page 1)

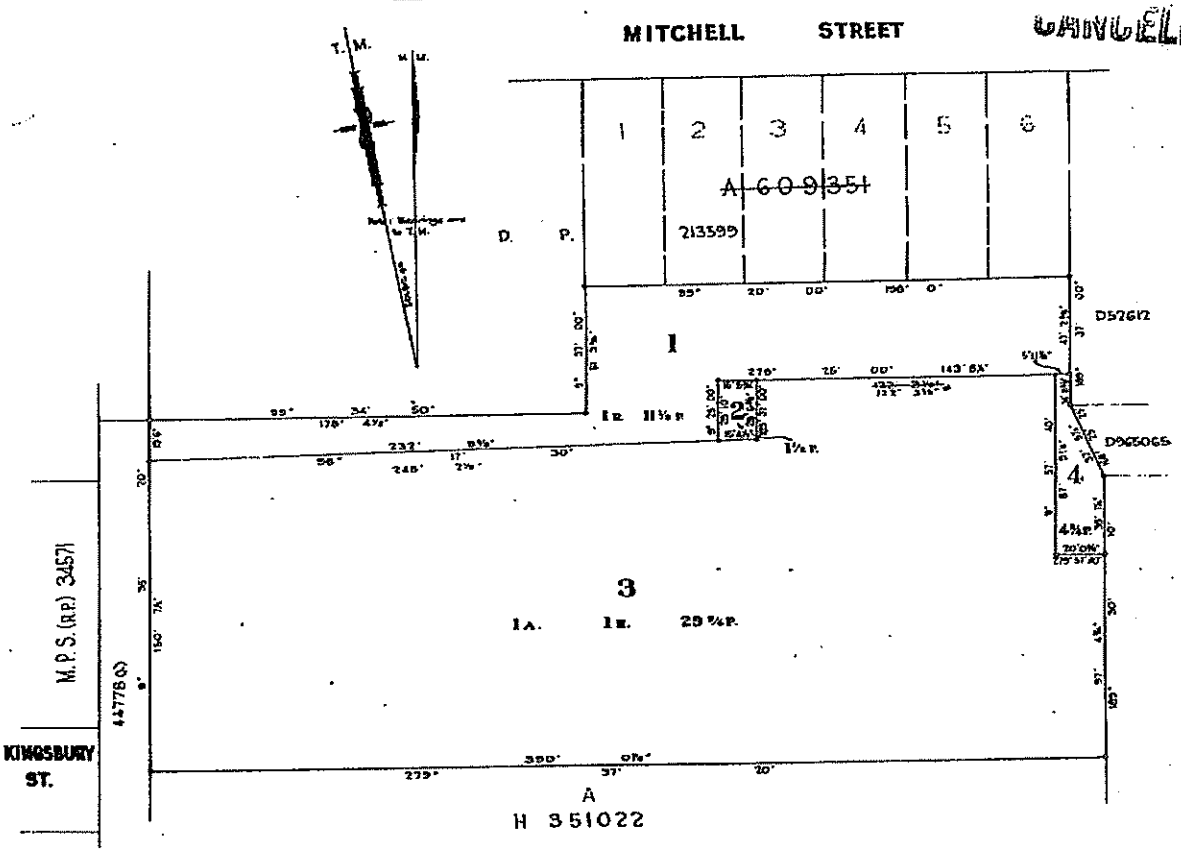
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness

Registrar-General.

CANCELLED

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO.

Estate in Fee Simple in Lot 1 in Deposited Plan 218702 at Enfield in the Municipality of Burwood Parish of Concord and County of Cumberland.

FIRST SCHEDULE (Continued overleaf)

TOMKINS ENFIELD NURSERIES PTY. LIMITED.

Registrar General.

SECOND SCHEDULE (Continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant(s) referred to in the said Deposited Plan.

Registrar General.

64

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED.

Vol. 9521 Fol 205

BY 1502 V. C. H. RIGHT, GOVERNMENT PRINTER

V544435
V694286
V707716

FIRST SCHEDULE (continued)

DP 737342 Registered 1/12/1986.

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
Title to be cancelled as to whole/~~part~~ upon creation of computer folios for lots 1 in the abovementioned plan.					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		
~~V544435 Mortgage to Commonwealth Bank of Australia. Registered 30-1-1985.~~						Discharged	V707715	
~~V694286 Caveat by Beneficial Finance Corporation Limited. Registered 16-5-1985.~~						Withdrawn	V707714	
V707716	Mortgage		to Beneficial Finance Corporation Limited. Registered 28-5-1985.					

(Page 2 of 2 pages)

FORM No. 184A NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

M

NEW SOUTH WALES

(For Grant and title reference prior to first edition see Deposited Plan.)

CERTIFICATE OF TITLE

PERTY ACT, 1900, as amended.

Vol. 9521 Fol. 208

1st Edition issued 11-9-1963.

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

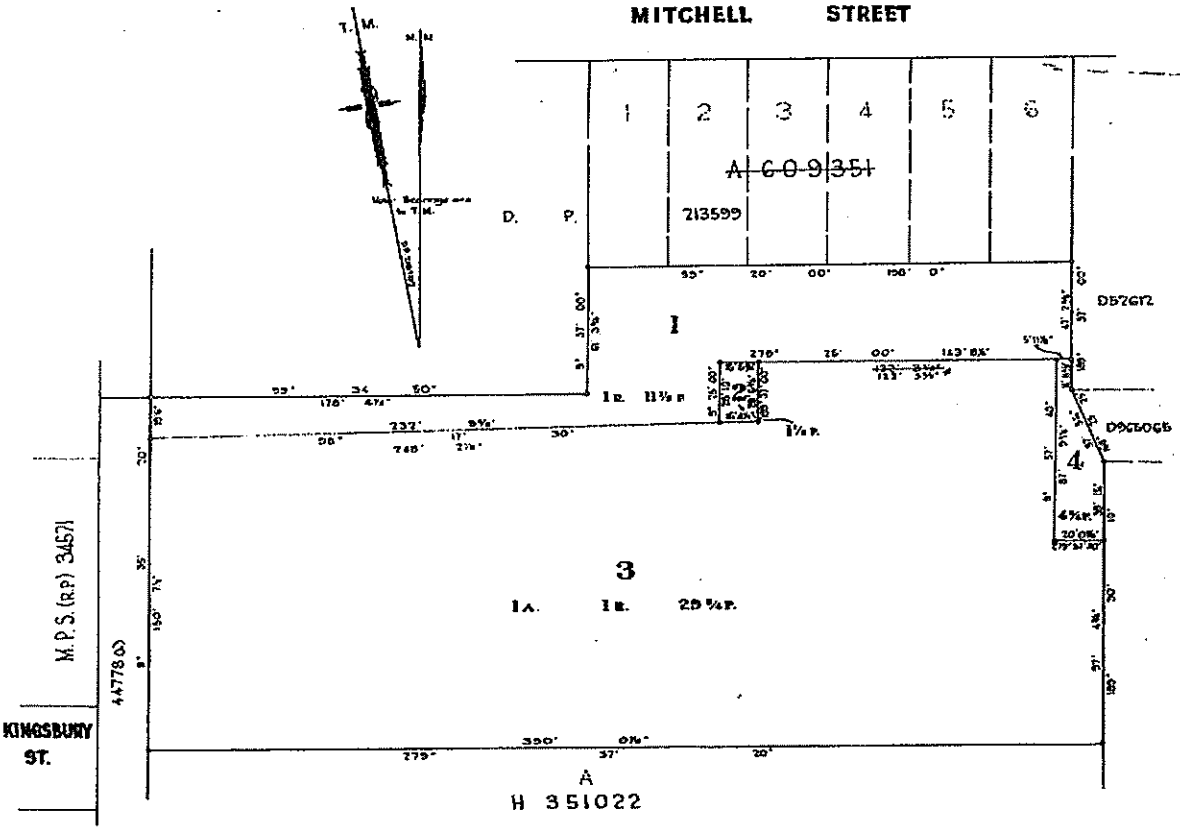
Witness B Bailey

Registrar-General.

CANCELLED

(Page 1) Vol. 9521 Fol. 208

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO.

Estate in Fee Simple in Lot 4 in Deposited Plan 218702 at Enfield in the Municipality of Burwood Parish of Concord and County of Cumberland.

FIRST SCHEDULE (Continued overleaf)

~~COVER-CARR PTY. LIMITED.~~

Registrar General.

SECOND SCHEDULE (Continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant(s) referred to in the said Deposited Plan.
2. Covenants created by Transfers Nos. H351022 and H363356 affecting parts.
3. ~~Mortgage No. J196376 to Australia and New Zealand Bank Limited. Entered 21-11-1962.~~ Discharged J 509 E 04

Registrar General.

Vol. 9521 Fol. 208

BY 1939 V. C. N. BLIGHT, GOVERNMENT PRINTER

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
Tonkens' Enfield Nurseries Pty Limited C/T 737342 Registered 1/12/1986. This folio is cancelled as to whole upon creation of ~~subsequent~~ folios for lots 1 in the above-mentioned plan.	Transfer	I509804 ~~26-7-1963~~	26 7 1963 ~~8-9-1964~~	8 · 9 · 1964	

V544435 M
V694286 Pt
V707714 W/D 15 dy 16m

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		
Covenant	I509804		Created by Transfer No. I509804	8 · 9 · 1964				
~~V544435 Mortgage to Commonwealth Bank of Australia. Registered 30-1-1985.~~						Discharged	V707715	
~~V694286 Caveat by Beneficial Finance Corporation Limited. Registered 16-5-1985.~~						Withdrawn	V707714	
V707716 Mortgage to Beneficial Finance Corporation Limited. Registered 28-5-1985.								

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

[redacted]

M

NEW SOUTH WALES

(For Grant and title reference prior to first edition see Deposited Plan.)

CERTIFICATE OF TITLE

[redacted] PERTY ACT, 1900, as amended.

Vol. 9270 Fol. 159

1st Edition issued 17-9-1962.

Vol. 9270 Fol. 159

(Page 1) Vol.

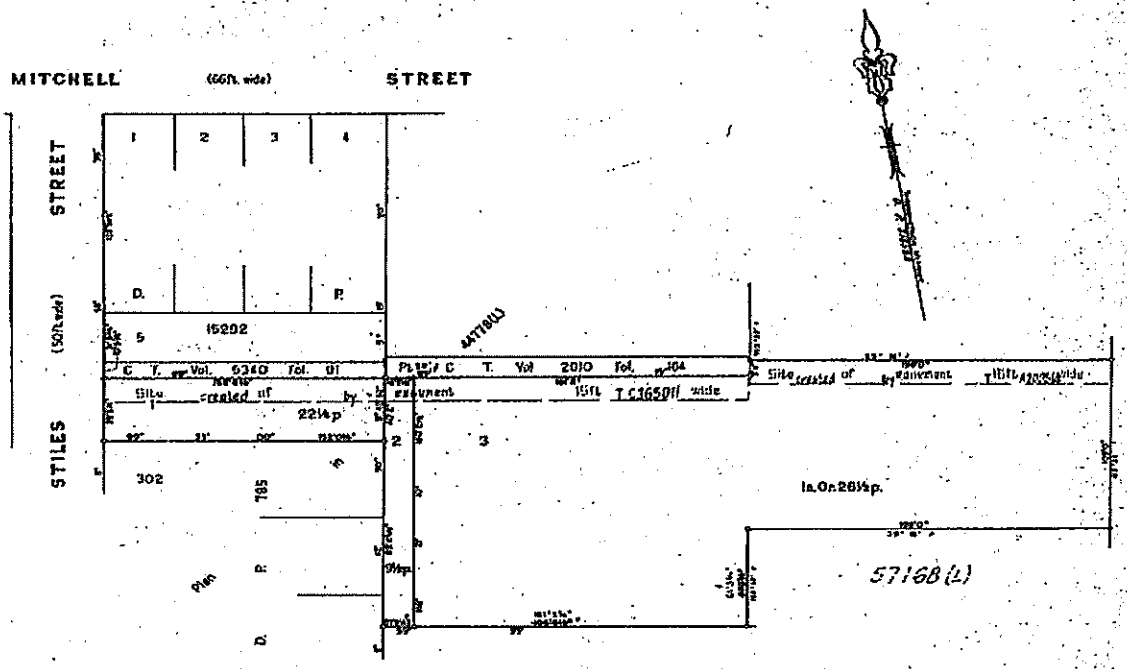
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness R. Brown

CANCELLED

Registrar-General.

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO.

Estate in Fee Simple in Lot 3 in Deposited Plan 213599 at Enfield in the Municipality of Burwood Parish of Concord and County of Cumberland excepting thereout the mines and deposits specified in Section 141 Public Works Act 1912 as regards part.

FIRST SCHEDULE (Continued overleaf)

TOMKINS' ENFIELD NURSERIES PTY. LIMITED.

Registrar General.

SECOND SCHEDULE (Continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant(s) referred to in the said Deposited Plan.
2. Easement created by Transfer No. A200514 affecting the part of the land above described shown in the plan hereon as "Site of Easement 15 feet Wide".
3. Easement created by Transfer No. C365011 affecting the part of the land above described shown in the plan hereon as "Site of Easement 15 feet Wide".
4. ~~Mortgage No. H813265 to The Commercial Banking Company of Sydney Limited. Entered 29-6-1961.~~ V544434

Registrar General.

Vol. 9270 Fol. 159

(Page 2 of 2 pages)

70538 1 62 BY LEOF W. C. N. BLIGHT, GOVERNMENT PRINTER

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
DP 737342 Registered 1/12/1886 This folio is cancelled as to whole/~~part~~ upon creation of computer folios for lot 1 of 101 in the above-mentioned plan.					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		
~~Mortgage~~	~~K999092~~	~~6-11-1969~~	~~to Network Finance Limited~~	~~20-3-1968~~		Discharged	S907781	
~~Caveat~~	~~K327345~~	~~3-7-1973~~		~~12-9-1973~~		Withdrawn	S699553	
~~Lease~~	~~K567365~~	~~26-11-1973~~		~~12-11-1973~~		Withdrawn	S907779	
~~Mortgage~~	~~K999092~~		~~Noted by Caveat Number of Mortgage~~	~~17-1-1980~~				
~~Mortgage~~	~~K979092~~		~~affidavit by K729239, Mortgage K694312,~~					
			~~Caveat Variation of Mortgage~~	~~17-1-1980~~		Cancelled	S907781	
~~Mortgage~~	~~K979092~~		~~affected by A576779 Variation of Mortgage~~	~~19-9-1980~~		Cancelled	S907781	
~~V544435 Mortgage to Commonwealth Bank of Australia. Registered 30-1-1985.~~						Discharged	V707715	
~~V594286 Caveat by Beneficial Finance Corporation Limited. Registered 16-5-1985.~~						Withdrawn	V707714	
V707716 Mortgage to Beneficial Finance Corporation Limited. Registered 28-5-1985.								

FORM No. 184A NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

Historical Title

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
30/7/2012 11:34AM

FOLIO: 101/737342

First Title(s): OLD SYSTEM
Prior Title(s): VOL 1320 FOL 250 VOL 5273 FOL 127
VOL 5956 FOL 74 VOL 9270 FOL 159
VOL 9521 FOL 205 VOL 9521 FOL 208

Recorded	Number	Type of Instrument	C.T. Issue
3/12/1986	DP737342	DEPOSITED PLAN	FOLIO CREATED EDITION 1
18/8/1987	X44195	DISCHARGE OF MORTGAGE	
18/8/1987	X44196	DISCHARGE OF MORTGAGE	EDITION 2
16/11/1988	X985987	TRANSFER	
16/11/1988	X985989	MORTGAGE	
16/11/1988	X985990	TRANSFER OF MORTGAGE	EDITION 3
19/10/1989	Y635871	DISCHARGE OF MORTGAGE	
19/10/1989	Y635872	MORTGAGE	EDITION 4
27/11/1990	Z351846	CAVEAT	
28/2/1991	Z487593	MORTGAGE	EDITION 5
23/9/1992	E780018	CAVEAT	
7/12/1993	I851962	WITHDRAWAL OF CAVEAT	
5/4/2000	6693844	DISCHARGE OF MORTGAGE	
5/4/2000	6693845	DISCHARGE OF MORTGAGE	
5/4/2000	6693846	MORTGAGE	EDITION 6
7/3/2003	9433914	CAVEAT	
12/8/2003	9672100	APPLICATION FOR PREPARATION OF LAPSING NOTICE	
3/11/2003	AA110944	WITHDRAWAL OF CAVEAT	
3/11/2003	AA110946	DISCHARGE OF MORTGAGE	
3/11/2003	AA110951	TRANSFER	
3/11/2003	AA110954	MORTGAGE	EDITION 7
4/8/2006	AC54361	REJECTED - LEASE	
4/8/2006	AC54362	REJECTED - LEASE	

*** END OF SEARCH ***

MG PRINTED ON 30/7/2012

Req:R277620 /Doc:DL X985987 /Rev:16-Sep-2010 /Sts:OK.SC /Prt:06-Aug-2012 09:56 /Pgs:ALL /Seq:1 of 1
Ref:mg /Src:M

RP [illegible] STAMP DUTY [illegible]

X985987

*1.00 STAMP DUTY 10/11/88

TRANSFER

REAL PROPERTY ACT, 1900

T

CA 1 of 4 +

$ 62

11/4

DESCRIPTION OF LAND Note (a)

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
FI 101/737342	WHOLE	ENFIELD

TRANSFEROR Note (b)

TOMKINS ENFIELD NURSERIES PTY LIMITED

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 3,700,000.00 being the same consideration in transfer of even date and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

JENBEND PTY LIMITED of 124-144 Newbridge Road, Moorebank 2170

OFFICE USE ONLY

S

TENANCY Note (e)

~~as joint tenants/tenants in common~~

PRIOR ENCUMBRANCES Note (f)

subject to the following PRIOR ENCUMBRANCES 1. — 2. ..... 3. .....

DATE 28 October 1988

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION Note (g)

~~Signed in my presence by the transferor who is personally known to me~~

The COMMON SEAL of TOMKINS ENFIELD NURSERIES PTY LIMITED was hereunto affixed in accordance with its Articles of Association in the presence of:

TOMKINS ENFIELD NURSERIES PTY LIMITED Common Seal

Director

Secretary

~~Address and occupation of Witness~~

Signature of Transferor

~~Signed in my presence by the transferee who is personally known to me~~

Note (g)

~~Signature of Witness~~

~~Name of Witness (BLOCK LETTERS)~~

~~Address and occupation of Witness~~

Signature of Transferee

S

Solicitor

TO BE COMPLETED BY LODGING PARTY Notes (h) and (i)

LODGED BY M.S.J

325

TML

Delivery Box Number 41J

OFFICE USE ONLY

4168

S

Checked	Passed
12/11	
Signed	Extra Fee

REGISTERED 10 NOV 1988

LOCATION OF DOCUMENTS

CT	OTHER	
		Herewith.
		In L.T.O. with
		Produced by

Secondary Directions		
Delivery Directions		

SFR
Service First Registration

Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 101/737342

SEARCH DATE	TIME	EDITION NO	DATE
30/7/2012	11:33 AM	7	3/11/2003

LAND

LOT 101 IN DEPOSITED PLAN 737342
AT ENFIELD
LOCAL GOVERNMENT AREA BURWOOD
PARISH OF CONCORD COUNTY OF CUMBERLAND
TITLE DIAGRAM DP737342

FIRST SCHEDULE

SYESUN PTY LIMITED (T AA110951)

SECOND SCHEDULE (8 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 LAND EXCLUDES MINERALS WITHIN THE PART SHOWN SO INDICATED IN THE TITLE DIAGRAM-SEE TRANSFER A405007
3 EASEMENT(S) AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM CREATED BY:
A200514 -EASEMENT 4.57 WIDE
A213256 -RIGHT OF ENTRY 2.44 WIDE
A525925 -RIGHT OF ENTRY 2.44 WIDE
C365011 -EASEMENT 4.57 WIDE
4 A525925 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM.
5 J509804 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM.
6 H351022 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM.
7 H363356 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM.
8 AA110954 MORTGAGE TO ST. GEORGE BANK LIMITED

NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND COMPRISED IN THIS FOLIO.
UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

MG PRINTED ON 30/7/2012

Service First Registration Pty Ltd
ACN: 108 037 029
Ph: 02 9233 1314
Fax: 9233 2878
Suite 102, Level 1, 64 Castlereagh Street
Sydney 2000
PO Box 1539 Sydney 2000
DX 189 Sydney

Summary of Owners Report

LPI **Sydney**

Address: - 2 Tangarra Street East, Croydon Park

Description: - Lot 23 D.P. 774159

As regards that part numbered (1) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
10.06.1913 (1913 to 1919)	John Hines (Builder)	Vol 2372 Fol 100 Now Vol 2993 Fol 178
20.09.1919 (1919 to 1923)	William Brown (Tobacco Worker)	Vol 2993 Fol 178
28.04.1923 (1923 to 1942)	Joseph Pennick (Small Goodsman)	Vol 2993 Fol 178
31.10.1942 (1942 to 1966)	Adhesives Proprietary Limited (Now Enfield Products Pty Limited)	Vol 2993 Fol 178
09.05.1966 (1966 to 1985)	Mauri Brothers & Thomson (Aust) Pty Limited	Vol 2993 Fol 178 Now Vol 11312 Fol 88

As regards those parts numbered (2), (3), (4) and (5) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
10.06.1913 (as regards the parts marked 2, 3 and 4 on the attached cadastre) 06.07.1914 (as regards the part marked 5 on the attached cadastre) (1913 to 1928, as regards the parts marked 2, 3 and 4 on the attached cadastre) (1914 to 1928, as regards the part marked 5 on the attached cadastre)	John Hines (Builder)	Vol 2372 Fol 100 (as regards the parts marked 2, 3 and 4 on the attached cadastre) Vol 2489 Fol 248 (as regards the part marked 5 on the attached cadastre) Now Vol 4018 Fol 179
25.01.1928 (1928 to 1966)	Adhesives Proprietary Limited (Now Enfield Products Pty Limited)	Vol 4018 Fol 179 Now Vol 6704 Fol 142
09.05.1966 (1966 to 1985)	Mauri Brothers & Thomson (Aust) Pty Limited	Vol 6704 Fol 142 Now Vol 11312 Fol 88

Leases: -

- 05.01.1945 to Sydney County Council, together with a right of way and other rights (D 355630) – Surrendered 14.04.1961

Service First Registration Pty Ltd
ACN: 108 037 029
Ph: 02 9233 1314
Fax: 9233 2878
Suite 102, Level 1, 64 Castlereagh Street
Sydney 2000
PO Box 1539 Sydney 2000
DX 189 Sydney

As regards that part numbered (6) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
02.04.1912 (1912 to 1929)	Elizabeth Lydia Tomkins (Married Woman)	Vol 2241 Fol 38 Now Vol 3906 Fol 122
17.04.1929 (1929 to 1945)	Ernest Joseph Norman Tomkins (Nursery Man)	Vol 3906 Fol 122 Now Vol 5273 Fol 128
17.07.1945 (1945 to 1966)	Adhesives Proprietary Limited (Now Enfield Products Pty Limited)	Vol 5273 Fol 128 Now Vol 5956 Fol 75
09.05.1966 (1966 to 1985)	Mauri Brothers & Thomson (Aust) Pty Limited	Vol 5956 Fol 75 Now Vol 11312 Fol 88

As regards that part numbered (7) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
06.05.1913 (1913 to 1926)	John Hines (Contractor)	Book 1003 No. 945
24.12.1926 (1926 to 1966)	Adhesives Proprietary Limited (Now Enfield Products Pty Limited)	Book 1502 No. 751
09.05.1966 (1966 to 1985)	Mauri Brothers & Thomson (Aust) Pty Limited	Book 2816 No. 638 Now Vol 11312 Fol 88

As regards that part numbered (8) on the attached cadastre

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
04.07.1900 (1900 to ? 1900)	Pietro Marcantelli (Vine Grower)	Vol 1320 Fol 250
1900	Provided in D.P. 3670 as a lane twenty feet wide	
13.05.1970 (1970 to 1985)	Mauri Brothers & Thomson (Aust) Pty Limited (No evidence could be found as to the closure of this lane. This parcel may have been claimed by possession)	Vol 1320 Fol 250 Now Vol 11312 Fol 88

Search continued as regards the whole of Lot 23 D.P. 774159

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.10.1985 (1985 to 1988)	Nursery Enterprises Pty Limited	Vol 11312 Fol 88 Now 23/774159
16.11.1988 (1988 to 2003)	Jenbend Pty Limited	23/774159
03.11.2003 (2003 to date)	# Syesun Pty Limited	23/774159

# Denotes Current Registered Proprietor

Service First Registration Pty Ltd
ACN: 108 037 029
Ph: 02 9233 1314
Fax: 9233 2878
Suite 102, Level 1, 64 Castlereagh Street
Sydney 2000
PO Box 1539 Sydney 2000
DX 189 Sydney

Easements: - NIL

Leases continued: -

- 14.10.1994 (U 684518) not investigated)
- 26.10.2006 to Silverfresh Produce Pty Limited, known as Fresh Fruit Palace Enfield – Expires 14.08.2010, also 5 year option

Yours Sincerely
Mark Groll
6 August 2012
(Ph: 0412 199 304)

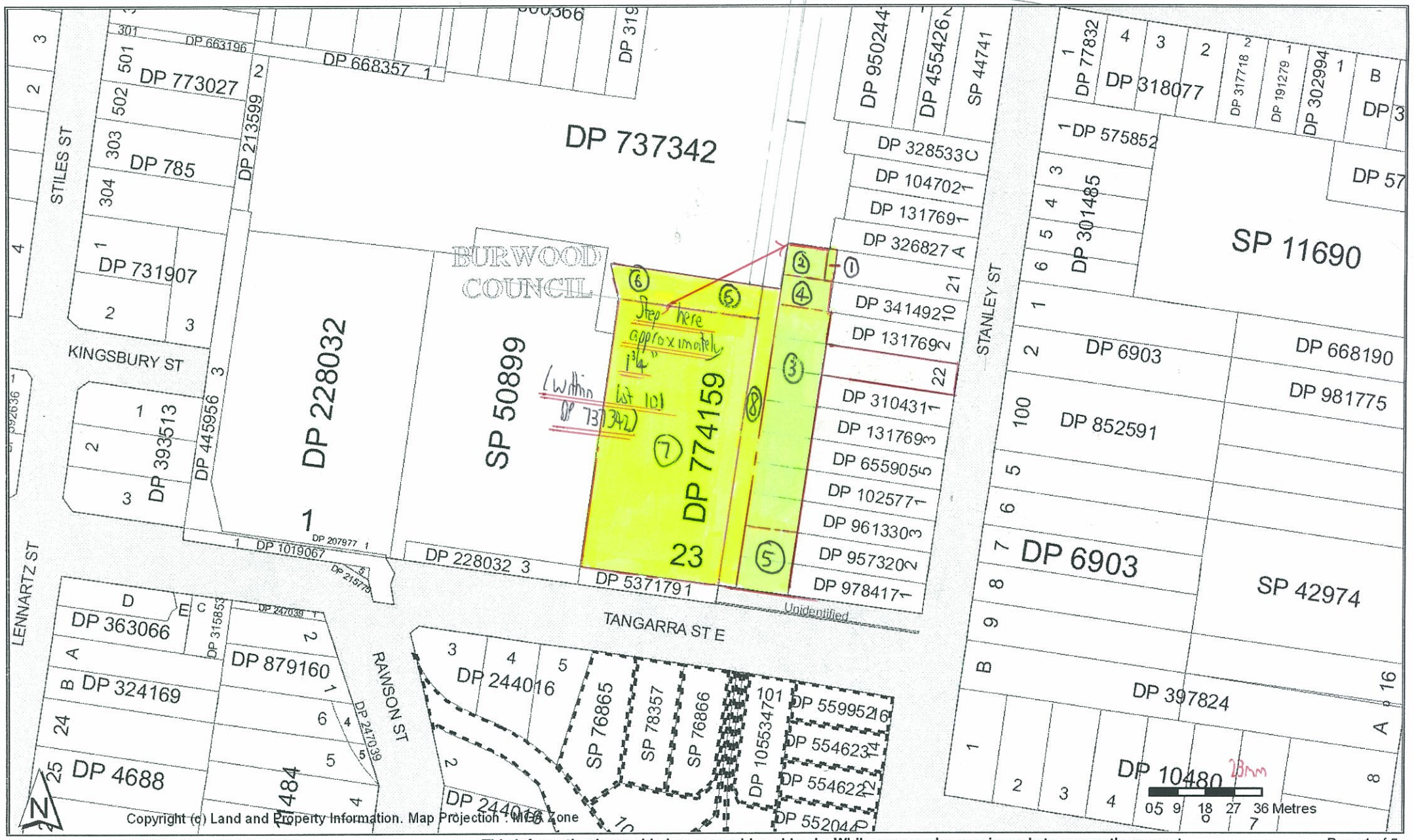
Land & Property Information
A division of the Department of Finance & Services

Cadastral Records Enquiry Report

Ref : 29

Requested Parcel : Lot 23 DP 774159 **Identified Parcel** : Lot 23 DP 774159

Locality : CROYDON PARK **LGA** : BURWOOD **Parish** : CONCORD **County** : CUMBERLAND



Report Generated 10:13:57 AM, 31 July, 2012

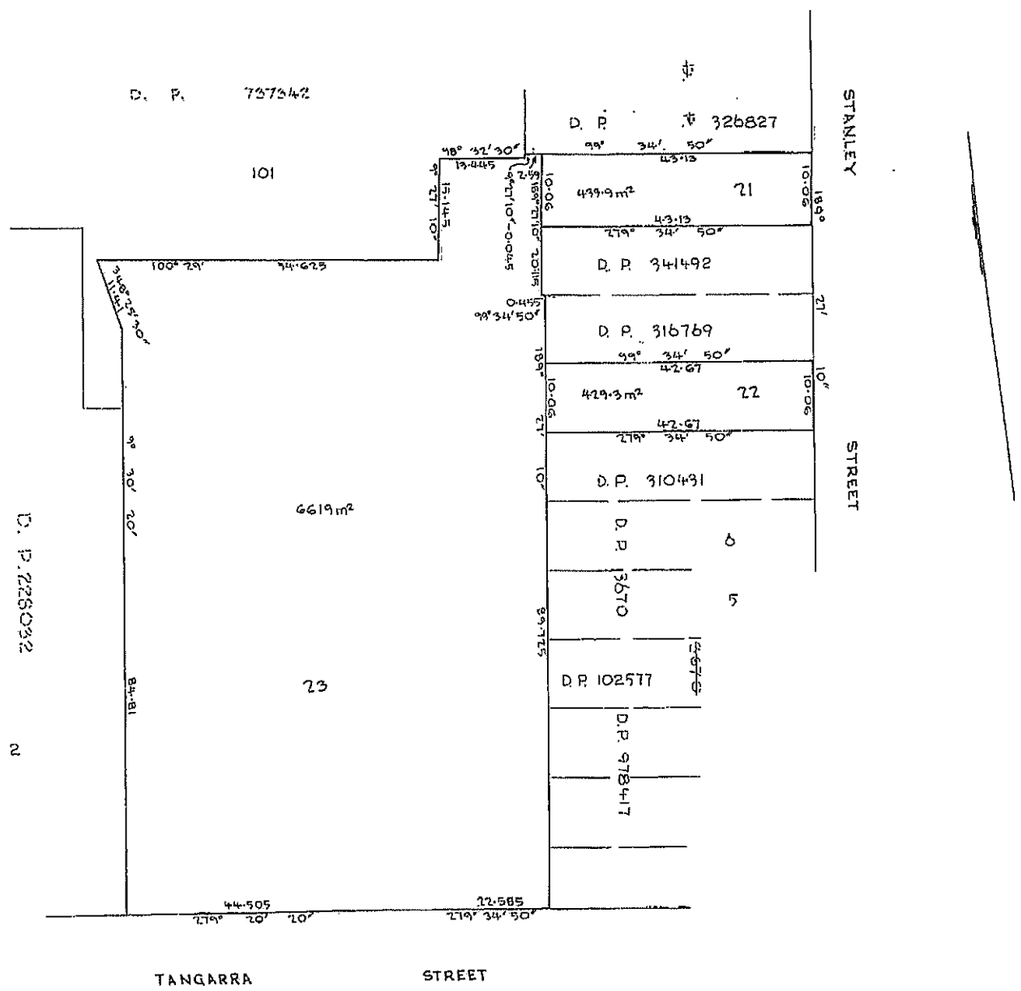
This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.

PLAN FORM 2

Plan Drawing only to appear in this space

*OFFICE USE ONLY

SIGNATURE AND SEALS ONLY.



D.P. 774159

Registered: 22.3.1988

C.A: NO210/95 15/D84/87
S10/87 OF 10-2-1988

Title System: TORRENS

Purpose: SUBDIVISION

Ref. Map: U0045-64

Last Plan: D.P. 537179

PLAN OF SUBDIVISION

OF LOT 2, D.P. 537179

Lengths are in metres. Reduction Ratio 1: 500

Mun./Shire—City—: Burwood

Locality: Enfield

Parish: Concord

County: Cumberland

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

I, John Henry McKittrick
of 6 Pound Road, Macnsby

a surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in this plan was done accurately and that the said survey complies with the Survey Practice Regulations of 1933 and any special requirements of the Department of Lands, and was completed on

6.11.87

Signature
Surveyor registered under Surveyors Act, 1929, as amended.
~~Datum Line~~ ~~Azimuth~~
~~Kind~~ ~~date~~ of survey.

Plans used in preparation of survey/compilation.

D.P.537179

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

PURSUANT TO SECTION 88 B OF THE CONVEYANCING ACT 1919-84 IT IS INTENDED TO CREATE:-
1. RESTRICTION AS TO USER.

AS SET OUT IN THE ACCOMPANYING INSTRUMENT SIGNED BY THE COUNCIL CLERK.

Crown Lands Office Approval

PLAN APPROVED .....
Authorised Officer

Land District .....

Paper No. .....

Field Book ..... pages .....

Council Clerk'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 section 34B of the † Metropolitan Water, Sewerage and Drainage Act, 1924, as amended, † Hunter District Water, Sewerage, and Drainage Act, 1938, as amended~~

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

Subdivision No. 210/95 15/D84/87 S10/87

Date 10-2-1988

(Signature) .....
Council Clerk

Council File No. .....

*This part of certificate is 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: 87/116 M.P.D.

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day.

23rd March, 1988

ENFIELD

DP3670 "A"

PLAN OF THE TRAM TERMINUS ESTATE. ENFIELD.

PARISH OF CONCORD, COUNTY OF CUMBERLAND.

Vol. 513 Fol 233.

3670

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 3670

FEET	INCHES		METRES
-	0	5/8	0.015
4	2	3/8	1.28
8	6		2.59
12	-		3.66
20	-		6.095
21	-		6.4
30	4	1/2	9.26
33	-		10.06
42	-		12.8
49	6		15.09
146	0	1/2	44.515
146	4	1/4	44.61
150	1		45.745
194	1	1/4	59.16
214	1	1/4	65.26
297	10	1/4	90.79
298	3	7/8	90.93

AC	RD	P	SQ M
-	-	.6	15.2
-	-	21 1/2	543.8
-	-	23 1/2	594.4
1	-	-	4047

MITCHELL (Aligned) STREET

99 ,, 34 ,, 50 / 214 ,, 1¼

9 ,, 27 ,, 30 / 150.1

99 ,, 34 ,, 50 / 194 ,, 1¼

20' WIDE LANE

33' 2¾ per. 15

14

13

9 ,, 27 ,, 30 / 200 FEET

12

11

10

9

8

7

6

5

4

3

33' 2¾ per. 2

30.4½ 21½ per. 99 ,, 34 ,, 50 194. 1¼ 1

20' LANE 20 FEET WIDE

21' 20' ONE FOOT 214. 1¼ RESERVED 5' 20' 21'

2¾ perches each

STANLEY STREET (Aligned)

9 ,, 27 ,, 30 / 200 FEET

33.0

5 ,, 30

16

1A. 0R. 0P.

Note.- This block edged carmine is not included in this Deposited Plan.

ENFIELD TRAMWAY TERMINUS

To Ashfield

Note,- All bearings are given from True North.

This is the plan marked "A" referred to in my declaration dated 5th March 1900.

Scale 50 feet to an Inch.

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 28th day of August, 1979

[redacted]

CERTIFICATE OF TITLE

NEW SOUTH WALES

REAL PROPERTY ACT, 1900, as amended.

Appln.Nos.4453,5182 & 44963
Prior Titles -
~~Vol.1976 Fol.230~~
Vol.2993 Fol.178 } (part)
Vol.4956 Fol. 75 }
Vol.6704 Fol.142 }

Vol. 11312 Fol. 88

[redacted] Reg. Gen.'

Edition issued 13-5-1970

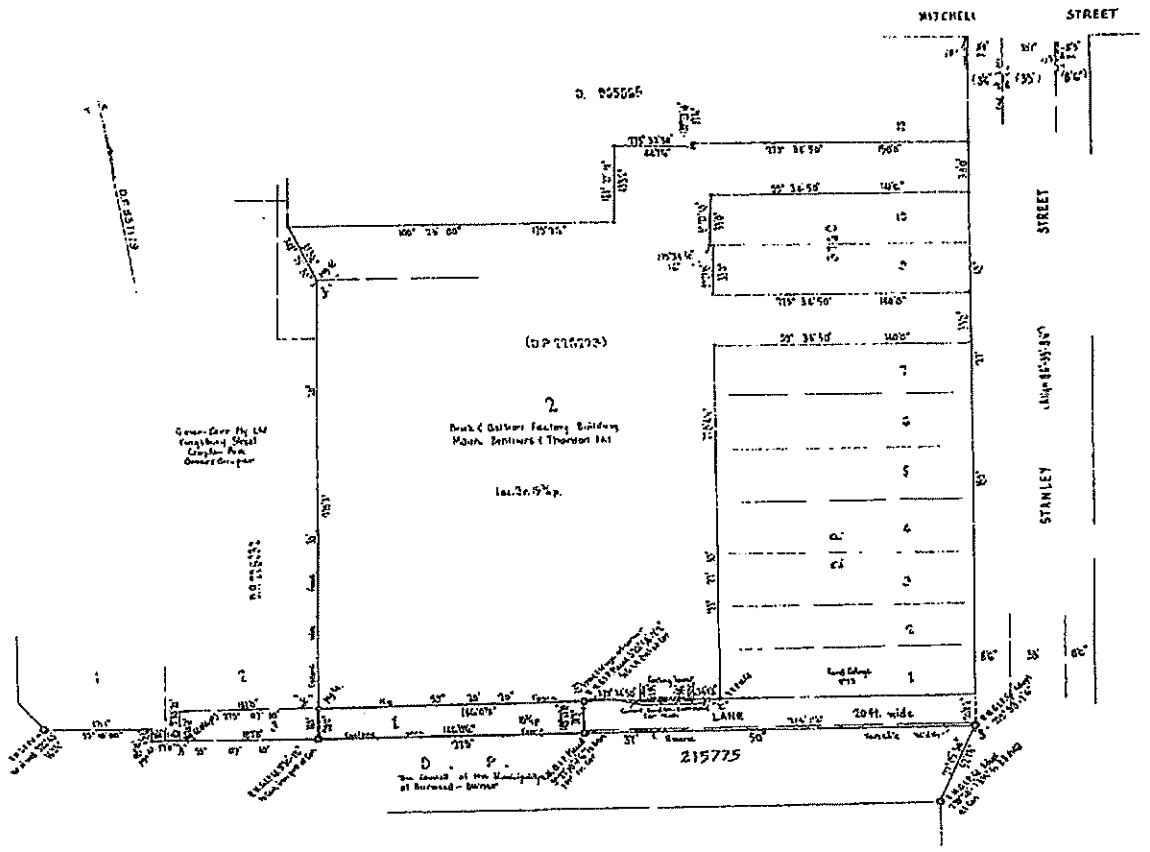
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness [redacted]

Registrar General.

(Page 1) Vol. 11312 Fol. 88

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 2 in Deposited Plan 537179 at Enfield in the Municipality of Burwood Parish of Concord and County of Cumberland being part of Portion 247 granted to Simeon Lord on 8-10-1816.

FIRST SCHEDULE

~~MAURI BROTHERS & THOMSON (AUST.) PTY. LIMITED.~~

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.

Registrar General

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

Vol. 11312 Fol 88

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	~~Signature of~~ Registrar-General's
Nursery Enterprises Pty. Limited by Transfer V984062. Registered 21-10-1985					
DP/SP 774159 Registered 22.3.88 This folio is cancel~~led in whole/part upon creation~~ of computer folios for lots 21-23 in the ~~above~~mentioned plan.					

V917655
V984062
X44199 Dm
DP. 774159

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	~~Signature of~~ Registrar-General	CANCELLATION
~~V917655 Caveat by Beneficial Finance Corporation Limited. Registered 2-9-1985.~~						
~~V984063 Mortgage to Beneficial Finance Corporation Limited. Registered 21-10-1985.~~						Withdrawn V984061 Discharged X44199.
			Interests created pursuant to Section 88B Conveyancing Act, 1919 by the registration of DP 774159 Registered 22.3.1988			

(Page 2 of 2 pages)

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

Historical Title

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
30/7/2012 11:34AM

FOLIO: 23/774159

First Title(s): OLD SYSTEM
Prior Title(s): VOL 11312 FOL 88

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988	DP774159	DEPOSITED PLAN	FOLIO CREATED EDITION 1
16/11/1988	X985988	TRANSFER	
16/11/1988	X985989	MORTGAGE	
16/11/1988	X985990	TRANSFER OF MORTGAGE	EDITION 2
19/10/1989	Y635871	DISCHARGE OF MORTGAGE	
19/10/1989	Y635872	MORTGAGE	EDITION 3
27/11/1990	Z351846	CAVEAT	
28/2/1991	Z487593	MORTGAGE	EDITION 4
23/9/1992	E780018	CAVEAT	
7/12/1993	I851962	WITHDRAWAL OF CAVEAT	
14/10/1994	U684518	LEASE	EDITION 5
5/4/2000	6693844	DISCHARGE OF MORTGAGE	
5/4/2000	6693845	DISCHARGE OF MORTGAGE	
5/4/2000	6693846	MORTGAGE	EDITION 6
7/3/2003	9433914	CAVEAT	
3/11/2003	AA110944	WITHDRAWAL OF CAVEAT	
3/11/2003	AA110946	DISCHARGE OF MORTGAGE	
3/11/2003	AA110950	TRANSFER	
3/11/2003	AA110954	MORTGAGE	EDITION 7
26/10/2006	AC641247	LEASE	EDITION 8

*** END OF SEARCH ***

RP 139

STAMP DUTY (2 [redacted]

OFFICE USE ONLY

X985988

TRANSFER

REAL PROPERTY ACT, 1900

T

2 of 2 - 1

$ nil

R2/4

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
DESCRIPTION OF LAND Note (a)	WHOLE	
FI 22/774159 and FI 23/774159		ENFIELD

TRANSFEROR Note (b)

NURSERY ENTERPRISES PTY LIMITED

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 3,700,000.00 being the same consideration in transfer of even date and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

JENBEND PTY LIMITED of 124-144 Newbridge Road, Moorebank 2170

OFFICE USE ONLY

S

TENANCY Note (e)

~~as joint tenants/tenants in common~~

PRIOR ENCUMBRANCES Note (f)

subject to the following PRIOR ENCUMBRANCES 1. — 2. 3.

DATE 28 October 1988

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION Note (g)

~~Signed in my presence by the transferor who is personally known to me~~

The COMMON SEAL OF NURSERY ENTERPRISES PTY LIMITED was hereunto affixed in accordance with its Articles of Association in the presence of:

NURSERY ENTERPRISES PTY. LIMITED Common Seal

Director Secretary

Signature of Transferor

~~Signature of Witness~~

~~Name of Witness (BLOCK LETTERS)~~

~~Address and occupation of Witness~~

Note (ff)

~~Signed in my presence by the transferee who is personally known to me~~

~~Signature of Witness~~

~~Name of Witness (BLOCK LETTERS)~~

~~Address and occupation of Witness~~

Signature of Transferee

Solicitor

TO BE COMPLETED BY LODGING PARTY Notes (h) and (i)

LODGED BY M.S.J

TML

Delivery Box Number 461 J

LOCATION OF DOCUMENTS	CT	OTHER
Herewith		
In L.T.O. with		
Produced by		

OFFICE USE ONLY

Checked	Passed
28/6	
Signed	Extra Fee

REGISTERED - -19

16 NOV 1988

Secondary Directions	
Delivery Directions	

Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 23/774159

SEARCH DATE	TIME	EDITION NO	DATE
30/7/2012	11:34 AM	8	26/10/2006

LAND

LOT 23 IN DEPOSITED PLAN 774159
AT ENFIELD
LOCAL GOVERNMENT AREA BURWOOD
PARISH OF CONCORD COUNTY OF CUMBERLAND
TITLE DIAGRAM DP774159

FIRST SCHEDULE

SYESUN PTY LIMITED (T AA110950)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 AA110954 MORTGAGE TO ST. GEORGE BANK LIMITED
3 AC641247 LEASE TO SILVERFRESH PRODUCE PTY LIMITED BEING THAT BRICK AND ALUMINIUM BUILDING TOGETHER WITH THE COVERED STORAGE SHED KNOWN AS FRESH FRUIT PALACE ENFIELD AS SHOWN ON PLAN WITH AC641247. EXPIRES: 14/8/2010. OPTION OF RENEWAL: 5 YEARS.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

MG PRINTED ON 30/7/2012

NOTICE OF PROPOSED DEVELOPMENT
(Ordinance No. 107)

(Sec. 342ZA, Local Government Act, 1919)

MUNICIPALITY OF BURWOOD

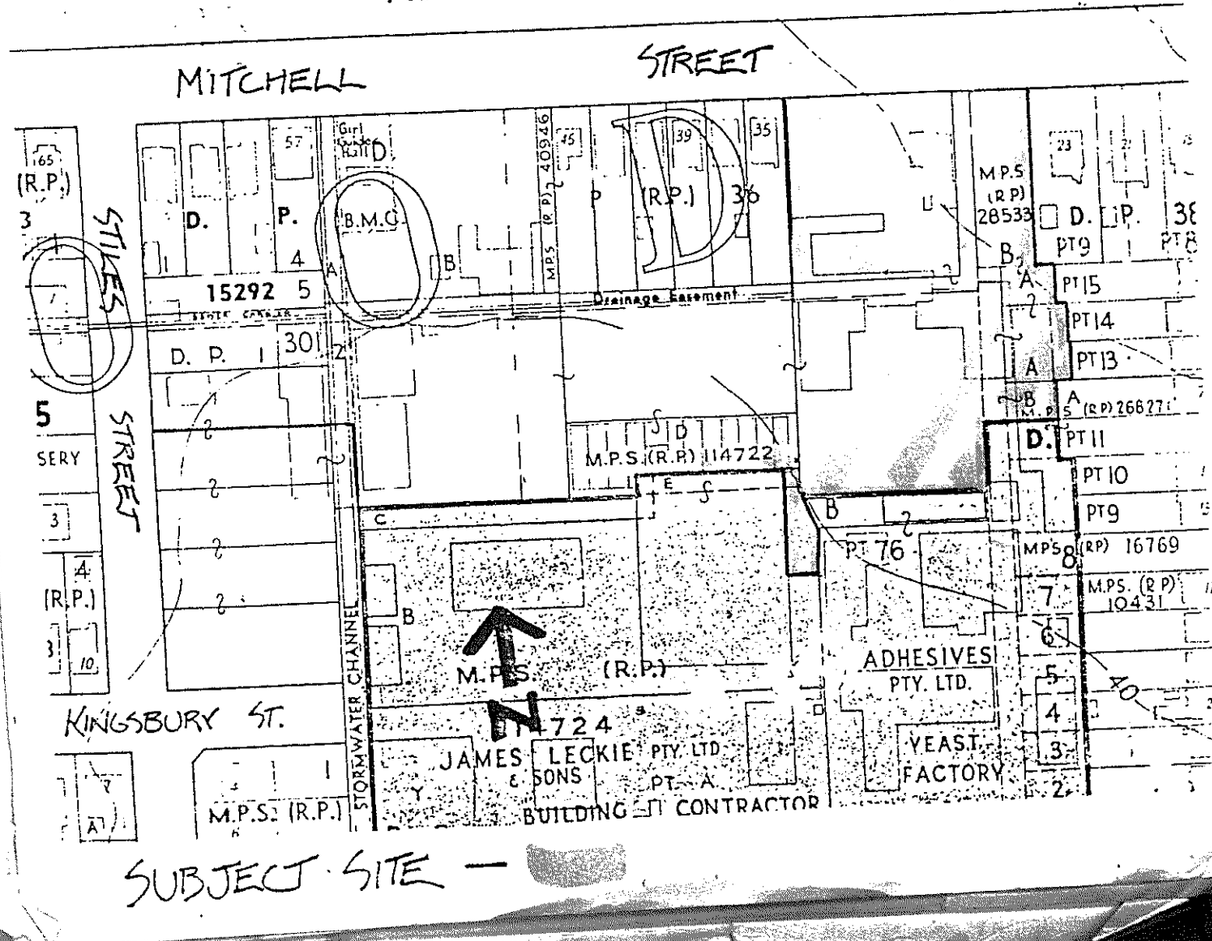
Notice of Proposed Development - 25-33 Mitchell Street, Enfield

You are hereby advised that an application has been received for the approval of the Council to carry out major redevelopment of the existing nursery as a retail plant nursery, including the erection of 2 glass houses, covered walkways, display gardens and public areas with off-street parking for 82 cars from Mitchell Street and staff parking and service access from Stiles Street, Enfield.

Before any application is considered by Council an opportunity is given to interested persons to examine the development plans. These plans and any specifications will be exhibited and may be inspected at the Council Chambers, Conder Street, Burwood, at any time between the hours of 9.00 a.m. and 4.00 p.m. on Mondays to Fridays (public holidays excepted), up to 12th June, 1984.

Any persons wishing to make a submission in respect of the abovementioned development should do so in writing before the end of the exhibition period.

Sketch Plan of Site



Appendix E

Laboratory Reports and Chain of Custody Documentation

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 77653

Client:
Douglas Partners
96 Hermitage Rd
West Ryde
NSW 2114

Attention: Richard Lamont

Sample log in details:

Your Reference:	**73112, Flower Power**
No. of samples:	19 Soils
Date samples received / completed instructions received	20/08/2012 / 20/08/2012

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	28/08/12 / 28/08/12
Date of Preliminary Report:	Not issued

NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Rhian Morgan
Reporting Supervisor

Nick Sarlamis
Inorganics Supervisor

Alex Tam
Approved Signatory

NATA
ACCREDITED FOR TECHNICAL COMPETENCE

vTRH & BTEX in Soil						
Our Reference:	UNITS	77653-1	77653-2	77653-3	77653-4	77653-5
Your Reference	----------	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.4-0.5	1.0-1.2	1.8-2.0	2.8-3.0	1.2-1.5
Date Sampled		16/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
vTRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	92	86	87	94

vTRH & BTEX in Soil						
Our Reference:	UNITS	77653-6	77653-7	77653-8	77653-9	77653-10
Your Reference	----------	BH9	BH4	BH5	BH6	BH6
Depth	----------	0.0-0.2	0.4-0.6	0.3-0.5	0.2-0.4	1.5-1.7
Date Sampled		17/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
vTRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	94	95	101	98	93

vTRH & BTEX in Soil						
Our Reference:	UNITS	77653-11	77653-12	77653-13	77653-14	77653-15
Your Reference	----------	BH7	BH8	BH9	BH10	BH10
Depth	----------	0.2-0.4	0.3-0.4	0.4-0.5	0.0-0.2	0.4-0.5
Date Sampled		17/08/2012	17/08/2012	17/08/2012	17/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
vTRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	92	99	94	100	100

vTRH & BTEX in Soil					
Our Reference:	UNITS	77653-16	77653-17	77653-18	77653-19
Your Reference	----------	BD4	BD10	TS/160812	TB/160812
Depth	----------	-	-	-	-
Date Sampled		17/08/2012	17/08/2012	17/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012
vTRH C_6 - C_9	mg/kg	<25	<25	[NA]	[NA]
Benzene	mg/kg	<0.2	<0.2	98%	<0.2
Toluene	mg/kg	<0.5	<0.5	97%	<0.5
Ethylbenzene	mg/kg	<1	<1	96%	<1
m+p-xylene	mg/kg	<2	<2	95%	<2
o-Xylene	mg/kg	<1	<1	96%	<1
Surrogate aaa-Trifluorotoluene	%	94	94	99	74

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	77653-1	77653-2	77653-3	77653-4	77653-5
Your Reference	----------	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.4-0.5	1.0-1.2	1.8-2.0	2.8-3.0	1.2-1.5
Date Sampled		16/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	180	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	89	91	87	91	88

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	77653-6	77653-7	77653-8	77653-9	77653-10
Your Reference	----------	BH9	BH4	BH5	BH6	BH6
Depth	----------	0.0-0.2	0.4-0.6	0.3-0.5	0.2-0.4	1.5-1.7
Date Sampled		17/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	86	85	91	92	85

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	77653-11	77653-12	77653-13	77653-14	77653-15
Your Reference	----------	BH7	BH8	BH9	BH10	BH10
Depth	----------	0.2-0.4	0.3-0.4	0.4-0.5	0.0-0.2	0.4-0.5
Date Sampled		17/08/2012	17/08/2012	17/08/2012	17/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	83	89	87	88	88

sTRH in Soil (C10-C36)			
Our Reference:	UNITS	77653-16	77653-17
Your Reference	----------	BD4	BD10
Depth	----------	-	-
Date Sampled		17/08/2012	17/08/2012
Type of sample		Soil	Soil
Date extracted	-	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100
Surrogate o-Terphenyl	%	86	87

PAHs in Soil						
Our Reference:	UNITS	77653-1	77653-2	77653-3	77653-4	77653-5
Your Reference	----------	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.4-0.5	1.0-1.2	1.8-2.0	2.8-3.0	1.2-1.5
Date Sampled		16/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.5	0.3	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	1.2	0.4	<0.1	<0.1	<0.1
Pyrene	mg/kg	1.2	0.3	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.5	0.2	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.5	0.2	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	1.1	0.4	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.75	0.19	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.5	0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	106	104	105	104	106

PAHs in Soil						
Our Reference:	UNITS	77653-6	77653-7	77653-8	77653-9	77653-10
Your Reference	----------	BH9	BH4	BH5	BH6	BH6
Depth	----------	0.0-0.2	0.4-0.6	0.3-0.5	0.2-0.4	1.5-1.7
Date Sampled		17/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	103	104	109	103	105

PAHs in Soil						
Our Reference:	UNITS	77653-11	77653-12	77653-13	77653-14	77653-15
Your Reference	----------	BH7	BH8	BH9	BH10	BH10
Depth	----------	0.2-0.4	0.3-0.4	0.4-0.5	0.0-0.2	0.4-0.5
Date Sampled		17/08/2012	17/08/2012	17/08/2012	17/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.2	0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	0.2	0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.07	0.06	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	106	106	101	103	104

PAHs in Soil			
Our Reference:	UNITS	77653-16	77653-17
Your Reference	----------	BD4	BD10
Depth	----------	-	-
Date Sampled		17/08/2012	17/08/2012
Type of sample		Soil	Soil
Date extracted	-	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.2
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	0.3	0.2
Pyrene	mg/kg	0.3	0.2
Benzo(a)anthracene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	0.1
Benzo(b+k)fluoranthene	mg/kg	0.3	<0.2
Benzo(a)pyrene	mg/kg	0.17	0.09
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	103	102

Organochlorine Pesticides in soil						
Our Reference:	UNITS	77653-1	77653-2	77653-3	77653-4	77653-5
Your Reference	----------	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.4-0.5	1.0-1.2	1.8-2.0	2.8-3.0	1.2-1.5
Date Sampled		16/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	25/08/2012	25/08/2012	25/08/2012	25/08/2012	25/08/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	94	94	95	93

Organochlorine Pesticides in soil						
Our Reference:	UNITS	77653-6	77653-8	77653-9	77653-10	77653-13
Your Reference	----------	BH9	BH5	BH6	BH6	BH9
Depth	----------	0.0-0.2	0.3-0.5	0.2-0.4	1.5-1.7	0.4-0.5
Date Sampled		17/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	25/08/2012	25/08/2012	25/08/2012	25/08/2012	25/08/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	97	93	93	96

Organochlorine Pesticides in soil			
Our Reference:	UNITS	77653-16	77653-17
Your Reference	----------	BD4	BD10
Depth	----------	-	-
Date Sampled		17/08/2012	17/08/2012
Type of sample		Soil	Soil
Date extracted	-	23/08/2012	23/08/2012
Date analysed	-	25/08/2012	25/08/2012
HCB	mg/kg	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Surrogate TCMX	%	95	93

Organophosphorus Pesticides						
Our Reference:	UNITS	77653-1	77653-2	77653-3	77653-4	77653-5
Your Reference	----------	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.4-0.5	1.0-1.2	1.8-2.0	2.8-3.0	1.2-1.5
Date Sampled		16/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	25/08/2012	25/08/2012	25/08/2012	25/08/2012	25/08/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	94	94	95	93

Organophosphorus Pesticides						
Our Reference:	UNITS	77653-6	77653-8	77653-9	77653-10	77653-13
Your Reference	----------	BH9	BH5	BH6	BH6	BH9
Depth	----------	0.0-0.2	0.3-0.5	0.2-0.4	1.5-1.7	0.4-0.5
Date Sampled		17/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	25/08/2012	25/08/2012	25/08/2012	25/08/2012	25/08/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	97	93	93	96

Organophosphorus Pesticides			
Our Reference:	UNITS	77653-16	77653-17
Your Reference	----------	BD4	BD10
Depth	----------	-	-
Date Sampled		17/08/2012	17/08/2012
Type of sample		Soil	Soil
Date extracted	-	23/08/2012	23/08/2012
Date analysed	-	25/08/2012	25/08/2012
Diazinon	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Surrogate TCMX	%	95	93

PCBs in Soil						
Our Reference:	UNITS	77653-1	77653-2	77653-3	77653-4	77653-5
Your Reference	----------	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.4-0.5	1.0-1.2	1.8-2.0	2.8-3.0	1.2-1.5
Date Sampled		16/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	25/08/2012	25/08/2012	25/08/2012	25/08/2012	25/08/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	99	94	94	95	93

PCBs in Soil						
Our Reference:	UNITS	77653-6	77653-8	77653-9	77653-10	77653-13
Your Reference	----------	BH9	BH5	BH6	BH6	BH9
Depth	----------	0.0-0.2	0.3-0.5	0.2-0.4	1.5-1.7	0.4-0.5
Date Sampled		17/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	25/08/2012	25/08/2012	25/08/2012	25/08/2012	25/08/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	93	97	93	93	96

PCBs in Soil			
Our Reference:	UNITS	77653-16	77653-17
Your Reference	----------	BD4	BD10
Depth	----------	-	-
Date Sampled		17/08/2012	17/08/2012
Type of sample		Soil	Soil
Date extracted	-	23/08/2012	23/08/2012
Date analysed	-	25/08/2012	25/08/2012
Arochlor 1016	mg/kg	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1
Surrogate TCLMX	%	95	93

Total Phenolics in Soil						
Our Reference:	UNITS	77653-1	77653-2	77653-3	77653-4	77653-5
Your Reference	----------	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.4-0.5	1.0-1.2	1.8-2.0	2.8-3.0	1.2-1.5
Date Sampled		16/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/08/2012	25/08/2012	25/08/2012	25/08/2012	25/08/2012
Date analysed	-	25/08/2012	25/08/2012	25/08/2012	25/08/2012	25/08/2012
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	150	<5

Total Phenolics in Soil						
Our Reference:	UNITS	77653-6	77653-8	77653-9	77653-10	77653-13
Your Reference	----------	BH9	BH5	BH6	BH6	BH9
Depth	----------	0.0-0.2	0.3-0.5	0.2-0.4	1.5-1.7	0.4-0.5
Date Sampled		17/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/08/2012	25/08/2012	25/08/2012	25/08/2012	25/08/2012
Date analysed	-	25/08/2012	25/08/2012	25/08/2012	25/08/2012	25/08/2012
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Total Phenolics in Soil			
Our Reference:	UNITS	77653-16	77653-17
Your Reference	----------	BD4	BD10
Depth	----------	-	-
Date Sampled		17/08/2012	17/08/2012
Type of sample		Soil	Soil
Date extracted	-	25/08/2012	25/08/2012
Date analysed	-	25/08/2012	25/08/2012
Total Phenolics (as Phenol)	mg/kg	<5	<5

Acid Extractable metals in soil						
Our Reference:	UNITS	77653-1	77653-2	77653-3	77653-4	77653-5
Your Reference	----------	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.4-0.5	1.0-1.2	1.8-2.0	2.8-3.0	1.2-1.5
Date Sampled		16/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Arsenic	mg/kg	7	22	9	6	10
Cadmium	mg/kg	1.2	3.2	<0.5	<0.5	0.5
Chromium	mg/kg	24	16	6	5	20
Copper	mg/kg	150	1,100	4	3	5
Lead	mg/kg	150	130	5	2	28
Mercury	mg/kg	0.3	0.5	<0.1	<0.1	<0.1
Nickel	mg/kg	32	33	2	2	3
Zinc	mg/kg	330	480	12	4	13

Acid Extractable metals in soil						
Our Reference:	UNITS	77653-6	77653-7	77653-8	77653-9	77653-10
Your Reference	----------	BH9	BH4	BH5	BH6	BH6
Depth	----------	0.0-0.2	0.4-0.6	0.3-0.5	0.2-0.4	1.5-1.7
Date Sampled		17/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Arsenic	mg/kg	<4	4	11	6	<4
Cadmium	mg/kg	<0.5	<0.5	0.5	<0.5	<0.5
Chromium	mg/kg	10	11	26	20	2
Copper	mg/kg	19	11	14	30	12
Lead	mg/kg	12	62	17	25	5
Mercury	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	7	5	35	<1
Zinc	mg/kg	29	52	18	38	12

Acid Extractable metals in soil						
Our Reference:	UNITS	77653-11	77653-12	77653-13	77653-14	77653-15
Your Reference	----------	BH7	BH8	BH9	BH10	BH10
Depth	----------	0.2-0.4	0.3-0.4	0.4-0.5	0.0-0.2	0.4-0.5
Date Sampled		17/08/2012	17/08/2012	17/08/2012	17/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Arsenic	mg/kg	4	<4	5	8	10
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	10	10	11	21	23
Copper	mg/kg	40	17	23	16	10
Lead	mg/kg	9	21	59	42	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Nickel	mg/kg	30	11	10	34	6
Zinc	mg/kg	28	12	77	40	23

Acid Extractable metals in soil				
Our Reference:	UNITS	77653-16	77653-17	77653-20
Your Reference	----------	BD4	BD10	BH7 - Triplicate
Depth	----------	-	-	0.2-0.4
Date Sampled		17/08/2012	17/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil
Date digested	-	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	23/08/2012	23/08/2012	23/08/2012
Arsenic	mg/kg	9	7	5
Cadmium	mg/kg	1.1	<0.5	<0.5
Chromium	mg/kg	23	13	15
Copper	mg/kg	110	4	45
Lead	mg/kg	120	22	13
Mercury	mg/kg	0.3	<0.1	<0.1
Nickel	mg/kg	36	2	38
Zinc	mg/kg	320	8	35

Moisture						
Our Reference:	UNITS	77653-1	77653-2	77653-3	77653-4	77653-5
Your Reference	----------	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.4-0.5	1.0-1.2	1.8-2.0	2.8-3.0	1.2-1.5
Date Sampled		16/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
Moisture	%	15	14	29	32	19

Moisture						
Our Reference:	UNITS	77653-6	77653-7	77653-8	77653-9	77653-10
Your Reference	----------	BH9	BH4	BH5	BH6	BH6
Depth	----------	0.0-0.2	0.4-0.6	0.3-0.5	0.2-0.4	1.5-1.7
Date Sampled		17/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
Moisture	%	12	18	21	18	15

Moisture						
Our Reference:	UNITS	77653-11	77653-12	77653-13	77653-14	77653-15
Your Reference	----------	BH7	BH8	BH9	BH10	BH10
Depth	----------	0.2-0.4	0.3-0.4	0.4-0.5	0.0-0.2	0.4-0.5
Date Sampled		17/08/2012	17/08/2012	17/08/2012	17/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/08/2012	23/08/2012	23/08/2012	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
Moisture	%	15	15	11	9.7	17

Moisture			
Our Reference:	UNITS	77653-16	77653-17
Your Reference	----------	BD4	BD10
Depth	----------	-	-
Date Sampled		17/08/2012	17/08/2012
Type of sample		Soil	Soil
Date prepared	-	23/08/2012	23/08/2012
Date analysed	-	24/08/2012	24/08/2012
Moisture	%	18	20

Asbestos ID - soils						
Our Reference:	UNITS	77653-1	77653-2	77653-3	77653-4	77653-5
Your Reference	----------	BH1	BH1	BH2	BH2	BH3
Depth	----------	0.4-0.5	1.0-1.2	1.8-2.0	2.8-3.0	1.2-1.5
Date Sampled		16/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
Sample mass tested	g	Approx 40g	Approx 40g	Approx 40g	Approx 40g	Approx 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained sandy soil	Brown coarse-grained sandy soil	Brown coarse-grained sandy soil	Brown fine-grained clayey soil
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils						
Our Reference:	UNITS	77653-6	77653-8	77653-9	77653-10	77653-13
Your Reference	----------	BH9	BH5	BH6	BH6	BH9
Depth	----------	0.0-0.2	0.3-0.5	0.2-0.4	1.5-1.7	0.4-0.5
Date Sampled		17/08/2012	16/08/2012	16/08/2012	16/08/2012	17/08/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/08/2012	24/08/2012	24/08/2012	24/08/2012	24/08/2012
Sample mass tested	g	Approx 40g	Approx 40g	Approx 40g	Approx 40g	Approx 40g
Sample Description	-	Red-brown coarse-grained soil	Brown fine-grained clayey soil	Brown fine-grained clayey soil	Beige fine-grained clayey soil	Brown coarse-grained soil
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils			
Our Reference:	UNITS	77653-16	77653-17
Your Reference	----------	BD4	BD10
Depth	----------	-	-
Date Sampled		17/08/2012	17/08/2012
Type of sample		Soil	Soil
Date analysed	-	24/08/2012	24/08/2012
Sample mass tested	g	Approx 40g	Approx 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown fine-grained clayey soil
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected

Miscellaneous Inorg - soil			
Our Reference:	UNITS	77653-3	77653-4
Your Reference	----------	BH2	BH2
Depth	----------	1.8-2.0	2.8-3.0
Date Sampled		16/08/2012	16/08/2012
Type of sample		Soil	Soil
Date prepared	-	23/08/2012	23/08/2012
Date analysed	-	23/08/2012	23/08/2012
Ammonia as N in soil	mg/kg	260	180

Micro testing in soil			
Our Reference:	UNITS	77653-3	77653-4
Your Reference	----------	BH2	BH2
Depth	----------	1.8-2.0	2.8-3.0
Date Sampled		16/08/2012	16/08/2012
Type of sample		Soil	Soil
Date testing started	-	22/08/2012	22/08/2012
Date testing completed	-	22/08/2012	22/08/2012
Faecal Coliforms in soil*	CFU/100g	<200	<200

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Inorg-030	Total Phenolics - determined colorimetrically following disitillation, based upon APHA 22nd ED 5530 D.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-057	Ammonia - determined colourimetrically based on EPA350.1 and APHA 22nd ED 4500-NH3 F, Soils are analysed following a KCl extraction.
Ext-008	Subcontracted to Barratt & Smith Pathlogy. NATA Accreditation No. 2178.

QUALITY CONTROL vTRH & BTEX in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			23/08/2012	77653-1	23/08/2012 || 23/08/2012	LCS-5	23/08/2012
Date analysed	-			24/08/2012	77653-1	24/08/2012 || 24/08/2012	LCS-5	24/08/2012
vTRH C_6 - C_9	mg/kg	25	Org-016	<25	77653-1	<25 || <25	LCS-5	93%
Benzene	mg/kg	0.2	Org-016	<0.2	77653-1	<0.2 || <0.2	LCS-5	78%
Toluene	mg/kg	0.5	Org-016	<0.5	77653-1	<0.5 || <0.5	LCS-5	94%
Ethylbenzene	mg/kg	1	Org-016	<1	77653-1	<1 || <1	LCS-5	94%
m+p-xylene	mg/kg	2	Org-016	<2	77653-1	<2 || <2	LCS-5	99%
o-Xylene	mg/kg	1	Org-016	<1	77653-1	<1 || <1	LCS-5	110%
Surrogate aaa-Trifluorotoluene	%		Org-016	102	77653-1	89 || 99 || RPD: 11	LCS-5	112%
QUALITY CONTROL sTRH in Soil (C10-C36)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			23/08/2012	77653-1	23/08/2012 || 23/08/2012	LCS-5	23/08/2012
Date analysed	-			24/08/2012	77653-1	24/08/2012 || 24/08/2012	LCS-5	24/08/2012
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	77653-1	<50 || <50	LCS-5	91%
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	77653-1	<100 || <100	LCS-5	107%
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	77653-1	<100 || <100	LCS-5	95%
Surrogate o-Terphenyl	%		Org-003	90	77653-1	89 || 89 || RPD: 0	LCS-5	135%
QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			23/08/2012	77653-1	23/08/2012 || 23/08/2012	LCS-5	23/08/2012
Date analysed	-			24/08/2012	77653-1	24/08/2012 || 24/08/2012	LCS-5	24/08/2012
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	<0.1 || <0.1	LCS-5	98%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	<0.1 || <0.1	LCS-5	93%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	0.5 || 0.3 || RPD: 50	LCS-5	92%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	1.2 || 0.6 || RPD: 67	LCS-5	90%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	1.2 || 0.6 || RPD: 67	LCS-5	93%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	0.5 || 0.3 || RPD: 50	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	0.5 || 0.4 || RPD: 22	LCS-5	96%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	77653-1	1.1 || 0.7 || RPD: 44	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	77653-1	0.75 || 0.46 || RPD: 48	LCS-5	97%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	0.5 || 0.3 || RPD: 50	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	77653-1	0.5 || 0.3 || RPD: 50	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012 subset	108	77653-1	106 || 107 || RPD: 1	LCS-5	102%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			23/08/2012	77653-1	23/08/2012 || 23/08/2012	LCS-5	23/08/2012
Date analysed	-			25/08/2012	77653-1	25/08/2012 || 25/08/2012	LCS-5	25/08/2012
HCB	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	LCS-5	90%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	LCS-5	100%
Heptachlor	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	LCS-5	86%
delta-BHC	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	LCS-5	95%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	LCS-5	99%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	LCS-5	100%
Dieldrin	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	LCS-5	126%
Endrin	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	LCS-5	114%
pp-DDD	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	LCS-5	112%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	LCS-5	94%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	97	77653-1	99 || 93 || RPD: 6	LCS-5	98%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			23/08/2012	77653-1	23/08/2012 || 23/08/2012	LCS-5	23/08/2012
Date analysed	-			25/08/2012	77653-1	25/08/2012 || 25/08/2012	LCS-5	25/08/2012
Diazinon	mg/kg	0.1	Org-008	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	Org-008	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	Org-008	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	77653-1	<0.1 || <0.1	LCS-5	102%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	77653-1	<0.1 || <0.1	LCS-5	108%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	77653-1	<0.1 || <0.1	LCS-5	117%
Surrogate TCMX	%		Org-008	97	77653-1	99 || 93 || RPD: 6	LCS-5	92%
QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			23/08/2012	77653-1	23/08/2012 || 23/08/2012	LCS-5	23/08/2012
Date analysed	-			25/08/2012	77653-1	25/08/2012 || 25/08/2012	LCS-5	25/08/2012
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	77653-1	<0.1 || <0.1	LCS-5	108%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	77653-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	97	77653-1	99 || 93 || RPD: 6	LCS-5	88%
QUALITY CONTROL Total Phenolics in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			25/08/2012	77653-1	25/08/2012 || 25/08/2012	LCS-1	25/08/2012
Date analysed	-			25/08/2012	77653-1	25/08/2012 || 25/08/2012	LCS-1	25/08/2012
Total Phenolics (as Phenol)	mg/kg	5	Inorg-030	<5	77653-1	<5 || <5	LCS-1	80%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date digested	-			23/08/2012	77653-1	23/08/2012 || 23/08/2012	LCS-1	23/08/2012
Date analysed	-			23/08/2012	77653-1	23/08/2012 || 23/08/2012	LCS-1	23/08/2012
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	77653-1	7 || 10 || RPD: 35	LCS-1	88%
Cadmium	mg/kg	0.5	Metals-020 ICP-AES	<0.5	77653-1	1.2 || 1.3 || RPD: 8	LCS-1	95%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	77653-1	24 || 19 || RPD: 23	LCS-1	92%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	77653-1	150 || 110 || RPD: 31	LCS-1	90%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	77653-1	150 || 140 || RPD: 7	LCS-1	90%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	77653-1	0.3 || 0.3 || RPD: 0	LCS-1	99%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	77653-1	32 || 27 || RPD: 17	LCS-1	92%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	77653-1	330 || 230 || RPD: 36	LCS-1	91%

QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]

QUALITY CONTROL Asbestos ID - soils	UNITS	PQL	METHOD	Blank
Date analysed	-			[NT]

QUALITY CONTROL Miscellaneous Inorg - soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			23/08/2012	[NT]	[NT]	LCS-1	23/08/2012
Date analysed	-			23/08/2012	[NT]	[NT]	LCS-1	23/08/2012
Ammonia as N in soil	mg/kg	0.5	Inorg-057	<0.5	[NT]	[NT]	LCS-1	104%

QUALITY CONTROL Micro testing in soil	UNITS	PQL	METHOD	Blank
Date testing started	-			[NT]
Date testing completed	-			[NT]
Faecal Coliforms in soil*	CFU/100 g	200	Ext-008	<200

QUALITY CONTROL vTRH & BTEX in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	77653-11	23/08/2012 || 23/08/2012	77653-2	23/08/2012
Date analysed	-	77653-11	24/08/2012 || 24/08/2012	77653-2	24/08/2012
vTRH C_6 - C_9	mg/kg	77653-11	<25 || <25	77653-2	94%
Benzene	mg/kg	77653-11	<0.2 || <0.2	77653-2	78%
Toluene	mg/kg	77653-11	<0.5 || <0.5	77653-2	95%
Ethylbenzene	mg/kg	77653-11	<1 || <1	77653-2	94%
m+p-xylene	mg/kg	77653-11	<2 || <2	77653-2	102%
o-Xylene	mg/kg	77653-11	<1 || <1	77653-2	105%
Surrogate aaa-Trifluorotoluene	%	77653-11	92 || 91 || RPD: 1	77653-2	98%

QUALITY CONTROL sTRH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	77653-11	23/08/2012 || 23/08/2012	77653-2	23/08/2012
Date analysed	-	77653-11	24/08/2012 || 24/08/2012	77653-2	24/08/2012
$TRHC_{10}$ - C_{14}	mg/kg	77653-11	<50 || <50	77653-2	99%
$TRHC_{15}$ - C_{28}	mg/kg	77653-11	<100 || <100	77653-2	115%
$TRHC_{29}$ - C_{36}	mg/kg	77653-11	<100 || <100	77653-2	94%
Surrogate o-Terphenyl	%	77653-11	83 || 86 || RPD: 4	77653-2	71%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	77653-11	23/08/2012 || 23/08/2012	77653-2	23/08/2012
Date analysed	-	77653-11	24/08/2012 || 24/08/2012	77653-2	24/08/2012
Naphthalene	mg/kg	77653-11	<0.1 || <0.1	77653-2	93%
Acenaphthylene	mg/kg	77653-11	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	77653-11	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	77653-11	<0.1 || <0.1	77653-2	88%
Phenanthrene	mg/kg	77653-11	<0.1 || <0.1	77653-2	93%
Anthracene	mg/kg	77653-11	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	77653-11	<0.1 || <0.1	77653-2	89%
Pyrene	mg/kg	77653-11	<0.1 || <0.1	77653-2	90%
Benzo(a)anthracene	mg/kg	77653-11	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	77653-11	<0.1 || <0.1	77653-2	89%
Benzo(b+k)fluoranthene	mg/kg	77653-11	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	77653-11	<0.05 || <0.05	77653-2	84%
Indeno(1,2,3-c,d)pyrene	mg/kg	77653-11	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	77653-11	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	77653-11	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%	77653-11	106 || 107 || RPD: 1	77653-2	99%

Client Reference: 73112, Flower Power

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	77653-2	23/08/2012
Date analysed	-	[NT]	[NT]	77653-2	25/08/2012
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	77653-2	84%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	77653-2	95%
Heptachlor	mg/kg	[NT]	[NT]	77653-2	84%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	77653-2	90%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	77653-2	94%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	77653-2	90%
Dieldrin	mg/kg	[NT]	[NT]	77653-2	123%
Endrin	mg/kg	[NT]	[NT]	77653-2	110%
pp-DDD	mg/kg	[NT]	[NT]	77653-2	105%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	77653-2	88%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	77653-2	89%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	77653-2	23/08/2012
Date analysed	-	[NT]	[NT]	77653-2	25/08/2012
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	[NT]	[NT]	77653-2	102%
Fenitrothion	mg/kg	[NT]	[NT]	77653-2	105%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	77653-2	117%
Surrogate TCMX	%	[NT]	[NT]	77653-2	94%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	77653-2	23/08/2012
Date analysed	-	[NT]	[NT]	77653-2	25/08/2012
Arochlor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	[NT]	[NT]	77653-2	108%
Arochlor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	77653-2	90%
QUALITY CONTROL Total Phenolics in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	77653-16	25/08/2012 || 25/08/2012	77653-2	25/08/2012
Date analysed	-	77653-16	25/08/2012 || 25/08/2012	77653-2	25/08/2012
Total Phenolics (as Phenol)	mg/kg	77653-16	<5 || <5	77653-2	75%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	77653-11	23/08/2012 || 23/08/2012	LCS-2	23/08/2012
Date analysed	-	77653-11	23/08/2012 || 23/08/2012	LCS-2	23/08/2012
Arsenic	mg/kg	77653-11	4 || 5 || RPD: 22	LCS-2	89%
Cadmium	mg/kg	77653-11	<0.5 || <0.5	LCS-2	97%
Chromium	mg/kg	77653-11	10 || 16 || RPD: 46	LCS-2	94%
Copper	mg/kg	77653-11	40 || 41 || RPD: 2	LCS-2	91%
Lead	mg/kg	77653-11	9 || 16 || RPD: 56	LCS-2	90%
Mercury	mg/kg	77653-11	<0.1 || <0.1	LCS-2	101%
Nickel	mg/kg	77653-11	30 || 35 || RPD: 15	LCS-2	93%
Zinc	mg/kg	77653-11	28 || 32 || RPD: 13	LCS-2	92%

Client Reference: 73112, Flower Power

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	77653-2	23/08/2012
Date analysed	-	[NT]	[NT]	77653-2	23/08/2012
Arsenic	mg/kg	[NT]	[NT]	77653-2	71%
Cadmium	mg/kg	[NT]	[NT]	77653-2	77%
Chromium	mg/kg	[NT]	[NT]	77653-2	84%
Copper	mg/kg	[NT]	[NT]	77653-2	#
Lead	mg/kg	[NT]	[NT]	77653-2	125%
Mercury	mg/kg	[NT]	[NT]	77653-2	92%
Nickel	mg/kg	[NT]	[NT]	77653-2	87%
Zinc	mg/kg	[NT]	[NT]	77653-2	#

Report Comments:

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.

Faecal Coliforms in soil analysed by Sonic Food & Water Testing. Report No.W1211791.

Acid Extractable Metals in Soil:# Percent recovery is not possible to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteriae has been exceeded for 77653-11 for Pb. Therefore a triplicate result has been issued as laboratory sample number 77653-20.

PAH in soil: The RPD for duplicate results is accepted due to the non homogenous nature of the sample/s.

Asbestos ID was analysed by Approved Identifier: Paul Ching
Asbestos ID was authorised by Approved Signatory: Paul Ching

INS: Insufficient sample for this test
NA: Test not required
<: Less than

PQL: Practical Quantitation Limit
RPD: Relative Percent Difference
>: Greater than

NT: Not tested
NA: Test not required
LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

Douglas Partners
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CHAIN OF CUSTODY

Project Name: FLOWER POWER
Project No: 73112 Sampler: RWL, SRP
Project Mgr: LR Mob. Phone: ~~0434561888~~ 0407630549
Email: Richard.lamont@douglaspartners.com.au
Date Required: 1 wk Lab Quote No.

To: Envirolab Services
12 Ashley Street, Chatswood NSW 2068
Attn: Tania Notaras
Phone: 02 9910 6200 Fax: 02 9910 6201
Email: tnotaras@envirolabservices.com.au

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 77653
Date Received: 20.08.12
Time Received: 15.50
Received by: Jia Lin
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Sample ID	Sample Depth	Lab ID	Sampling Date	S - soil W - water	Container type	COMBO 8A	COMBO 3	AMMONIA	Forensic calculations					Notes
BH1	0.4-0.5	1	16/8/12	S	G	X								
"	1.0-1.2	2	"	"	"	X								
BH2	1.8-2.0	3	"	"	"	X		X	X	—	Will			RING 21/8/12 TO CONFIRM THESE
BH2	2.8-3.0	4	"	"	"	X		X	X					TESTS. — need to
BH3	1.2-1.5	5	17/8/12	"	"	X								analyse.
BH9	~~0.2-0.4~~ ⇒ 0.0-0.2	6	"	"	"	X								
BH4	0.4-0.6	7	16/8/12	"	"		X							
BH5	0.3-0.5	8	"	"	"	X								
BH6	0.2-0.4	9	"	"	"	X								
"	1.5-1.7	10	"	"	"	X								
BH7	0.2-0.4	11	17/8/12	"	"		X							
BH8	0.3-0.4	12	"	"	"		X							

Lab Report No.
Send Results to: Douglas Partners Address: 96 Hermitage Road, West Ryde 2114
Phone: (02) 9809 0666
Fax: (02) 9809 4095

Relinquished by: Spitalieri	Signed:	Date & Time: 20/8/12	Received By: Jia Lin	Date & Time: 20.08.12.
Relinquished by:	Signed:	Date & Time:	Received By:	Date & Time:

Douglas Partners
Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

Project Name: .....
Project No: ..... Sampler: RJL.....
Project Mgr: .....Mob. Phone:0434561888 .....
Email: Richard.lamont@douglaspartners.com.au .....
Date Required: ..... Lab Quote No. .....

To: Envirolab Services
12 Ashley Street, Chatswood NSW 2068
Attn: Tania Notaras
Phone: 02 9910 6200 Fax: 02 9910 6201
Email: tnotaras@envirolabservices.com.au

Sample ID	Sample Depth	Lab ID	Sampling Date	S - soil W – water	Container type	COMBO 8A	COMBO 3							Notes
BH9	0.4-0.5	13	17/8/12	S	G	X								
BH10	0.0-0.2	14	"	"	"		X							
"	0.4-0.5	15	"	"	"		X							
BD4	/	16	/	"	"	X								
BD10	/	17	/	"	"	X								
TS/160812	/	18	/			BTEX								
TB/160812	/	19	/	/	/	"								

Lab Report No. .....
Send Results to: Douglas Partners Address: 96 Hermitage Road, West Ryde 2114 Phone: (02) 9809 0666 Fax: (02) 9809 4095

Relinquished by:	Signed:	Date & Time:	Received By:	Date & Time:
Relinquished by:	Signed:	Date & Time:	Received By:	Date & Time:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 77653-A

Client:
Douglas Partners
96 Hermitage Rd
West Ryde
NSW 2114

Attention: James Pitcher

Sample log in details:

Your Reference:	**73112, Flower Power**
No. of samples:	Additional testing on 6 soils
Date samples received / completed instructions received	20/08/2012 / 29/08/12

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	31/08/12 / 31/08/12
Date of Preliminary Report:	Not issued

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Results Approved By:

Jacinta Hurst
Laboratory Manager

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	77653-A-1 BH1 0.4-0.5 16/08/2012 Soil	77653-A-2 BH1 1.0-1.2 16/08/2012 Soil	77653-A-3 BH2 1.8-2.0 16/08/2012 Soil	77653-A-4 BH2 2.8-3.0 16/08/2012 Soil	77653-A-13 BH9 0.4-0.5 17/08/2012 Soil
Date extracted	-	30/08/2012	30/08/2012	30/08/2012	30/08/2012	30/08/2012
Date analysed	-	30/08/2012	30/08/2012	30/08/2012	30/08/2012	30/08/2012
Dichlorodifluoromethane	mg/kg	<1	<1	<1	<1	<1
Chloromethane	mg/kg	<1	<1	<1	<1	<1
Vinyl Chloride	mg/kg	<1	<1	<1	<1	<1
Bromomethane	mg/kg	<1	<1	<1	<1	<1
Chloroethane	mg/kg	<1	<1	<1	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1	<1	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1	<1	<1	<1
trans-1,2-dichloroethene	mg/kg	<1	<1	<1	<1	<1
1,1-dichloroethane	mg/kg	<1	<1	<1	<1	<1
cis-1,2-dichloroethene	mg/kg	<1	<1	<1	<1	<1
bromochloromethane	mg/kg	<1	<1	<1	<1	<1
chloroform	mg/kg	<1	<1	<1	<1	<1
2,2-dichloropropane	mg/kg	<1	<1	<1	<1	<1
1,2-dichloroethane	mg/kg	<1	<1	<1	<1	<1
1,1,1-trichloroethane	mg/kg	<1	<1	<1	<1	<1
1,1-dichloropropene	mg/kg	<1	<1	<1	<1	<1
Cyclohexane	mg/kg	<1	<1	<1	<1	<1
carbon tetrachloride	mg/kg	<1	<1	<1	<1	<1
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
dibromomethane	mg/kg	<1	<1	<1	<1	<1
1,2-dichloropropane	mg/kg	<1	<1	<1	<1	<1
trichloroethene	mg/kg	<1	<1	<1	<1	<1
bromodichloromethane	mg/kg	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	mg/kg	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	mg/kg	<1	<1	<1	<1	<1
1,1,2-trichloroethane	mg/kg	<1	<1	<1	<1	<1
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1	<1	<1	<1	<1
dibromochloromethane	mg/kg	<1	<1	<1	<1	<1
1,2-dibromoethane	mg/kg	<1	<1	<1	<1	<1
tetrachloroethene	mg/kg	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	mg/kg	<1	<1	<1	<1	<1
chlorobenzene	mg/kg	<1	<1	<1	<1	<1
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
bromoform	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
styrene	mg/kg	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	mg/kg	<1	<1	<1	<1	<1
o-Xylene	mg/kg	<1	<1	<1	<1	<1

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	77653-A-1 BH1 0.4-0.5 16/08/2012 Soil	77653-A-2 BH1 1.0-1.2 16/08/2012 Soil	77653-A-3 BH2 1.8-2.0 16/08/2012 Soil	77653-A-4 BH2 2.8-3.0 16/08/2012 Soil	77653-A-13 BH9 0.4-0.5 17/08/2012 Soil
1,2,3-trichloropropane	mg/kg	<1	<1	<1	<1	<1
isopropylbenzene	mg/kg	<1	<1	<1	<1	<1
bromobenzene	mg/kg	<1	<1	<1	<1	<1
n-propyl benzene	mg/kg	<1	<1	<1	<1	<1
2-chlorotoluene	mg/kg	<1	<1	<1	<1	<1
4-chlorotoluene	mg/kg	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	mg/kg	<1	<1	<1	<1	<1
tert-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	mg/kg	<1	<1	<1	<1	<1
1,3-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
sec-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,4-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
4-isopropyl toluene	mg/kg	<1	<1	<1	<1	<1
1,2-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
n-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	mg/kg	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	mg/kg	<1	<1	<1	<1	<1
hexachlorobutadiene	mg/kg	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	mg/kg	<1	<1	<1	<1	<1
Surrogate Dibromofluorometha	%	97	98	97	97	97
Surrogate aaa-Trifluorotoluene	%	112	116	110	110	122
Surrogate Toluene-d_8	%	100	99	99	99	98
Surrogate 4-Bromofluorobenzene	%	98	97	99	96	95

VOCs in soil		
Our Reference:	UNITS	77653-A-16
Your Reference	----------	BD4
Depth	----------	-
Date Sampled		17/08/2012
Type of sample		Soil
Date extracted	-	30/08/2012
Date analysed	-	30/08/2012
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<1
trans-1,2-dichloroethene	mg/kg	<1
1,1-dichloroethane	mg/kg	<1
cis-1,2-dichloroethene	mg/kg	<1
bromochloromethane	mg/kg	<1
chloroform	mg/kg	<1
2,2-dichloropropane	mg/kg	<1
1,2-dichloroethane	mg/kg	<1
1,1,1-trichloroethane	mg/kg	<1
1,1-dichloropropene	mg/kg	<1
Cyclohexane	mg/kg	<1
carbon tetrachloride	mg/kg	<1
Benzene	mg/kg	<0.2
dibromomethane	mg/kg	<1
1,2-dichloropropane	mg/kg	<1
trichloroethene	mg/kg	<1
bromodichloromethane	mg/kg	<1
trans-1,3-dichloropropene	mg/kg	<1
cis-1,3-dichloropropene	mg/kg	<1
1,1,2-trichloroethane	mg/kg	<1
Toluene	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<1
dibromochloromethane	mg/kg	<1
1,2-dibromoethane	mg/kg	<1
tetrachloroethene	mg/kg	<1
1,1,1,2-tetrachloroethane	mg/kg	<1
chlorobenzene	mg/kg	<1
Ethylbenzene	mg/kg	<1
bromoform	mg/kg	<1
m+p-xylene	mg/kg	<2
styrene	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
o-Xylene	mg/kg	<1
1,2,3-trichloropropane	mg/kg	<1

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ---------- 	 77653-A-16 BD4 - 17/08/2012 Soil
isopropylbenzene	mg/kg	<1
bromobenzene	mg/kg	<1
n-propyl benzene	mg/kg	<1
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3,5-trimethyl benzene	mg/kg	<1
tert-butyl benzene	mg/kg	<1
1,2,4-trimethyl benzene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
sec-butyl benzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
4-isopropyl toluene	mg/kg	<1
1,2-dichlorobenzene	mg/kg	<1
n-butyl benzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	97
Surrogate aaa-Trifluorotoluene	%	121
Surrogate Toluene-d_8	%	99
Surrogate 4-Bromofluorobenzene	%	95

Method ID	Methodology Summary
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.

QUALITY CONTROL VOCs in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			30/08/2012	77653-A-1	30/08/2012 || 30/08/2012	LCS-1	30/08/2012
Date analysed	-			30/08/2012	77653-A-1	30/08/2012 || 30/08/2012	LCS-1	30/08/2012
Dichlorodifluoromethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
Chloromethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
Vinyl Chloride	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
Bromomethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
Chloroethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
Trichlorofluoromethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,1-Dichloroethene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,1-dichloroethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	LCS-1	100%
cis-1,2-dichloroethene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
bromochloromethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
chloroform	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	LCS-1	104%
2,2-dichloropropane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,2-dichloroethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	LCS-1	84%
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	LCS-1	93%
1,1-dichloropropene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
Cyclohexane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
carbon tetrachloride	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
Benzene	mg/kg	0.2	Org-014	<0.2	77653-A-1	<0.2 || <0.2	[NR]	[NR]
dibromomethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,2-dichloropropane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
trichloroethene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	LCS-1	86%
bromodichloromethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	LCS-1	103%
trans-1,3-dichloropropene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
Toluene	mg/kg	0.5	Org-014	<0.5	77653-A-1	<0.5 || <0.5	[NR]	[NR]
1,3-dichloropropane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
dibromochloromethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	LCS-1	101%
1,2-dibromoethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
tetrachloroethene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	LCS-1	97%
1,1,1,2-tetrachloroethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
chlorobenzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
Ethylbenzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
bromoform	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
m+p-xylene	mg/kg	2	Org-014	<2	77653-A-1	<2 || <2	[NR]	[NR]
styrene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
o-Xylene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]

QUALITY CONTROL VOCs in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
isopropylbenzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
bromobenzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
n-propyl benzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
2-chlorotoluene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
4-chlorotoluene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
tert-butyl benzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
sec-butyl benzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
4-isopropyl toluene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
n-butyl benzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
hexachlorobutadiene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	1	Org-014	<1	77653-A-1	<1 || <1	[NR]	[NR]
Surrogate Dibromofluorometha	%		Org-014	98	77653-A-1	97 || 97 || RPD: 0	LCS-1	101%
Surrogate aaa-Trifluorotoluene	%		Org-014	118	77653-A-1	112 || 119 || RPD: 6	LCS-1	120%
Surrogate Toluene-d_8	%		Org-014	100	77653-A-1	100 || 99 || RPD: 1	LCS-1	101%
Surrogate 4-Bromofluorobenzene	%		Org-014	97	77653-A-1	98 || 97 || RPD: 1	LCS-1	100%

QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	77653-A-2	30/08/2012
Date analysed	-	[NT]	[NT]	77653-A-2	30/08/2012
Dichlorodifluoromethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Chloromethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	mg/kg	[NT]	[NT]	[NR]	[NR]
Bromomethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Chloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	mg/kg	[NT]	[NT]	[NR]	[NR]
1,1-Dichloroethene	mg/kg	[NT]	[NT]	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	mg/kg	[NT]	[NT]	77653-A-2	92%
cis-1,2-dichloroethene	mg/kg	[NT]	[NT]	[NR]	[NR]
bromochloromethane	mg/kg	[NT]	[NT]	[NR]	[NR]
chloroform	mg/kg	[NT]	[NT]	77653-A-2	97%
2,2-dichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	mg/kg	[NT]	[NT]	77653-A-2	81%

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QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
1,1,1-trichloroethane	mg/kg	[NT]	[NT]	77653-A-2	85%
1,1-dichloropropene	mg/kg	[NT]	[NT]	[NR]	[NR]
Cyclohexane	mg/kg	[NT]	[NT]	[NR]	[NR]
carbon tetrachloride	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
dibromomethane	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
trichloroethene	mg/kg	[NT]	[NT]	77653-A-2	80%
bromodichloromethane	mg/kg	[NT]	[NT]	77653-A-2	92%
trans-1,3-dichloropropene	mg/kg	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Toluene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
dibromochloromethane	mg/kg	[NT]	[NT]	77653-A-2	89%
1,2-dibromoethane	mg/kg	[NT]	[NT]	[NR]	[NR]
tetrachloroethene	mg/kg	[NT]	[NT]	77653-A-2	90%
1,1,1,2-tetrachloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
chlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
bromoform	mg/kg	[NT]	[NT]	[NR]	[NR]
m+p-xylene	mg/kg	[NT]	[NT]	[NR]	[NR]
styrene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
o-Xylene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
isopropylbenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
bromobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	mg/kg	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
tert-butyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
sec-butyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]

Client Reference: 73112, Flower Power

QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
1,2,4-trichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
hexachlorobutadiene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluorometha	%	[NT]	[NT]	77653-A-2	100%
Surrogate aaa- Trifluorotoluene	%	[NT]	[NT]	77653-A-2	114%
Surrogate Toluene-d_8	%	[NT]	[NT]	77653-A-2	101%
Surrogate 4- Bromofluorobenzene	%	[NT]	[NT]	77653-A-2	97%

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

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CHAIN OF CUSTODY

Project Name: FLOWER POWER
Project No: 73112 Sampler: RWL, SRP
Project Mgr: LR Mob. Phone: ~~0434564888~~ 0407630549
Email: ~~Richard.lamont@douglaspartners.com.au~~ Richard.lamont@douglaspartners.com.au
Date Required: 1 wk Lab Quote No.

To: Envirolab Services
12 Ashley Street, Chatswood NSW 2068
Attn: Tania Notaras
Phone: 02 9910 6200 Fax: 02 9910 6201
Email: tnotaras@envirolabservices.com.au

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 77653 A
Date Received: 20.08.12
Time Received: 15.50
Received by: Jia Lin
Temp: Cool/Ambient
Cooling: Ice/Gel Pack
Security: Intact/Broken/None

Sample ID	Sample Depth	Lab ID	Sampling Date	S - soil W - water	Container type	Combo 8A	Combo 3	Ammonia	Forecast coliforms			VOC's (2 days)		Notes
BH1	0.4-0.5	1	16/8/12	S	G	X						X		
"	1.0-1.2	2	"	"	"	X						X		
BH2	1.8-2.0	3	"	"	"	X		X	X			X will		RING 21/8/12 TO CONFIRM THESE TESTS — need to analyse.
BH2	2.8-3.0	4	"	"	"	X		X	X			X		
BH3	1.2-1.5	5	17/8/12	"	"	X								
BH9	~~0.2-0.4~~ 0.0-0.2	6	"	"	"	X								
BH4	0.4-0.6	7	16/8/12	"	"		X							
BH5	0.3-0.5	8	"	"	"	X								
BH6	0.2-0.4	9	"	"	"	X								
"	1.5-1.7	10	"	"	"	X								
BH7	0.2-0.4	11	17/8/12	"	"		X							
BH8	0.3-0.4	12	"	"	"		X							

Lab Report No.
Send Results to: Douglas Partners Address: 96 Hermitage Road, West Ryde 2114
Phone: (02) 9809 0666
Fax: (02) 9809 4095

Relinquished by: COURIER	Signed:	Date & Time: 20/8/12	Received By: Jia Lin	Date & Time: 20.08.12.
Relinquished by:	Signed:	Date & Time:	Received By:	Date & Time:

Page ___ of ___

Douglas Partners
Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

Project Name: .....
Project No: ..... Sampler: RJL.....
Project Mgr: .....Mob. Phone:0434561888 .....
Email: Richard.lamont@douglaspartners.com.au .....
Date Required: ..... Lab Quote No. .....

To: Envirolab Services
12 Ashley Street, Chatswood NSW 2068
Attn: Tania Notaras
Phone: 02 9910 6200 Fax: 02 9910 6201
Email: tnotaras@envirolabservices.com.au

Sample ID	Sample Depth	Lab ID	Sampling Date	S - soil W – water	Container type	COMBO 8a	COMBO 3	VOCs (2 day)						Notes
BH9	0.4-0.5	13	17/8/12	S	G	X		X						
BH10	0.0-0.2	14	"	"	"		X							
"	0.4-0.5	15	"	"	"		X							
BD4	~	16	~	"	"	X		X						
TB10	~	17	~	"	"	X								
TB/16/8/12	~	18	~	~	~	BTEX								
TB/16/8/12	~	19	~	~	~	~								

Lab Report No. .....
Send Results to: Douglas Partners Address: 96 Hermitage Road, West Ryde 2114
Phone: (02) 9809 0666
Fax: (02) 9809 4095

Relinquished by:	Signed:	Date & Time:	Received By:	Date & Time:
Relinquished by:	Signed:	Date & Time:	Received By:	Date & Time:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 77740

Client:
Douglas Partners
96 Hermitage Rd
West Ryde
NSW 2114

Attention: James Pitcher

Sample log in details:

Your Reference:	**73112, Flower Power**
No. of samples:	5 Waters
Date samples received / completed instructions received	21/08/2012 / 21/08/2012

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	29/08/12 / 30/08/12
Date of Preliminary Report:	Not Issued

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Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Jacinta Hurst
Laboratory Manager

Nick Sarlamis
Inorganics Supervisor

vTRH & BTEX in Water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	77740-1 BH3 21/08/2012 Water	77740-2 BH6 21/08/2012 Water	77740-3 BD1/210812 21/08/2012 Water	77740-4 TS/210812 21/08/2012 Water	77740-5 TB/210812 21/08/2012 Water
Date extracted	-	22/08/2012	22/08/2012	22/08/2012	22/08/2012	22/08/2012
Date analysed	-	22/08/2012	22/08/2012	22/08/2012	22/08/2012	22/08/2012
TRHC$_6$ - C$_9$	µg/L	<10	<10	<10	[NA]	<10
Benzene	µg/L	<1	<1	[NA]	106%	<1
Toluene	µg/L	<1	<1	[NA]	84%	<1
Ethylbenzene	µg/L	<1	<1	[NA]	97%	<1
m+p-xylene	µg/L	<2	<2	[NA]	102%	<2
o-xylene	µg/L	<1	<1	[NA]	101%	<1
Surrogate Dibromofluoromethane	%	95	110	114	100	103
Surrogate toluene-d8	%	85	95	94	87	85
Surrogate 4-BFB	%	90	88	88	104	89

sTRH in Water (C10-C36)				
Our Reference:	UNITS	77740-1	77740-2	77740-3
Your Reference	----------	BH3	BH6	BD1/210812
Date Sampled	----------	21/08/2012	21/08/2012	21/08/2012
Type of sample		Water	Water	Water
Date extracted	-	22/08/2012	22/08/2012	22/08/2012
Date analysed	-	22/08/2012	22/08/2012	22/08/2012
TRHC$_{10}$ - C$_{14}$	µg/L	82	<50	<50
TRHC$_{15}$ - C$_{28}$	µg/L	170	<100	<100
TRHC$_{29}$ - C$_{36}$	µg/L	<100	<100	<100
Surrogate o-Terphenyl	%	92	90	96

PAHs in Water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	77740-1 BH3 21/08/2012 Water	77740-2 BH6 21/08/2012 Water
Date extracted	-	22/08/2012	22/08/2012
Date analysed	-	23/08/2012	23/08/2012
Naphthalene	µg/L	<1	<1
Acenaphthylene	µg/L	<1	<1
Acenaphthene	µg/L	<1	<1
Fluorene	µg/L	<1	<1
Phenanthrene	µg/L	<1	<1
Anthracene	µg/L	<1	<1
Fluoranthene	µg/L	<1	<1
Pyrene	µg/L	<1	<1
Benzo(a)anthracene	µg/L	<1	<1
Chrysene	µg/L	<1	<1
Benzo(b+k)fluoranthene	µg/L	<2	<2
Benzo(a)pyrene	µg/L	<1	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1	<1
Dibenzo(a,h)anthracene	µg/L	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	<1
Surrogate p-Terphenyl-d_{14}	%	123	119

OCP in water - trace level Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	77740-1 BH3 21/08/2012 Water	77740-2 BH6 21/08/2012 Water
Date extracted	-	28/08/2012	28/08/2012
Date analysed	-	28/08/2012	28/08/2012
HCB	µg/L	<0.001	<0.001
Heptachlor	µg/L	<0.001	<0.001
Heptachlor Epoxide	µg/L	<0.001	<0.001
Aldrin	µg/L	<0.001	<0.001
gamma-BHC (Lindane)	µg/L	<0.001	<0.001
alpha-BHC	µg/L	<0.001	<0.001
beta-BHC	µg/L	<0.001	<0.001
delta-BHC	µg/L	<0.001	<0.001
trans-Chlordane	µg/L	<0.001	<0.001
cis-Chlordane	µg/L	<0.001	<0.001
Oxychlordane	µg/L	<0.001	<0.001
Dieldrin	µg/L	<0.001	<0.001
p,p-DDE	µg/L	<0.001	<0.001
p,p-DDD	µg/L	<0.001	<0.001
p,p-DDT	µg/L	<0.001	<0.001
Endrin	µg/L	<0.001	<0.001
Endrin Aldehyde	µg/L	<0.001	<0.001
Endrin Ketone	µg/L	<0.001	<0.001
alpha-Endosulfan	µg/L	<0.001	<0.001
beta-Endosulfan	µg/L	<0.001	<0.001
Endosulfan Sulfate	µg/L	<0.001	<0.001
Methoxychlor	µg/L	<0.001	<0.001
Surrogate OC Recovery	%	86	93

OP Pesticides -Trace Level Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	77740-1 BH3 21/08/2012 Water	77740-2 BH6 21/08/2012 Water
Date extracted	-	28/08/2012	28/08/2012
Date analysed	-	28/08/2012	28/08/2012
Demeton-S-methyl	µg/L	<0.01	<0.01
Dichlorvos	µg/L	<0.01	<0.01
Diazinon	µg/L	<0.01	<0.01
Dimethoate	µg/L	<0.01	<0.01
Chlorpyrifos	µg/L	<0.01	<0.01
Chlorpyrifos methyl	µg/L	<0.01	<0.01
Malathion	µg/L	<0.01	<0.01
Fenthion	µg/L	<0.01	<0.01
Azinphos Ethyl	µg/L	<0.01	<0.01
Azinphos Methyl	µg/L	<0.01	<0.01
Chlorfenvinphos (E)	µg/L	<0.01	<0.01
Chlorfenvinphos (Z)	µg/L	<0.01	<0.01
Ethion	µg/L	<0.01	<0.01
Fenitrothion	µg/L	<0.01	<0.01
Parathion (Ethyl)	µg/L	<0.01	<0.01
Parathion (Methyl)	µg/L	<0.01	<0.01
Primiphos Ethyl	µg/L	<0.01	<0.01
Primiphos Methyl	µg/L	<0.01	<0.01
Surrogate OP Recovery - TPP	%	77	102

PCB in water - trace level Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	77740-1 BH3 21/08/2012 Water	77740-2 BH6 21/08/2012 Water
Date extracted	-	28/08/2012	28/08/2012
Date analysed	-	28/08/2012	28/08/2012
Aroclor 1016	µg/L	<0.01	<0.01
Aroclor 1221	µg/L	<0.01	<0.01
Aroclor 1232	µg/L	<0.01	<0.01
Aroclor 1242	µg/L	<0.01	<0.01
Aroclor 1248	µg/L	<0.01	<0.01
Aroclor 1254	µg/L	<0.01	<0.01
Aroclor 1260	µg/L	<0.01	<0.01
Total PCB's (as above)	µg/L	<0.01	<0.01

Total Phenolics in Water			
Our Reference:	UNITS	77740-1	77740-2
Your Reference	----------	BH3	BH6
Date Sampled	----------	21/08/2012	21/08/2012
Type of sample		Water	Water
Date extracted	-	23/08/2012	23/08/2012
Date analysed	-	23/08/2012	23/08/2012
Total Phenolics (as Phenol)	mg/L	<0.05	<0.05

HM in water - dissolved Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	77740-1 BH3 21/08/2012 Water	77740-2 BH6 21/08/2012 Water	77740-3 BD1/210812 21/08/2012 Water
Date prepared	-	22/08/2012	22/08/2012	22/08/2012
Date analysed	-	22/08/2012	22/08/2012	22/08/2012
Arsenic-Dissolved	µg/L	1	2	2
Cadmium-Dissolved	µg/L	0.3	0.1	0.2
Chromium-Dissolved	µg/L	<1	<1	<1
Copper-Dissolved	µg/L	3	<1	<1
Lead-Dissolved	µg/L	<1	<1	<1
Mercury-Dissolved	µg/L	<0.050	<0.050	<0.050
Nickel-Dissolved	µg/L	2	18	19
Zinc-Dissolved	µg/L	46	14	27

Miscellaneous Inorganics			
Our Reference:	UNITS	77740-1	77740-2
Your Reference	----------	BH3	BH6
Date Sampled	----------	21/08/2012	21/08/2012
Type of sample		Water	Water
Date prepared	-	22/08/2012	22/08/2012
Date analysed	-	22/08/2012	22/08/2012
pH	pH Units	7.2	6.6

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Ext-020	Analysis subcontracted to Australian Government - National Measurement Institute. NATA Accreditation No: 198
Inorg-030	Total Phenolics - determined colorimetrically following disitillation, based upon APHA 22nd ED 5530 D.
Metals-022 ICP-MS	Determination of various metals by ICP-MS.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA 22nd ED, 4500-H+.

QUALITY CONTROL vTRH & BTEX in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			22/08/2012	[NT]	[NT]	LCS-W1	22/08/2012
Date analysed	-			22/08/2012	[NT]	[NT]	LCS-W1	22/08/2012
$TRHC_6$ - C_9	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	104%
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	122%
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	102%
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	98%
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	LCS-W1	100%
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	98%
Surrogate Dibromofluoromethane	%		Org-016	92	[NT]	[NT]	LCS-W1	104%
Surrogate toluene-d8	%		Org-016	103	[NT]	[NT]	LCS-W1	99%
Surrogate 4-BFB	%		Org-016	101	[NT]	[NT]	LCS-W1	102%
QUALITY CONTROL sTRH in Water (C10-C36)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			22/08/2012	[NT]	[NT]	LCS-W3	22/08/2012
Date analysed	-			22/08/2012	[NT]	[NT]	LCS-W3	22/08/2012
$TRHC_{10}$ - C_{14}	µg/L	50	Org-003	<50	[NT]	[NT]	LCS-W3	106%
$TRHC_{15}$ - C_{28}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W3	117%
$TRHC_{29}$ - C_{36}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W3	103%
Surrogate o-Terphenyl	%		Org-003	95	[NT]	[NT]	LCS-W3	127%
QUALITY CONTROL PAHs in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			22/08/2012	[NT]	[NT]	LCS-W1	22/08/2012
Date analysed	-			23/08/2012	[NT]	[NT]	LCS-W1	23/08/2012
Naphthalene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	75%
Acenaphthylene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Fluorene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	94%
Phenanthrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	88%
Anthracene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	87%
Pyrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	88%
Benzo(a)anthracene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL PAHs in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Chrysene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	92%
Benzo(b+k)fluoranthene	µg/L	2	Org-012 subset	<2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	95%
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012 subset	110	[NT]	[NT]	LCS-W1	81%

QUALITY CONTROL OCP in water - trace level	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			28/08/2012	[NT]	[NT]	LCS-W1	28/08/2012
Date analysed	-			28/08/2012	[NT]	[NT]	LCS-W1	28/08/2012
HCB	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Heptachlor	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	76%
Heptachlor Epoxide	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Aldrin	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	65%
gamma-BHC (Lindane)	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	58%
alpha-BHC	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
beta-BHC	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
delta-BHC	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
trans-Chlordane	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
cis-Chlordane	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Oxychlordane	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Dieldrin	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	78%
p,p-DDE	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
p,p-DDD	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
p,p-DDT	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	80%
Endrin	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	83%
Endrin Aldehyde	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Endrin Ketone	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
alpha-Endosulfan	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
beta-Endosulfan	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulfate	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Methoxychlor	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Surrogate OC Recovery	%		Ext-020	[NT]	[NT]	[NT]	LCS-W1	75%

QUALITY CONTROL OP Pesticides - Trace Level	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			28/08/2012	[NT]	[NT]	LCS-W1	28/08/2012
Date analysed	-			28/08/2012	[NT]	[NT]	LCS-W1	28/08/2012
Demeton-S-methyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Dichlorvos	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Diazinon	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Dimethoate	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	LCS-W1	102%
Chlorpyrifos methyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Malathion	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Fenthion	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Azinphos Ethyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Azinphos Methyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Chlorfenvinphos (E)	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Chlorfenvinphos (Z)	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Ethion	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	LCS-W1	120%
Fenitrothion	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Parathion (Ethyl)	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	LCS-W1	116%
Parathion (Methyl)	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Primiphos Ethyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Primiphos Methyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Surrogate OP Recovery - TPP	%		Ext-020	[NT]	[NT]	[NT]	LCS-W1	100%

QUALITY CONTROL PCB in water - trace level	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			28/08/2012	[NT]	[NT]	LCS-W1	28/08/2012
Date analysed	-			28/08/2012	[NT]	[NT]	LCS-W1	28/08/2012
Aroclor 1016	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1260	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Total PCB's (as above)	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	LCS-W1	74%
QUALITY CONTROL Total Phenolics in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			22/08/2012	[NT]	[NT]	LCS-W1	23/08/2012
Date analysed	-			22/08/2012	[NT]	[NT]	LCS-W1	23/08/2012
Total Phenolics (as Phenol)	mg/L	0.05	Inorg-030	<0.05	[NT]	[NT]	LCS-W1	87%
QUALITY CONTROL HM in water - dissolved	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			22/08/2012	77740-2	22/08/2012 || 22/08/2012	LCS-W1	22/08/2012
Date analysed	-			22/08/2012	77740-2	22/08/2012 || 22/08/2012	LCS-W1	22/08/2012
Arsenic-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	77740-2	2 || 2 || RPD: 0	LCS-W1	99%
Cadmium-Dissolved	µg/L	0.1	Metals-022 ICP-MS	<0.1	77740-2	0.1 || 0.1 || RPD: 0	LCS-W1	105%
Chromium-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	77740-2	<1 || <1	LCS-W1	100%
Copper-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	77740-2	<1 || <1	LCS-W1	94%
Lead-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	77740-2	<1 || <1	LCS-W1	101%
Mercury-Dissolved	µg/L	0.05	Metals-021 CV-AAS	<0.050	77740-2	<0.050 || [N/T]	LCS-W1	96%
Nickel-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	77740-2	18 || 18 || RPD: 0	LCS-W1	97%
Zinc-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	77740-2	14 || 14 || RPD: 0	LCS-W1	102%

Client Reference: 73112, Flower Power

QUALITY CONTROL Miscellaneous Inorganics	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			[NT]	[NT]	[NT]	LCS-1	22/08/2012
Date analysed	-			[NT]	[NT]	[NT]	LCS-1	22/08/2012
pH	pH Units		Inorg-001	[NT]	[NT]	[NT]	LCS-1	102%

Report Comments:

OC/OP/PCB's water analysed by NMI. Report No.RN931079.

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

Douglas Partners
Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

Project Name: FLOWER POWER
Project No: 73112 Sampler: JRP
Project Mgr: LR Mob. Phone: 0407630549
Email: ~~Richard.lamont~~ JAMES.PITCHER@douglaspartners.com.au
Date Required: 1 WK Lab Quote No.

To: Envirolab Services
12 Ashley Street, Chatswood NSW 2068
Attn: Tania Notaras
Phone: 02 9910 6200 Fax: 02 9910 6201
Email: tnotaras@envirolabservices.com.au

ENVIROLAB Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 77740.
Date Received: 21/8
Time Received: 5:60
Received by: SB
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

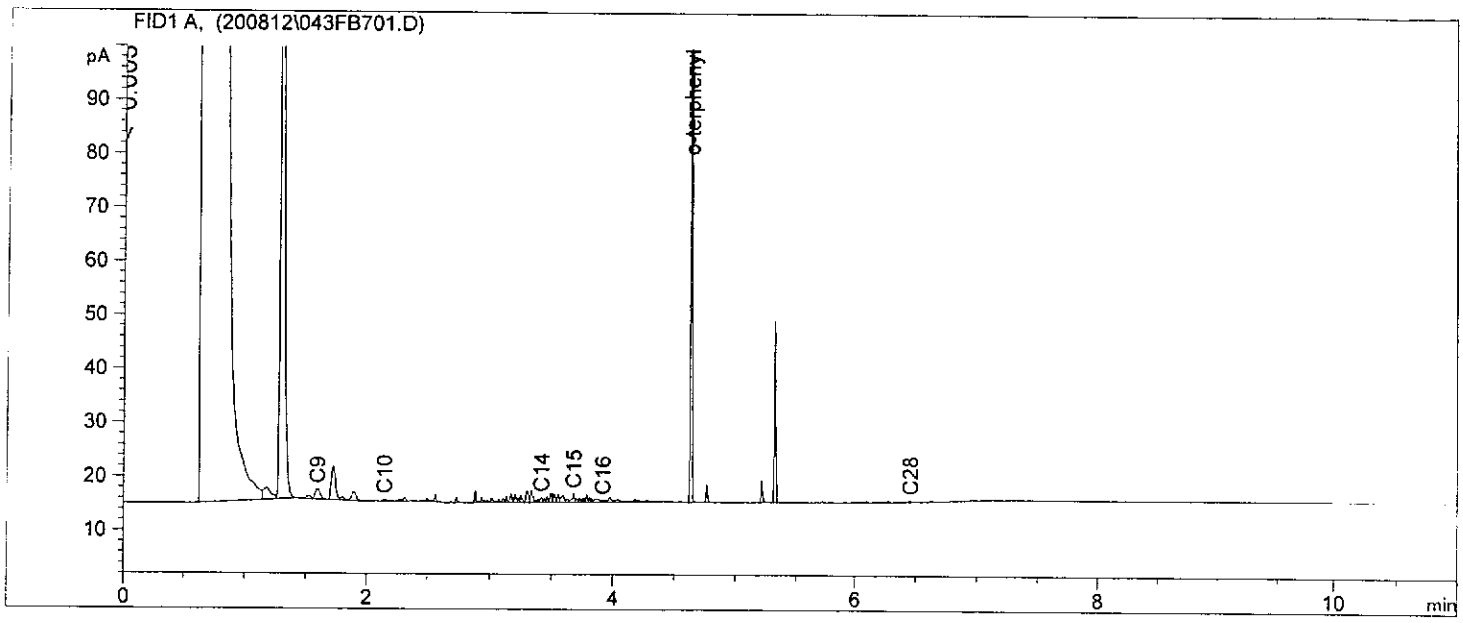
	Sample ID	Sample Depth	Lab ID	Sampling Date	S - soil W - water	Container type	Combo 8	OCP/PCB (TRACE LEVEL)	Ph.	TPH	HEAVY METALS				Notes
1	BH3	✓		21/8/12	W	PG	✓	✓	✓						
2	BH6	✓		"	W	"	✓	✓	✓						
3	BD1/210812	✓		"	W	"				✓	✓				
4	TS/210812	✓		"	W	G									
5	TB/210812	✓		"	W	G									

Lab Report No.
Send Results to: Douglas Partners Address: 96 Hermitage Road, West Ryde 2114
Phone: (02) 9809 0666
Fax: (02) 9809 4095

Relinquished by:	Signed:	Date & Time:	Received By:	Date & Time:
J. PITCHER		21/8/12		
Relinquished by:	Signed:	Date & Time:	Received By:	Date & Time:

Data File C:\DATA\08_12\200812\043FB701.D
Sample Name: 77740-1w

Acq. Operator	:	Seq. Line	: 143
Acq. Instrument	: GC#1	Location	: Vial 43
Injection Date	: 22/08/2012 8:12:25 PM	Inj	: 1
		Inj Volume	: 1 µl
Acq. Method	: C:\CHEM32\1\METHODS\NEPMNEW.M		
Last changed	: 20/08/2012 12:25:13 PM		
Analysis Method	: C:\METHODS\08_12\200812F.M		
Last changed	: 24/08/2012 4:16:47 PM		
Method Info	: FAST TPH WITH 15M HP5 COLUMNS		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, 24 August 2012 4:16:41 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [mg/L]	Grp	Name
1.599	VV	5.50332	2.10065e-1	1.15605	1	C9
2.148	BB	7.80549e-1	2.12164e-1	1.65605e-1	1	C10
3.420	VV	1.26456	2.22989e-1	2.81982e-1	1	C14
3.682	VV	2.18915	2.14504e-1	4.69581e-1	2	C15
3.919	VV	3.65630e-1	1.97622e-1	7.22566e-2	2	C16
4.640	BB	137.49701	1.99893e-1	27.48474		o-terphenyl
5.075		-	-	-		chlorooctadecane
5.723		-	-	-	2	C24
6.456	VV	2.33341e-1	2.31261e-1	5.39627e-2	2	C28
7.128		-	-	-	3	C32
7.542		-	-	-	3	C34
8.084		-	-	-	3	C36
9.863		-	-	-	3	C40

Totals : 29.68418

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 77740-A

Client:
Douglas Partners
96 Hermitage Rd
West Ryde
NSW 2114

Attention: James Pitcher

Sample log in details:

Your Reference:	**73112, Flower Power**
No. of samples:	Additional testing on 3 waters
Date samples received / completed instructions received	21/08/2012 / 29/08/12

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	30/08/12 / 30/08/12
Date of Preliminary Report:	Not issued

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Results Approved By:

Nick Sarlamis
Inorganics Supervisor

Miscellaneous Inorganics				
Our Reference:	UNITS	77740-A-1	77740-A-2	77740-A-3
Your Reference	----------	BH3	BH6	BD1/210812
Date Sampled	----------	21/08/2012	21/08/2012	21/08/2012
Type of sample		Water	Water	Water
Date prepared	-	29/08/2012	29/08/2012	29/08/2012
Date analysed	-	29/08/2012	29/08/2012	29/08/2012
Ammonia as N in water	mg/L	1.8	0.064	0.064

Method ID	Methodology Summary
Inorg-057	Ammonia - determined colourimetrically based on EPA350.1 and APHA 22nd ED 4500-NH3 F, Soils are analysed following a KCl extraction.

Client Reference: 73112, Flower Power

QUALITY CONTROL Miscellaneous Inorganics	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			29/08/2012	[NT]	[NT]	LCS-W1	29/08/2012
Date analysed	-			29/08/2012	[NT]	[NT]	LCS-W1	29/08/2012
Ammonia as N in water	mg/L	0.005	Inorg-057	<0.005	[NT]	[NT]	LCS-W1	96%

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

Jacinta Hurst

From: James Pitcher [James.Pitcher@douglaspartners.com.au]
Sent: Wednesday, 29 August 2012 10:04
To: Jacinta Hurst
Subject: DP Job 73112-ELS ref 77740

77740 A
24hrs T/A
due 3/9/18.

Jacinta,

Could we please get the 2 samples and the duplicate (3 total) tested for ammonia.

Many thanks

James

James Pitcher | Geo Environmental Engineer
Douglas Partners Pty Ltd | ABN 75 053 980 117 | www.douglaspartners.com.au
96 Hermitage Road West Ryde NSW 2114 | PO Box 472 West Ryde NSW 1685
P: 02 9809 0666 | F: 02 9809 4095 | M: 0407 630 549 | E: James.Pitcher@douglaspartners.com.au

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 77740-B

Client:
Douglas Partners
96 Hermitage Rd
West Ryde
NSW 2114

Attention: James Pitcher

Sample log in details:

Your Reference:	**73112, Flower Power**
No. of samples:	Additional testing on 2 waters
Date samples received / completed instructions received	21/08/2012 / 29/08/12

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	31/08/12 / 31/08/12
Date of Preliminary Report:	Not Issued

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Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Jacinta Hurst
Laboratory Manager

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	77740-B-1 BH3 21/08/2012 Water	77740-B-2 BH6 21/08/2012 Water
Date extracted	-	29/08/2012	29/08/2012
Date analysed	-	29/08/2012	29/08/2012
Dichlorodifluoromethane	µg/L	<10	<10
Chloromethane	µg/L	<10	<10
Vinyl Chloride	µg/L	<10	<10
Bromomethane	µg/L	<10	<10
Chloroethane	µg/L	<10	<10
Trichlorofluoromethane	µg/L	<10	<10
1,1-Dichloroethene	µg/L	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1
1,1-dichloroethane	µg/L	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1
Bromochloromethane	µg/L	<1	<1
Chloroform	µg/L	<1	<1
2,2-dichloropropane	µg/L	<1	<1
1,2-dichloroethane	µg/L	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1
1,1-dichloropropene	µg/L	<1	<1
Cyclohexane	µg/L	<1	<1
Carbon tetrachloride	µg/L	<1	<1
Benzene	µg/L	<1	<1
Dibromomethane	µg/L	<1	<1
1,2-dichloropropane	µg/L	<1	<1
Trichloroethene	µg/L	<1	<1
Bromodichloromethane	µg/L	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1
Toluene	µg/L	<1	<1
1,3-dichloropropane	µg/L	<1	<1
Dibromochloromethane	µg/L	<1	<1
1,2-dibromoethane	µg/L	<1	<1
Tetrachloroethene	µg/L	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1
Chlorobenzene	µg/L	<1	<1
Ethylbenzene	µg/L	<1	<1
Bromoform	µg/L	<1	<1
m+p-xylene	µg/L	<2	<2
Styrene	µg/L	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1
o-xylene	µg/L	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	77740-B-1 BH3 21/08/2012 Water	77740-B-2 BH6 21/08/2012 Water
Isopropylbenzene	µg/L	<1	<1
Bromobenzene	µg/L	<1	<1
n-propyl benzene	µg/L	<1	<1
2-chlorotoluene	µg/L	<1	<1
4-chlorotoluene	µg/L	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1
Tert-butyl benzene	µg/L	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1
Sec-butyl benzene	µg/L	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1
4-isopropyl toluene	µg/L	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1
n-butyl benzene	µg/L	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1
Hexachlorobutadiene	µg/L	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1
Surrogate Dibromofluoromethane	%	102	101
Surrogate toluene-d8	%	96	96
Surrogate 4-BFB	%	98	98

Method ID	Methodology Summary
Org-013	Water samples are analysed directly by purge and trap GC-MS.

QUALITY CONTROL VOCs in water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			29/08/2012	[NT]	[NT]	LCS-W1	29/08/2012
Date analysed	-			29/08/2012	[NT]	[NT]	LCS-W1	29/08/2012
Dichlorodifluoromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Chloromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Bromomethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Chloroethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
1,1-Dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Trans-1,2-dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	103%
Cis-1,2-dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Bromochloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Chloroform	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	102%
2,2-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	102%
1,1,1-trichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	105%
1,1-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Cyclohexane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Carbon tetrachloride	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Dibromomethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Trichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	116%
Bromodichloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	98%
trans-1,3-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Toluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Dibromochloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	91%
1,2-dibromoethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Tetrachloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	95%
1,1,1,2-tetrachloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Chlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Bromoform	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
m+p-xylene	µg/L	2	Org-013	<2	[NT]	[NT]	[NR]	[NR]
Styrene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,1,2,2-tetrachloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
o-xylene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]

Client Reference: 73112, Flower Power

QUALITY CONTROL VOCs in water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
1,2,3-trichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Isopropylbenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Bromobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,3,5-trimethyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Tert-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Sec-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2,4-trichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Hexachlorobutadiene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluoromethane	%		Org-013	96	[NT]	[NT]	LCS-W1	102%
Surrogate toluene-d8	%		Org-013	95	[NT]	[NT]	LCS-W1	97%
Surrogate 4-BFB	%		Org-013	97	[NT]	[NT]	LCS-W1	94%

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

Douglas Partners
Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

Project Name: Flower Power
Project No: 73112 Sampler: JRP
Project Mgr: LR Mob. Phone: 0407630549
Email: ~~Richard.lamont@douglaspartners.com.au~~ JAMES.PITCHER@DOUGLASPARTNERS.COM.AU
Date Required: ASAP Lab Quote No.

To: Envirolab Services
12 Ashley Street, Chatswood NSW 2068
Attn: Tania Notaras
Phone: 02 9910 6200 Fax: 02 9910 6201
Email: tnotaras@envirolabservices.com.au

ENVIROLAB Services
12 Ashley St
Chatswood NSW 2067
PH: (02) 9910 6200

Job No: 77740-B
Date Received: 21/8
Time Received: 5:50
Received by: SB
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

	Sample ID	Sample Depth	Lab ID	Sampling Date	S - soil W - water	Container type	Combo 8	OCP/PCB (TRACE LEVEL)	PH.	TPH	HEAVY METALS	VOC's (2day)			Notes
1	BH3	✓	-1	21/8/12	W	PG	✓	✓	✓			X			
2	BH6	✓	-2	"	W	"	✓	✓	✓			X			
3	BD1/210812	✓		"	W	"				✓	✓				
4	TS/210812	✓		"	W	G									
5	TB/210812	✓		"	W	G									

Lab Report No.
Send Results to: Douglas Partners Address: 96 Hermitage Road, West Ryde 2114
Phone: (02) 9809 0666
Fax: (02) 9809 4095

Relinquished by: J. PITCHER	Signed:	Date & Time: 21/8/12	Received By:	Date & Time:	
Relinquished by:	Signed:	Date & Time:	Received By:	Date & Time:	

Appendix F

Quality Assurance and Quality Control Procedures

QA/QC PROCEDURES AND RESULTS

F1 - FIELD QUALITY ASSURANCE AND QUALITY CONTROL

The field QC procedures for sampling as prescribed in Douglas Partners Field Procedures Manual were followed at all times during the assessment.

F1.1 Weather Conditions

Soil sampling was undertaken by DP on 16 August 2012 in fine weather conditions and on 17 August 2012 in slightly overcast weather conditions with some light showers. Groundwater sampling was undertaken on 21 August 2012 in fine weather conditions.

F1.2 Sample Collection

Sample collection procedures and dispatch for soil are reported in Section 7.4.

F1.3 Logs

Logs for each sampling location were recorded in the field. The individual samples were recorded on the field logs along with the sample identity, location, depth, initials of sampler, duplicate locations, duplicate type and site observations. Logs are presented in Appendix G.

F1.4 Chain of Custody

Chain of custody information was recorded on the Chain of Custody (COC) sheets and accompanied samples to the analytical laboratory. Signed copies of COCs are presented in Appendix E, following the laboratory reports.

F1.5 Replicate Sampling Techniques

Replicate samples were collected in the field as a measure of accuracy, precision and repeatability of the results. Field replicate samples for soil were collected from the same location and at an identical depth to the primary sample. Equal portions of the primary sample were placed into the sampling jars and sealed. The sample was not homogenised in a bowl and then split to prevent the loss of volatiles from the soil. Replicate samples were labelled with a DP identification number, recorded on DP test bore logs, so as to conceal their relationship to their primary sample from the analysing laboratory.

F1.6 Replicate Frequency

Field sampling comprised replicate sampling, at a rate of approximately one replicate sample for every ten original samples for intra-laboratory analysis and inter-laboratory analysis.

F1.7 Trip Spikes

According to the NSW EPA *Guidelines for Consultants Reporting on Contaminated Sites* (1997), laboratory prepared trip spikes are to be taken into the field, subjected to the same preservation methods

as the field samples, then analysed, for the purposes of determining the losses in volatile organics incurred prior to reaching the laboratory.

The practicalities of trip spikes are currently being debated and a detailed procedure is yet to be finalised. Discussions with the laboratory indicated that trip spikes are generally prepared as aqueous solutions. The laboratory prepared an aqueous trip spike and a soil trip spike which were preserved in the standard manner and taken into the field unopened. The volatile organic recovery rates are shown below. At this stage, the laboratory has no standard acceptance limits in recovery rates as results from in-house laboratory controls often vary. Results (Table F1) indicate that the percentage loss for BTEX during the trip was minimal and therefore appropriate preservation techniques were employed.

Table F1: Trip Spike Results of BTEX (mg/kg)

Sample ID	Matrix	Recovery (%)				
		Benzene	Toluene	Ethyl Benzene	m+p-xylene	o-Xylene
Trip Spike (16/08/2012)	soil	98	97	96	95	96
Trip Spike (21/08/2012)	water	106	84	97	102	101

F1.8 Trip Blanks

Laboratory prepared soil trip blank was taken out to the field unopened, subjected to the same preservation methods as the field samples, then analysed for the purposes of determining the transfer of contaminants into the blank sample incurred prior to reaching the laboratory. The results of the laboratory analysis for the trip blanks are shown in Table F2.

Table F2: Trip Blank Results of BTEX

Sample ID	Matrix	BTEX				
		Benzene	Toluene	Ethyl benzene	m+p-xylene	o-Xylene
Trip Blank (16/08/2012)	soil	<0.2 mg/kg	<0.5 mg/kg	<1 mg/kg	<2 mg/kg	<1 mg/kg
Trip Blank (21/08/2012)	water	<1 µg/L	<1 µg/L	<1 µg/L	<2 µg/L	<1 µg/L

Levels of analytes were all below detection limits indicating that cross contamination had not occurred during the course of the round trip from the site to the laboratory.

F1.9 Field Instrument Calibration

All soil samples were screened for the presence of Total Photo-Ionisable Compounds (TOPIC) using a calibrated Photo-Ionisation Detector (PID).

F1.10 Relative Percentage Difference

A measure of the consistency of results for field samples is derived by the calculation of relative percentage differences (RPDs) for duplicate samples. A RPD of less than 30% is generally considered typically acceptable for inorganic analytes by OEH, although in general a wider RPD range (50%) may be acceptable for organic analytes.

F1.10.1 Intra-Laboratory Analysis

One intra-laboratory soil replicate and one groundwater replicate was conducted as an internal check of the reproducibility within the primary laboratory (Envirolab Pty Ltd) and as a measure of consistency of sampling techniques. The comparative results of analysis between original and replicate samples are summarised in the tables below.

Table F3a: Intra-laboratory Results of Heavy Metals in Soil BD4

Sample ID	As	Cd	Cr1	Cu	Pb	Hg	Ni	Zn
BH1/0.4-0.5	7	1.2	24	150	150	0.3	32	330
BD4/160812	9	1.1	23	110	120	0.3	36	320
Difference	2	0.1	1	40	30	0	4	10
RPD (%)	25	9	4	**31**	22	0	12	3

Table F3b: Intra-laboratory Results of Heavy Metals in Soil BD10

Sample ID	As	Cd	Cr1	Cu	Pb	Hg	Ni	Zn
BH3/1.2-1.5	10	0.5	20	5	28	<0.1	3	13
BD10-160812	7	<0.5	13	4	22	<0.1	2	8
Difference	3	0	7	1	6	0	1	5
RPD (%)	**35**	0	**42**	22	24	0	**40**	**48**

Table F4a: Intra-laboratory Results of PAH in Soil BD4

Sample ID	B(a)P	Total +ve PAH
BH1/0.4-0.5	0.75	7.35
BD4/160812	0.17	2.17
Difference	0.58	5.18
RPD (%)	**126**	**109**

Table F4b: Intra-laboratory Results of PAH in Soil BD10

Sample ID	B(a)P	Total +ve PAH
BH3/1.2-1.5	0.05	1.55
BD10-160812	0.09	1.89
Difference	0.04	0.34
RPD (%)	**57**	20

Most of calculated RPD values for soil samples were within the acceptable range of less than 30 for inorganic analytes and less than 50% for organic analytes with the exception of those shaded, however, this is not considered to be of concern due to:

- The low actual differences in the concentrations of the replicate pairs;
- The results being of relatively low values and
- Replicates, rather than homogenised duplicates were used to avoid volatile loss; and
- The heterogeneous nature of the fill material from which the samples were collected.

It is therefore considered that the results indicate an acceptable consistency between the soil samples and their replicates and indicate that suitable field sampling methodology was adopted and laboratory precision was achieved.

Table F5: Intra-laboratory Results of TPH for Groundwater

Sample ID	TPH C_6-C_9	TPH C_{10}-C_{36}
GW1-191211	<10	<PQL
BD1-191211	<10	<PQL
Difference	0	0
RPD (%)	0	0

The RPDs were found to be within the acceptable range (± 30%) for inorganics and ± 50% for.

It is therefore considered that the results of the intra-laboratory samples indicate an acceptable consistency between the groundwater sample and the replicated sample and indicates that suitable field sampling methodology was adopted and laboratory precision was achieved.

F2 - LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL

F2.1 Chain of Custody

Chain of custody information was recorded on the Chain of Custody (COC) sheets and accompanied samples to the analytical laboratory. COCs contained receipt date and time and the identity of samples. Signed copies of COCs are presented in Appendix E, following the laboratory reports.

F2.2 Holding Times

A review of the laboratory report sheets and chain-of-custody documentation indicated that holding times were met, as summarised in the tables below.

Table F6: Holding Times for Soil

Analyte	Recommended maximum holding time	Holding time met
Heavy Metals: As, Cd, Cr, Cu, Pb, Hg, Ni, Zn	6 months	Yes
TPH C6-C9	14 days	Yes
TPH C10-C36	14 days	Yes
BTEX	14 days	Yes
PAH	14 days	Yes
OCP	14 days	Yes
OPP	14 days	Yes
PCB	14 days	Yes
Phenols	14 days	Yes
VOC	14 days	Yes
Asbestos	Nil	yes

Table F7: Holding Times for Groundwater

Analyte	Recommended Holding time	Holding time met
Heavy Metals: As, Cd, Cr, Cu, Pb, Hg, Ni, Zn	6 months	Yes
TPH C_6-C_9	14 days	Yes
TPH C_{10}-C_{36}	7 days	Yes
BTEX	14 days	Yes
PAH	7 days	Yes
OCP/PCB	7 days	Yes
Total phenols	28 days	Yes
VOCs	14 days	Yes

F2.3 Analytical Laboratory

Samples were submitted to the following laboratory for analysis:

- Envirolab Services Pty Ltd (Chatswood); and

Envirolab is NATA accredited. Envirolab's accreditation number is 2901 and is accredited for compliance with ISO/IEC 17025. Envirolab tests comply with NATA and NEPM. In house procedures are employed by Envirolab in the absence of documented standards.

F2.4 Surrogate Spike

This sample is prepared by adding a known amount of surrogate, which behaves similarly to the analyte, prior to analysis to each sample. The recovery result indicates the proportion of the known concentration of the surrogate that is detected during analysis. These results are within acceptance limits as specified in Envirolab Services' and Labmark's laboratory report, indicating that the extraction technique was effective.

The laboratory acceptance criteria for surrogate samples is generally 60-140% for organics; and 10-140% for semi-VOC and speciated phenols.

F2.5 Practical Quantitation Limits - PQLs

The PQL is the lowest quantity of an analyte which can be detected during the analysis. PQLs at different analytical laboratories can differ based on the analytical techniques.

F2.6 Reference and Daily Check Sample Results - Laboratory Control Sample (LCS)

This sample comprises spiking either a standard reference material or a control matrix (such as a blank of sand or water) with a known concentration of specific analytes. The LCS is then analysed and results compared against each other to determine how the laboratory has performed with regard to sample preparation and analytical procedure. LCSs are analysed at a frequency of 1 in 20, with a minimum of one analysed per batch.

The laboratory acceptance criteria for LCS samples is generally 70-130% for inorganics/ metals; and 60-140% for organics; and 10-140% for SVOC and speciated phenols.

F2.7 Laboratory Duplicate Results

These are additional portions of a sample which are analysed in exactly the same manner as all other samples. The laboratory acceptance criteria for duplicate samples is: in cases where the level is <5xPQL – any RPD is acceptable; and in cases where the level is >5xPQL – 0-50% RPD is acceptable.

F2.8 Laboratory Blank Results

The laboratory blank, sometimes referred to as the method blank or reagent blank is the sample prepared and analysed at the beginning of every analytical run, following calibration of the analytical apparatus. This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, it can be determined by processing solvents and reagents in exactly the same manner as for samples. Laboratory blanks are analysed at a frequency of 1 in 20, with a minimum of one per batch.

F2.9 Matrix Spike

This is a sample duplicate prepared by adding a known amount of analyte prior to analysis, and then treated exactly the same as all other samples. The recovery result indicates the proportion of the known concentration of the analyte that is detected during analysis. The laboratory acceptance criteria for matrix spike samples is generally 70-130% for inorganics/metals; and 60-140% for organics; and 10-140% for SVOC and speciated phenols.

F2.10 Results of Laboratory QA

The laboratory QA for surrogate spikes, LCS, laboratory duplicate results, method blanks and matrix spikes were generally within the acceptance standards.

It was therefore considered that an acceptable level of laboratory precision and consistency was achieved and that surrogate spikes, LCS, laboratory duplicate results, method blanks and matrix spike results were of an acceptable level.

Appendix G

Bore Log Results

Notes About this Report

About this Report

Douglas Partners

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

Sampling Methods

Douglas Partners

Sampling

Sampling is carried out during drilling or test pitting to allow engineering examination (and laboratory testing where required) of the soil or rock.

Disturbed samples taken during drilling provide information on colour, type, inclusions and, depending upon the degree of disturbance, some information on strength and structure.

Undisturbed samples are taken by pushing a thin-walled sample tube into the soil and withdrawing it to obtain a sample of the soil in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

Test Pits

Test pits are usually excavated with a backhoe or an excavator, allowing close examination of the in-situ soil if it is safe to enter into the pit. The depth of excavation is limited to about 3 m for a backhoe and up to 6 m for a large excavator. A potential disadvantage of this investigation method is the larger area of disturbance to the site.

Large Diameter Augers

Boreholes can be drilled using a rotating plate or short spiral auger, generally 300 mm or larger in diameter commonly mounted on a standard piling rig. The cuttings are returned to the surface at intervals (generally not more than 0.5 m) and are disturbed but usually unchanged in moisture content. Identification of soil strata is generally much more reliable than with continuous spiral flight augers, and is usually supplemented by occasional undisturbed tube samples.

Continuous Spiral Flight Augers

The borehole is advanced using 90-115 mm diameter continuous spiral flight augers which are withdrawn at intervals to allow sampling or in-situ testing. This is a relatively economical means of drilling in clays and sands above the water table. Samples are returned to the surface, or may be collected after withdrawal of the auger flights, but they are disturbed and may be mixed with soils from the sides of the hole. Information from the drilling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively low reliability, due to the remoulding, possible mixing or softening of samples by groundwater.

Non-core Rotary Drilling

The borehole is advanced using a rotary bit, with water or drilling mud being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from the rate of penetration. Where drilling mud is used this can mask the cuttings and reliable identification is only possible from separate sampling such as SPTs.

Continuous Core Drilling

A continuous core sample can be obtained using a diamond tipped core barrel, usually with a 50 mm internal diameter. Provided full core recovery is achieved (which is not always possible in weak rocks and granular soils), this technique provides a very reliable method of investigation.

Standard Penetration Tests

Standard penetration tests (SPT) are used as a means of estimating the density or strength of soils and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, Methods of Testing Soils for Engineering Purposes - Test 6.3.1.

The test is carried out in a borehole by driving a 50 mm diameter split sample tube under the impact of a 63 kg hammer with a free fall of 760 mm. It is normal for the tube to be driven in three successive 150 mm increments and the 'N' value is taken as the number of blows for the last 300 mm. In dense sands, very hard clays or weak rock, the full 450 mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form.

- In the case where full penetration is obtained with successive blow counts for each 150 mm of, say, 4, 6 and 7 as:

  4,6,7
  N=13

- In the case where the test is discontinued before the full penetration depth, say after 15 blows for the first 150 mm and 30 blows for the next 40 mm as:

  15, 30/40 mm

The results of the SPT tests can be related empirically to the engineering properties of the soils.

Dynamic Cone Penetrometer Tests / Perth Sand Penetrometer Tests

Dynamic penetrometer tests (DCP or PSP) are carried out by driving a steel rod into the ground using a standard weight of hammer falling a specified distance. As the rod penetrates the soil the number of blows required to penetrate each successive 150 mm depth are recorded. Normally there is a depth limitation of 1.2 m, but this may be extended in certain conditions by the use of extension rods. Two types of penetrometer are commonly used.

- Perth sand penetrometer - a 16 mm diameter flat ended rod is driven using a 9 kg hammer dropping 600 mm (AS 1289, Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.
- Cone penetrometer - a 16 mm diameter rod with a 20 mm diameter cone end is driven using a 9 kg hammer dropping 510 mm (AS 1289, Test 6.3.2). This test was developed initially for pavement subgrade investigations, and correlations of the test results with California Bearing Ratio have been published by various road authorities.

Symbols & Abbreviations

Douglas Partners

Introduction

These notes summarise abbreviations commonly used on borehole logs and test pit reports.

Drilling or Excavation Methods

C	Core Drilling
R	Rotary drilling
SFA	Spiral flight augers
NMLC	Diamond core - 52 mm dia
NQ	Diamond core - 47 mm dia
HQ	Diamond core - 63 mm dia
PQ	Diamond core - 81 mm dia

Water

▷	Water seep
▽	Water level

Sampling and Testing

A	Auger sample
B	Bulk sample
D	Disturbed sample
E	Environmental sample
U_{50}	Undisturbed tube sample (50mm)
W	Water sample
pp	pocket penetrometer (kPa)
PID	Photo ionisation detector
PL	Point load strength Is(50) MPa
S	Standard Penetration Test
V	Shear vane (kPa)

Description of Defects in Rock

The abbreviated descriptions of the defects should be in the following order: Depth, Type, Orientation, Coating, Shape, Roughness and Other. Drilling and handling breaks are not usually included on the logs.

Defect Type

B	Bedding plane
Cs	Clay seam
Cv	Cleavage
Cz	Crushed zone
Ds	Decomposed seam
F	Fault
J	Joint
Lam	lamination
Pt	Parting
Sz	Sheared Zone
V	Vein

Orientation

The inclination of defects is always measured from the perpendicular to the core axis.

h	horizontal
v	vertical
sh	sub-horizontal
sv	sub-vertical

Coating or Infilling Term

cln	clean
co	coating
he	healed
inf	infilled
stn	stained
ti	tight
vn	veneer

Coating Descriptor

ca	calcite
cbs	carbonaceous
cly	clay
fe	iron oxide
mn	manganese
slt	silty

Shape

cu	curved
ir	irregular
pl	planar
st	stepped
un	undulating

Roughness

po	polished
ro	rough
sl	slickensided
sm	smooth
vr	very rough

Other

fg	fragmented
bnd	band
qtz	quartz

Symbols & Abbreviations

Graphic Symbols for Soil and Rock

General


Asphalt


Road base


Concrete


Filling

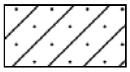
Soils


Topsoil

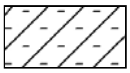

Peat


Clay

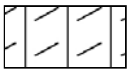

Silty clay

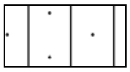

Sandy clay

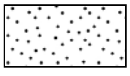

Gravelly clay

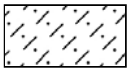

Shaly clay

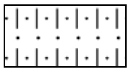

Silt


Clayey silt


Sandy silt

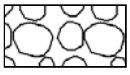

Sand

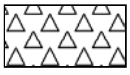

Clayey sand


Silty sand


Gravel


Sandy gravel


Cobbles, boulders

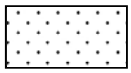

Talus

Sedimentary Rocks

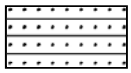

Boulder conglomerate

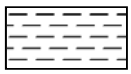

Conglomerate


Conglomeratic sandstone

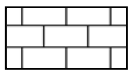

Sandstone


Siltstone


Laminite

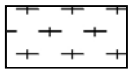

Mudstone, claystone, shale

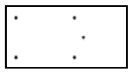

Coal


Limestone

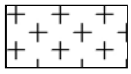
Metamorphic Rocks

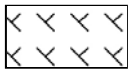

Slate, phyllite, schist

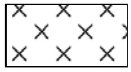

Gneiss

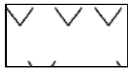

Quartzite

Igneous Rocks


Granite


Dolerite, basalt, andesite


Dacite, epidote


Tuff, breccia


Porphyry

BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: --
EASTING: 6247750.287
NORTHING: 324038.1052
DIP/AZIMUTH: 90°/--

BORE No: BH1
PROJECT No: 73112
DATE: 16/8/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		CONCRETE							
	0.16	FILLING - black and brown, sandy gravelly clay filling. Sand is fine to coarse, gravel is fine to coarse, subrounded to angular of concrete and ironstone fragments, damp		E*	0.4 0.5	BD4	PID=0.4		
	0.8	FILLING - black, slightly gravelly, clayey sand filling. Sand is fine to coarse, gravel is fine to medium brick and concrete fragments, damp 1.0-1.4m: slight chemical odour		E*	1.0 1.2	BD5	PID=0.4		
	1.5	FILLING - slightly sandy, gravelly clay filling. Sand is fine to coarse, gravel is fine to coarse, angular to subangular porcelain and brick fragments, moist		E	1.5 1.6		PID=0.3		
	1.7	CLAY - stiff, slightly silty, brown clay with occasional fine to medium gravel of ironstone, damp		E	2.0 2.2		PID=0.4		
				E	2.8		PID=0.2		
	3.0	Bore discontinued at 3.0m - target depth reached			3.0				

RIG: Geoprobe **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Diacore to 0.16m; Solid flight auger to 3.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Drilled near surface tank (gasoline). *Field replicate sample BD4 taken at 0.4-0.5m; Field replicate sample BD5 taken at 1.0-1.2m.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U$_x$	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: --
EASTING: 6247758.626
NORTHING: 324038.1052
DIP/AZIMUTH: 90°/--

BORE No: BH2
PROJECT No: 73112
DATE: 16/8/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.16	CONCRETE							
		FILLING - black, clayey gravelly sand filling. Sand is fine to coarse, gravel is fine to coarse, angular to subrounded of ironstone and brick fragments, damp		E	0.2		PID=0.6		
	0.5				0.4				
		FILLING - black, sandy, slightly gravelly clay filling. Sand is fine to coarse, gravel is fine to coarse, angular to subrounded brick and ironstone fragments, damp							
1				E*	0.8	BD6	PID=0.4		1
					1.0				
	1.5	FILLING - grey, silty sand filling. Sand is fine to medium. Very strong odour, saturated						▼	
				E*	1.8	BD7	PID=1.4		
2					2.0				2
					2.8				
				E			PID=5.8		
3	3.0	Bore discontinued at 3.0m - hole abandoned due to sewerage smell			3.0				3
4									4

RIG: Geoprobe **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Diacore to 0.16m; Solid flight auger to 3.0m

WATER OBSERVATIONS: Water observed at 1.5m depth, hole becomes saturated and had strong sewerage odour

REMARKS: *Field replicate sample BD6 taken at 0.8-1.0m; *Field replicate sample BD7 taken at 1.8-2.0m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: 13.21 AHD
EASTING: 6247817.78
NORTHING: 324054.7
DIP/AZIMUTH: 90°/--

BORE No: BH3
PROJECT No: 73112
DATE: 17/8/2012
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
13	0.01	ASPHALT							Gatic cover
		FILLING - red, sandy gravel filling. Sand is fine to coarse, gravel is fine to coarse, angular to subangular brick and concrete fragments (probable old footing?)							Plain pipe
	0.3	CONCRETE							
	0.45	FILLING - black, slightly gravelly, sandy clay filling. Sand is fine to coarse size, gravel is fine to medium, subangular ironstone and brick fragments. Frequent organic matter (twigs/rootlets), saturated (probably due to diacore flush)		E*	0.5	BD9	PID=0.1		Bentonite
					0.7				
12	1.0	FILLING - dark grey, slightly sandy, slightly gravelly clay filling. Sand is fine to coarse, gravel is fine subangular ironstone fragments, damp		E*	1.2	BD10	PID=0.1		
					1.5				
	1.6	FILLING - brown, slightly sandy clay filling. Sand is fine to coarse, damp		E	1.8		PID=0.3		
11	2				2.0			21-08-12	Backfilled with gravel
	2.5	SILTY CLAY - stiff, grey and brown, silty clay, damp		E	2.5		PID=0.1		
					2.7				
10	3								
	3.4	SILTY CLAY - stiff, red mottled grey, silty clay, occasional fine to coarse subangular ironstone gravel, moist		E	3.4		PID=0.0		
					3.6				
9	4			E	3.8		PID=0.2		
					4.0				Machine slotted PVC screen

RIG: Geoprobe **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Breaker to 0.1m; Hand auger to 0.3m; Diacore to 0.45m

WATER OBSERVATIONS: Moist clay from 3.4m. 21/8/12 groundwater at 2.13m prior to water sampling

REMARKS: Moved bore 3 times to avoid footings - Diacore required. *Field replicate sample BD9 taken at 0.5-0.7m; *Field replicate sample BD10 taken at 1.2-1.5m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: 13.21 AHD
EASTING: 6247817.78
NORTHING: 324054.7
DIP/AZIMUTH: 90°/--

BORE No: BH3
PROJECT No: 73112
DATE: 17/8/2012
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		SILTY CLAY - stiff, red mottled grey, silty clay, occasional fine to coarse subangular ironstone gravel, moist *(continued)*		E	5.0		PID=0.0		
					5.2				
				E	5.8		PID=0.1		
	6				6.0				6
					6.8				
				E			PID=0.1		
	7				7.0				7
				E	8.0		PID=0.0		
	8				8.1				8
				E	8.6		PID=0.0		End cap
	9	9.0 Bore discontinued at 9.0m - target depth reached							9

RIG: Geoprobe **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Breaker to 0.1m; Hand auger to 0.3m; Diacore to 0.45m

WATER OBSERVATIONS: Moist clay from 3.4m. 21/8/12 groundwater at 2.13m prior to water sampling

REMARKS: Moved bore 3 times to avoid footings - Diacore required. *Field replicate sample BD9 taken at 0.5-0.7m; *Field replicate sample BD10 taken at 1.2-1.5m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: --
EASTING: 6247826.538
NORTHING: 324075.2992
DIP/AZIMUTH: 90°/--

BORE No: BH4
PROJECT No: 73112
DATE: 16/8/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.1	ASPHALT							
		FILLING - red-brown, slightly sandy, gravelly clay filling. Sand is fine to coarse, gravel is fine to coarse, angular to subrounded brick and concrete rubble, humid		E	0.2		PID=0.9		
				E	0.4		PID=0.7		
				E	0.6				
					0.8				
1		1.0-1.5m: some red mottling		E	1.0		PID=0.8		1
					1.2				
	1.5	SILTY CLAY - stiff, light brown, silty clay, moist		E*	1.5	BD1	PID=0.8		
					1.7				
2				E	1.9		PID=0.2		2
		- occasional fine to medium, subangular ironstone gravel after 2.3m			2.1				
				E	2.5		PID=0.6		
					2.7			▼	
		- saturated at 2.8m							
3	3.0	Bore discontinued at 3.0m - target depth reached							3
4									4

RIG: Geoprobe **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Solid flight auger to 3.0m

WATER OBSERVATIONS: Saturated at 2.8m

REMARKS: *Field replicate sample BD1 taken at 1.5-1.7m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: 16.18 AHD
EASTING: 6247853.01
NORTHING: 324087.2492
DIP/AZIMUTH: 90°/--

BORE No: BH5
PROJECT No: 73112
DATE: 16/8/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
16	0.0	ASPHALT							
	0.2	FILLING - red-brown, slightly sandy clay filling. Sand is fine to coarse, moist		E*	0.3	BD3	PID=0.6		
	0.6	SILTY CLAY - stiff, light brown, slightly silty clay, moist			0.5				
				E	0.8		PID=0.3		
15	1				1.0				1
		1.5m: becoming grey mottled red		E	1.5		PID=0.5		
					1.7				
				E	1.8		PID=0.6		
14	2				2.0				2
		2.5m: becoming orange							
				E	2.8		PID=0.3		
	3 3.0	Bore discontinued at 3.0m - target depth reached			3.0				3
13									
	4								4
12									

RIG: Geoprobe **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Solid flight auger to 3.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Field replicate sample BD3 taken at 0.3-0.5m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: 16.18 AHD
EASTING: 6247927.43
NORTHING: 324109.03
DIP/AZIMUTH: 90°/--

BORE No: BH6
PROJECT No: 73112
DATE: 16/8/2012
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
16	0.05	FILLING - red, medium rounded gravel of decorative stone							Gatic cover
		FILLING - brown, slightly sandy, gravelly clay filling. Sandstone is fine to coarse, gravel is subangular, fine to coarse sandstone, humid		E	0.2				Plain pipe
					0.4				
	0.5	SILTY CLAY - stiff, brown and grey mottled red, silty clay (humid) - occasional fine ironstone gravel		E	0.5		PID=0.4		
					0.6				Bentonite
15	1			E	1.0		PID=0.6		1
					1.2				
	1.5	SILTY CLAY - stiff, grey, friable silty clay, dry to humid		E	1.5		PID=1.0		
					1.7				
14	2			E	2.0		PID=0.3		2 Plain pipe
					2.1				
								21-08-12	
		2.8-4.5m: becoming dry			2.8				
				E			PID=0.7		
13	3				3.0				3
									Bentonite
					3.8				
				E			PID=0.8		
12	4				4.0				4
	4.5	SILTY CLAY - grey, slightly sandy, slightly gravelly, silty clay. Sand is fine to coarse, gravel is fine ironstone fragments fragments, saturated							Backfilled with gravel

RIG: Geoprobe **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Solid flight auger to 7.0m

WATER OBSERVATIONS: Saturated at 4.5m on 17/8/12. 21/8/12 groundwater at 2.68m prior to water sampling

REMARKS: *Field replicate sample BD2 taken at 0.2-0.4m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: 16.18 AHD
EASTING: 6247927.43
NORTHING: 324109.03
DIP/AZIMUTH: 90°/--

BORE No: BH6
PROJECT No: 73112
DATE: 16/8/2012
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		SILTY CLAY - grey, slightly sandy, slightly gravelly, silty clay. Sand is fine to coarse, gravel is fine ironstone fragments fragments, saturated *(continued)*		E	5.0		PID=1.7		
					5.2				Machine slotted PVC screen
				E	6.0		PID=0.3		
					6.2				
					6.8				
				E			PID=1.3		End cap
	7.0	Bore discontinued at 7.0m - target depth reached			7.0				

RIG: Geoprobe **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Solid flight auger to 7.0m

WATER OBSERVATIONS: Saturated at 4.5m on 17/8/12. 21/8/12 groundwater at 2.68m prior to water sampling

REMARKS: *Field replicate sample BD2 taken at 0.2-0.4m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: --
EASTING: 6247879.19
NORTHING: 324724.72
DIP/AZIMUTH: 90°/--

BORE No: BH7
PROJECT No: 73112
DATE: 17/8/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.05	FILLING - red, medium rounded gravel of decorative stone							
		FILLING - grey, slightly sandy, gravelly clay filling. Sand is fine to coarse, gravel is fine sandstone fragments. Frequent sandstone cobbles, humid		E	0.2		PID=0.0		
		0.3m: white conduit, probable power to fountain			0.4				
	0.6	Bore discontinued at 0.6m - refusal on sandstone cobbles							
	1								
	2								
	3								
	4								

RIG: Hand tools **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Hand auger to 0.6m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Hand augered as access denied for rig by Store Manager on 17/8/12. Tried 2 locations, both refused on sandstone

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: --
EASTING: 6247859.718
NORTHING: 323952.9765
DIP/AZIMUTH: 90°/--

BORE No: BH8
PROJECT No: 73112
DATE: 17/8/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.05	FILLING - red, medium rounded gravel of decorative stone filling			0.1				
		FILLING - grey, clayey sand filling. Sand is fine to coarse, gravel is fine to medium, subrounded to subangular sandstone fragments, moist		E*		BD11	PID=0.0		
	0.3			E	0.3 0.4		PID=0.9		
		FILLING - grey, slightly sandy, slightly gravelly clay filling. Sand is fine to coarse, gravel is fine to medium of ironstone and sandstone fragments, damp							
	0.7	FILLING - dark grey clay filling, moist		E	0.7 0.8		PID=0.4		
	1								1
	1.2	Bore discontinued at 1.2m - refusal on possible sandstone boulder/footing							
	2								2
	3								3
	4								4

RIG: Hand tools **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Hand auger to 1.2m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Hand augered as access denied for rig by Store Manager on the day. *Field replicate sample BD11 taken at 0.1-0.3m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: --
EASTING: 6247861.517
NORTHING: 323928.6545
DIP/AZIMUTH: 90°/--

BORE No: BH9
PROJECT No: 73112
DATE: 17/8/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - brown, slightly sandy, slightly gravelly clay filling. Sand is fine to coarse, gravel is fine to coarse, angular to rounded glass, brick and limestone fragments (ornamental stone), humid		E	0.0	BD8	PID=0.1		
	0.2				0.2				
	0.4			E	0.4		PID=0.1		
	0.5	FILLING - grey mottled yellow, slightly sandy, gravelly clay filling. Sand is fine to coarse, gravel is fine to coarse, angular to subangular brick, moist		E	0.5		PID=0.3		
	0.6				0.6				
	0.7	Bore discontinued at 0.7m 1st: boulder of sandstone 2nd: moved in encountered solid metal at 0.5m 3rd location 0.5m (solid object)							
	1								
	2								
	3								
	4								

RIG: Hand tools **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Hand auger to 0.7m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Hand augered as access denied for drill by Store Manager on the day. *Field replicate sample BD8 taken at 0.0-0.2m, tried 3 locations

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Flower Power
PROJECT: Flower Power, Croydon Park
LOCATION: 27 Mitchell Street, Croydon Park

SURFACE LEVEL: --
EASTING: 6247938.135
NORTHING: 324069.4092
DIP/AZIMUTH: 90°/--

BORE No: BH10
PROJECT No: 73112
DATE: 17/8/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING- slightly clayey silt topsoil filling, dry. Frequent rootlets		E	0.0		PID=0.8		
	0.2	FILLING - brown, slightly sandy, slightly gravelly clay filling. Sand is fine to coarse. Gravel is fine to medium, subangular ironstone fragments			0.2				
	0.4	CLAY - firm, grey and red, slightly silty clay		E	0.4	BD12	PID=0.7		
					0.5				
					0.8				
1				E			PID=0.4		1
	1.0				1.0				
	1.2	Bore discontinued at 1.2m - target depth reached							
2									2
3									3
4									4

RIG: Hand tools **DRILLER:** Rockwell **LOGGED:** JRP **CASING:** Uncased

TYPE OF BORING: Hand auger to 1.2m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Hand augered as access for rig denied on day by Store Manager. *Field replicate sample BD12 taken at 0.4-0.5m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Groundwater Field Sheet

Project and Bore Installation Details					
Bore / Standpipe ID:	**Test Bore 3**				
Project Name:	Flower Power				
Project Number:	73112				
Site Location:	27 Mitchell Street, Croydon Park				
Bore Easting:	6247927.43		Northing:	324109.03	
Installation Date:	16-Aug-12				
GW Level (during drilling):	4.5	m bgl			
Well Depth:	7	m bgl			
Screened Interval:	3	m bgl			
Contaminants/Comments:					
Bore Development Details					
Date/Time:	17-Aug-12				
Purged By:	JRP				
GW Level (pre-purge):	7.5	m bgl			
GW Level (post-purge):	8.7	m bgl			
PSH observed:	No				
Observed Well Depth:	8.7	m bgl			
Estimated Bore Volume:	15	L			
Total Volume Purged:	15	L			
Equipment:	Bailer				
Micropurge and Sampling Details					
Date/Time:	21/8/12				
Sampled By:	JRP				
Weather Conditions:	Fine				
GW Level (pre-purge):	2.13	m bgl			
GW Level (post sample):	5.91	m bgl			
PSH observed:	No				
Observed Well Depth:	8.7	m bgl			
Estimated Bore Volume:		L			
Total Volume Purged:	10	L			
Equipment:	Geo pump				

Water Quality Parameters

Time / Volume	Temp (^{o}C)	DO (mg/L)	EC (µS or mS/cm)	pH	Redox (mV)
Stabilisation Criteria (3 readings)	***0.1^{o}C***	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10 mV**
12:12	20.5	66.4	3227	6.87	28.9
12:14	20	66.1	2994	6.78	25.4
12:16	19.9	37.8	2947	6.77	21.1
12:18	19.8	28	2976	6.77	5.9
12:20	19.9	28.3	2983	6.78	-0.7
12:22	20.2	40.4	3112	6.85	-7
12:24	20.4	37.7	3294	6.85	-11.3
12:26	20.8	41.1	3966	6.91	-14.4
Additional Readings Following stabilisation:	DO % Sat	SPC	TDS		

Sample Details

Sampling Depth (rationale):	m bgl,
Sample Appearance (e.g. colour, siltiness, odour):	clear
Sample ID:	BH3
QA/QC Samples:	
Sampling Containers and filtration:	1L glass, 2x 40mL glass vials (HCl) , 1x500ml plastic, 1x200ml plastic (H_2SO_4), 1x 100mL plastic (HNO_3 (filtered)),
Comments / Observations:	

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Groundwater Field Sheet

Project and Bore Installation Details					
Bore / Standpipe ID:	**Test Bore 6**				
Project Name:	Flower Power				
Project Number:	73112				
Site Location:	27 Mitchell Street, Croydon Park				
Bore Easting:	6247927.43		Northing:	324109.03	
Installation Date:	16-Aug-12				
GW Level (during drilling):	4.5	m bgl			
Well Depth:	7	m bgl			
Screened Interval:	3	m bgl			
Contaminants/Comments:					
Bore Development Details					
Date/Time:	17-Aug-12				
Purged By:	JRP				
GW Level (pre-purge):	4	m bgl			
GW Level (post-purge):	3.6	m bgl			
PSH observed:	No				
Observed Well Depth:	7	m bgl			
Estimated Bore Volume:	20	L			
Total Volume Purged:	>60	L			
Equipment:	Bailer				
Micropurge and Sampling Details					
Date/Time:	21/8/12				
Sampled By:	JRP				
Weather Conditions:	Fine				
GW Level (pre-purge):	2.68	m bgl			
GW Level (post sample):	3.36	m bgl			
PSH observed:	No				
Observed Well Depth:	7	m bgl			
Estimated Bore Volume:		L			
Total Volume Purged:	15-Oct	L			
Equipment:	Geopump				

Water Quality Parameters

Time / Volume	Temp (^{o}C)	DO (mg/L)	EC (µS or mS/cm)	pH	Redox (mV)
Stabilisation Criteria (3 readings)	***0.1^{o}C***	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10 mV**
11:10	19.1	451.6	7740	6.44	50.4
11:12	19.1	445	7879	6.43	47.4
11:14	19.1	433.7	7989	6.43	41.3
11:16	19.2	412.4	8091	6.43	34
11:18	19.1	392.6	8091	6.43	28.3
11:20	19.1	369.1	8129	6.42	24
11:22	19.1	337.4	8139	6.42	19.3
11:24	19.1	297.4	8172	6.42	16.2
11:26	19.1	256	8172	6.42	13.7
11:28	19.1	47	8162	6.42	11.5
Additional Readings Following stabilisation:	DO % Sat	SPC	TDS		

Sample Details

Sampling Depth (rationale):	m bgl,
Sample Appearance (e.g. colour, siltiness, odour):	clear
Sample ID:	BH6
QA/QC Samples:	
Sampling Containers and filtration:	1L glass, 2x 40mL glass vials (HCl) , 1x500ml plastic, 1x200ml plastic (H_2SO_4), 1x 100mL plastic (HNO_3 (filtered)),
Comments / Observations:	