Landcom

Sydney Metro North West
Hills Showground Precinct

1-5 Carrington Road,
Castle Hill NSW

Soils and Contamination Report

29 October 2019
54813/125497 (Rev 1)
JBS&G Australia Pty Ltd

www.jbsg.com.au

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Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
AHD	Australian Height Datum
AS	Australian Standard
ASS	Acid Sulfate Soils
AST	Aboveground Storage Tank
bgl	Below Ground Surface
BOM	Bureau of Meteorology
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
COPC	Contaminants of Potential Concern
Council	The Hills Shire City Council
CSM	Conceptual Site Model
DA	Development Application
DLWC	Department of Land and Water Conservation
DP	Deposited Plan
DPI	Department of Primary Industry
DPIE	Department of Planning, Industry and the Environment
EPA	Environment Protection Authority
ESA	Environmental Site Assessment
ha	Hectare
JBS&G	JBS&G Australia Pty Ltd
LEP	Local Environmental Plan
LPI	Land and Property Information
NRT	Northwest Rapid Transit
NSW	New South Wales
OCP	Organochlorine Pesticides
OEH	Office of Environment and Heritage
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PCR	Primary Contact Recreation
PFAS	Per and Polyfluoroalkyl Substances
PSI	Preliminary Site Investigation
RL	Relative Level
RPD	Relative Percent Difference
SAMR	Salinity Assessment and Management Report
SEEC	Strategic Environmental Engineering & Consulting Pty Ltd
SMNW	Sydney Metro North West
SSDA	State Significant Development Application
SVC	Surface and Viaduct Construction
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
UCL	Upper Confidence Limit
UST	Underground Storage Tank
VOC	Volatile Organic Compounds

Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Landcom (the client) via Aver Pty Ltd (Aver) to prepare a preliminary site-wide contamination assessment report for the Hills Showground Precinct mixed use State Significant Development (SSD) project application. The proposed development is located at 1-5 Carrington Road, Castle Hill, as shown on **Figure 1** and **Figure 2**. The site comprises a 8.4 hectare (ha) parcel of land, legally defined as Lots 52 to 56 Deposited Plan (DP) 1253217 and Lot 54 and 50 in DP 1253217 and comprises three nominated development precincts, the Hills Showground Precinct East, Hills Showground Precinct West and the Doran Drive Precinct, as shown on **Figure 3**.

It is understood Landcom is currently developing a Concept Proposal for submission to the NSW Department of Planning, Industry and Environment (DPIE) to allocate yield and maximum Gross Floor Area (GFA) for future residential development and minimum GFA for non-residential land uses for each of the proposed development parcels (Precincts).

To address the key issues outlined in the Planning Secretary's Environmental Assessment Requirements (SEARs[1]) and to satisfy the requirements of *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55), a Preliminary Site Investigation (PSI) of potential site-wide contamination is required to demonstrate the site is suitable/can be made suitable for its proposed uses. Based on client supplied conceptual design plans (**Appendix A**) it is understood Landcom is seeking approval for a high density mixed-use precinct, including multi-story residential buildings combined with ground level commercial spaces, public/private open space, retail and community facilities.

The objectives of the Preliminary Contamination Assessment were to:

- Collate and review available data, including previous investigations and supplement this with current information to identify areas of potential environmental concern (AECs) and associated contaminants of potential concern (COPCs) as may be present at the site;
- Review and document regional geological, hydrogeological, topographical and services infrastructure information to identify site media and potential contaminant transportation pathways at the site;
- Identify potential data gaps across the site and assess the potential for near surface contamination as a result of the SMNW works;
- Address the key contamination issues in the SEARs and the requirements of SEPP 55 to demonstrate the suitability of the site for development, or provide recommendations that will enable the site to be considered suitable prior to commencement of future use(s); and
- Develop and document a preliminary conceptual site model (CSM) of contamination to facilitate comments on potential issues that may require further consideration, including assessment, management and/or remediation to make the site suitable for its proposed uses.

Based on the scope of investigation undertaken, and in accordance with the limitations in **Section 8**, the following conclusions are provided:

- This desktop assessment of potential contamination included a review of available (pre-SMNW Project) site investigation reports, more general site history and regional condition

[1] Planning Secretary's Environment Assessment Requirements. *Sydney Metro Northwest – Hills Showground Station Precinct Concept Proposal and Stage 1 Subdivision. Part Lot 140 in DP1180973 – 1-5 Carrington Road Castle Hill.* SSD 9653 dated 9 October 2019 for Landcom on behalf of Sydney Metro (SEARs).

information and a site inspection to evaluate the potential for contamination concerns in relation to three proposed development Precincts at the site.

- Prior to the commencement of the SMNW Project activities, the site comprised three main areas: the Hills Shire Council Chambers and Administration building and surrounds (Hills Showground Precinct East); the former performing arts centre and associated carparking area (central portion including Showground Station and Doran Drive Precinct); and the Council Works Depot (Hills Showground Precinct West and constructed carpark infrastructure).
- Historical site investigation reports available for assessment were limited to the former Council Works Depot footprint. These investigations identified the presence of small scale soil and groundwater contamination and underground fuel infrastructure (considered significant point sources of potential contamination), prior to the commencement of the SMNW Project activities. Records obtained from SafeWork NSW and validation documentation have indicated removal of the majority of the identified fuel infrastructure. Notwithstanding, in the absence of further validation documentation and/or a RAP as may have been prepared as required by Project Approval consent conditions, there remains uncertainty on the fate of previously identified asbestos impacts and the current contamination status of this portion of this site.
- In addition, significant ground disturbance works have been completed within the central portion of the site (Doran Drive Precinct) during the SMNW Project activities. This site portion is currently surfaced with exposed fill material. Subject to the availability of validation documentation confirming the status of ground conditions in this portion of the site, there is also a remaining data gap as to the current characterisation of this site portion given the potentially contaminating activities that have occurred within this area.
- Within the eastern portion of the site, occupied by the former Council Chambers and Administration building, the potential for site contamination has been identified as relatively low, being associated with historical agricultural/open space management, the historical use of hazardous building materials (asbestos and lead paint) and the potential presence of limited profile of fill material of unknown origin. However, the absence of existing characterisation data, again remains an open data gap with regard to drawing conclusions on the suitability of the site for the proposed landuses.
- With consideration of the above, it is considered that the site can be made suitable for the proposed land uses, subject to implementation of an appropriate staged data gap contamination assessment (that may include verification reviews of SMNW stage validation reports) and appropriate management of any small scale remaining contamination issues in accordance with NSW EPA guidance as appropriate prior to commencement of future final construction activities.
- Review of acid sulfate soil (ASS) conditions identified there is no appreciable risk of ASS presence within natural residual soils at the site given the formation environment, and therefore no future management for the potential presence of ASS is required during future ground disturbance works.

1. Introduction

1.1 Introduction and Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by Landcom (the client) via Aver Pty Ltd (Aver) to prepare a preliminary site-wide contamination assessment report for the Hills Showground Precinct mixed use State Significant Development (SSD) project application. The proposed development is located at 1-5 Carrington Road, Castle Hill, as shown on **Figure 1** and **Figure 2**. The site comprises a 8.4 hectare (ha) parcel of land, legally defined as Lots 52 to 56 Deposited Plan (DP) 1253217 and Lot 54 and 50 in DP 1253217 and comprises three nominated development precincts, the Hills Showground Precinct East, Precinct West and the Doran Drive Precinct, as shown on **Figure 3**.

It is understood Landcom is currently developing a Concept Proposal for submission to the NSW Department of Planning, Industry and Environment (DPIE) to allocate yield and maximum Gross Floor Area (GFA) for future residential development and minimum GFA for non-residential land uses for each of the proposed development parcels (Precincts).

To address the key issues outlined in the Planning Secretary's Environmental Assessment Requirements (SEARs[2]) and to satisfy the requirements of *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55), a Preliminary Site Investigation (PSI) of potential site-wide contamination is required to demonstrate the site is suitable/can be made suitable for its proposed uses. Based on client supplied conceptual design plans (**Appendix A**) it is understood Landcom is seeking approval for a high density mixed-use precinct, including multi story residential buildings combined with ground level commercial and retail spaces, public/private open space and community facilities.

It is understood portions of the site known as the former Baulkham Hills Shire Council Depot (Council Depot) have previously been the subject of environmental investigations which identified several areas of environmental concern (AEC) and isolated soil and groundwater contamination associated with historic land use activities. More recently, a large portion of the developable area has undergone significant ground disturbance (bulk earthworks/material storage), as associated with SMNW redevelopment works.

This preliminary contamination assessment report documents the environmental status of the site and provides comment on active and historical potentially contaminating activities at or in proximity of the site to assess the suitability of the site its proposed uses.

The investigation was developed in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

1.2 Objective

The objectives of the Preliminary Contamination Assessment are to:

- Collate and review available data, including previous investigations and supplement this with current information to identify areas of potential environmental concern (AECs) and associated contaminants of potential concern (COPCs) as may be present at the site;
- Review and document regional geological, hydrogeological, topographical and services infrastructure information to identify site media and potential contaminant transportation pathways at the site;

[2] Planning Secretary's Environment Assessment Requirements. *Sydney Metro Northwest – Hills Showground Station Precinct Concept Proposal and Stage 1 Subdivision. Part Lot 140 in DP1180973 – 1-5 Carrington Road Castle Hill.* SSD 9653 issued 26 October 2019 for Landcom on behalf of Sydney Metro (SEARs)

- Identify potential data gaps across the site and assess the potential for near surface contamination as a result of the SMNW works;
- Address the key contamination issues in the SEARs and the requirements of SEPP 55 to demonstrate the suitability of the site for development, or provide recommendations that will enable the site to be considered suitable prior to commencement of future use(s); and
- Develop and document a preliminary conceptual site model (CSM) of contamination to facilitate comments on potential issues that may require further consideration, including assessment, management and/or remediation to make the site suitable for its proposed uses.

1.3 Scope of Works

The scope of works completed for this assessment comprised:

- A review of available historical site use, background information and previous investigations to identify potential areas of environmental and chemical concern;
- Review and collation of available regional and site specific information in relation to geology, hydrogeology, etc. including previous environmental and geotechnical site investigation data to confirm site conditions and the presence of potential AECs;
- Development of a site-wide CSM based on the available information specific to the site; and
- preparation of a preliminary environmental site assessment report in general accordance with relevant EPA Guidelines.

1.4 Hills Showground Station Precinct Development

The site comprises part of the SMNW Project, formerly known as the North West Rail Link (NWRL). The broader SMNW Project has delivered eight new metro stations, commuter carparking and an upgrade to existing railways. The Showground Station Precinct site will be divided into three individual precincts, the Hills Showground Precinct West, Hills Showground Precinct East and the Doran Drive Precinct. The three precincts will comprise a total of approximately 3.95 ha of developable government land which are to be utilised to create a series of mutually dependant transit neighbourhoods.

The vision for the Showground Precinct is to transform the area around the Station into a vibrant urban centre providing a range of housing, employment and retail services close to public transport through of a series of diverse, mixed-use commercial/residential redevelopments.

A summary the proposed development for each precinct area as provided by Landcom is included in **Appendix A**.

2. Site Condition and Surrounding Environment

The Showground Station Precinct is located 26 km to the north west of the Sydney central business district (CBD). The location of the site is shown in **Figure 1**, current layout is shown in **Figure 2**. Site details are summarised in **Table 2.1**.

Table 2.1 Summary Site Details

Developable Lot Numbers	Lot 53, 55 and 56 in DP 1253217
Former Development Street Address	1-5 Carrington Road, Castle Hill, NSW
Site Area	Site Area 8.4 ha Precinct Areas: • Hills Showground Precinct East: 28,226 m^2; • Doran Drive Precinct: 7,969 m^2; and • Hills Showground Precinct West: 3,293 m^2.
Local Government Authority	The Hills Shire Council
Geographic Coordinates (MGA 56)	Hills Showground Precinct East: 313657.818 East 6266343.447 North Doran Drive Precinct: 313523.792 East 6266254.708 North Hills Showground Precinct West: 313387.127East 6266224.817North
Zoning	B2 – Local Centre R1 – General Residential SP2 – Infrastructure: Local Road Widening
Previous Land Uses	Residential, agricultural, commercial / industrial (council chambers and administration, works depot)
Current Land Uses	Commercial, vacant land
Proposed Developable Land Uses	Residential, recreational, retail and commercial

2.1 Site Layout

A detailed inspection of the site was conducted from publicly accessible places within the Showground Station Precinct on 6 May 2019 by one of JBS&Gs trained and experienced environmental consultants. Photographs taken during the inspection are provided in **Appendix B**, and details pertaining to site observations are summarised below.

This portion of the site comprised the former Council Chambers and Administration building (eastern portion of the site), newly constructed infrastructure associated with the Hills Showground Metro Station and a series of vacant parcels of land (central and western portion of the site), which were accessed from Carrington Road (south) and Showground Road (east), and a network of newly constructed road reserves.

Hills Showground Precinct East

The Hills Showground Precinct East was occupied by the former Council Chambers and Administration building, comprising a large three story commercial office building and associated hardstand concrete/asphalt paved parking lots. At the time of the inspection, it is understood that the site was unoccupied, and the site boundaries were secured via a range of fencing comprising construction hoarding and security fencing.

The building was characterised by four radiating wings forming a cross footprint situated atop a ridgeline (topographic high point). The northern most portion of the site was observed to fall in a north-easterly direction toward Showground Road and contained an asphalt paved carpark and landscaped areas including garden beds, scattered tall trees and open grassed areas. To the south of

the ridgeline, the balance of the eastern and southern portions fell toward the south-east (Carrington Road) and south-west (Cattai Creek) with localised landscaped mounds noted within the site facing Carrington Road. Areas of hardstand pavement surrounded the former Council Chambers and Administration building[3] and were noted to contain scattered building and demolition waste.

The southern portion of this precinct was separately fenced from the balance of the site and comprised a batter slope retaining the northern portion of the site, followed by a level concrete paved area and then further batters retaining the site above the new Andalusian Way road reserve, which formed the southern extent of this portion of the site.

A new electrical substation associated with adjacent railway infrastructure had been constructed in the south-east most corner of this precinct, facing Andalusian Way and Carrington Road.

Doran Drive Precinct

The Doran Drive Precinct comprised a rectangular area secured by construction hoarding and security fencing, surrounded by newly constructed road reserves - Andalusian Way to the north-east, De Clambe Drive to the north-west, Doran Drive to the south-west and Mandala Parade to the south-east. The new Hills Showground Metro Station being located beyond Mandala Parade.

This precinct was a freshly prepared vacant lot with no vegetation cover. Ground surfaces were noted to comprise exposed (unsealed) graded fill materials with constructed batters retaining the sites above the surrounding road reserves in certain areas (further discussed in **Section 2.6**). Areas were noted to be stained green consistent with the former application of dust suppression measured, with some areas also characterised by dark grey aggregate.

Hills Showground Precinct West

This precinct comprised an L-shaped area secured by construction hoarding, bound to the north-east by Doran Drive and north-west and south-west by De Clambe Drive. The newly constructed commuter carpark infrastructure bound the internal portion of the L-shape and extended to the south-east.

The site area was characterised by sloping batters and levelled batter-toe areas retaining the two street reserves above the carpark ground floor levels. With the exception of a set of constructed access stairs and level footpath for the carpark in the northern portion of the site, this portion was also a vacant site, with vegetation limited to scattered grass/weed cover. The ground surfaces were characterised by exposed fill material and a mulch covered drainage basin in the south-west portion, surrounding a constructed stormwater drain. A vertical concrete wall was situated at the south-extent of the site, associated with the carpark connection to the station to the east.

The newly constructed road reserves comprised asphalt paved roads with constructed guttering and stormwater inlets and paved pedestrian walkways with landscaped beds incorporating ground covers and semi-mature trees. A stormwater detention basin was apparent in the south-westernmost portion of the site, beyond De Clambe Drive and adjacent to Cattai Creek. This area was separately fenced, with a paved driveway area extending to several stormwater infrastructure shafts. Gabbion walls bound the area to the north-west retaining the Showground property above. Aquatic rushes were present within the lowest areas of the basin, with the balance of the basin stabilised with geotextile/hessian and mulch. Beyond De Clambe Drive to the south, was the vegetated Cattai Creek riparian zone.

[3] It is noted this building is proposed to be demolished under a separate development application [DA (304/2020/LA] submitted to Hills Council on 9 September 2019.

2.2 Surrounding Land Uses

The current land uses of adjacent properties or properties across adjacent roads are summarised below.

- North-west –De Clambe Drive respectively community use and open sided animal sheds/showground buildings and open turfed parkland associated with the Castle Hill Showground in addition to a paved vehicle parking area;
- North-east – Showground Road across which are low density residential, public open space and residential/commercial developments north of Showground Road;
- South-east to South – Carrington Road, across which there is low density residential developments and mixed residential/commercial buildings (child care, medical/physiotherapy); and
- South-West – Cattai Creek riparian zone, beyond which lies commercial and industrial warehouses.

2.3 Geology and Soils

Reference to the online ESPADE 2.0 tool hosted by the NSW Office of Environment and Heritage (OEH 2018[4]) and the 1:100 000 Geological Series Sydney Geological Survey of NSW Sheet 9030 (DMR 1991[5]) indicates that the site is present within the following natural geological and soil landscapes:

- **Geology**:
    - Hawkesbury Sandstone – typically comprising medium to very coarse-grained quartz/quartzose sandstone with minor laminated mudstone and siltstone lenses. Layers are typically 1 to 3 m thick (as primary bedding planes).
    - Ashfield Shale – the basal unit of the Wianamatta Group comprising dark black to grey claystone and siltstone grading to a distinct laminate of fine sandstone and siltstone.
    - Mittagong Formation – comprising fine grained brown sandstones and interlaminated or interbedded dark grey siltstones.

Further information pertaining to the site geological setting has been presented in a detailed geotechnical report prepared for the site, as provided in **Appendix C**.

- **Landscape**: the site is typically located within undulating to rolling low hills on Wianamatta Group shales, with local relief 50-80 m and slopes of 5–20 %. Landforms generally include narrow ridges, hillcrests and valleys. Vegetation is usually extensively cleared open-forest (wet sclerophyll forest).
- **Soils**:
    - 'Glenorie landscape'– residual, shallow to moderately deep (200 cm) yellow podzolic soils and gleyed podzolic soils along drainage lines.
    - 'Hawkesbury' – colluvial, shallow discontinuous lithosols/siliceous sands associated with rocky outcrops, yellow earths, localised yellow and red podzolic soils associated with shale lenses and siliceous sands and secondary yellow earths along drainage lines.
- **Limitations**:

[4] *ESPADE 2.0*. NSW Office of Environment and Heritage, Accessed 13 November 2018, OEH 2018;
[5] *1:100 000 Penrith Geological Map Sheet 9030 Edition 1*. Department of Mineral Resources, Published 1991, DMR 1991

- ‘Glenorie Landscape’ – water erosion hazards, localised steep slopes, localised mass movement hazards, localised surface movement potential and localised impermeable highly plastic soil.
- ‘Hawkesbury’ – steep slopes, mass movement/rockfall hazard, water erosion hazard, non-cohesive soils, highly permeable soils of low fertility.

It is noted the ‘Luddenham’ soil landscape may intersect the south-western boundary of the site, adjacent to Cattai Creek. Given the anticipated limited area which may contain this soil landscape and noting its location external to the proposed developable areas, no further consideration was warranted.

2.4 Salinity

The *Salinity Potential in Western Sydney* map (DIPNR 2002[6]) indicates that the assessment area exists within an area of ‘moderate salinity potential’ outside of drainage line areas. Areas of moderate salinity generally consist of areas susceptible to saline affectation if disturbed particularly if saline groundwater/seepage is intercepted and/or if areas of water logging can occur. Areas with this classification exhibit scattered scalding and indicator vegetation, but soil concentrations have not been mapped. Saline soils are identified as potentially existing within these areas.

Within soils surrounding Cattai Creek a ‘high salinity potential’ is noted, situated adjacent to the west of the assessment area. Areas of high saline risk generally occur lower in the landscape, or at permeability contrasts, where saline groundwater may come near to the ground surface or where seepage causes water logged conditions, thereby concentrating soils. Typically scattered saline indicator vegetation occurs in these areas.

JBS&G note previous investigations (**Section 4**) have not specifically assessed site soil conditions for saline soils across the site.

2.5 Acid Sulfate Soils

DLWC (1998), states that acid sulfate soils (ASS) are likely to be located in coastal lowlands up to about 10 m Australian Height Datum (AHD). No risk map for the area encompassing the site was provided as part of the acid sulfate soil risk map series, DLWC (1998), typically indicating that such conditions have not been identified based on regional mapping of geology and soil (as discussed in **Section 2.3**).

Review of accessible data using the SEED tool, hosted by NSW OEH (2018[7]) indicates the area occupied by the site has not been required to be assessed for the presence of ASS based on the outcomes of a preliminary evaluation. Such sites are by default characterised as “no known occurrence”, being defined as areas where land management activities are not likely to be affected by ASS materials.

Planning certificates presented in **Section 3.8** and included in **Appendix D**, do not identify the site as being subject to any policies relating to ASS.

Review of the geographical and topographical location of the assessment area, in addition to the geological conditions identified at the site has indicated that there is no appreciable risk of acid sulfate soil occurrence in natural soils and/or rock at the site. On this basis, there is no further requirement for consideration of ASS conditions and/or management of such during future ground disturbance activities.

[6] *Salinity Potential in Western Sydney*. Department of Infrastructure, Planning and Natural Resources, March 2003, DIPNR 2002;
[7] *Sharing and Enabling Environmental Data (SEED)*. https://www.seed.nsw.gov.au/ accessed 12 November 2018;

2.6 Topography

Review of topographic information obtained from the Spatial Information Exchange Viewer (LPI 2016[8]) regional topographic map indicated that the site is located within an undulating regional topography characterised by an approximately north-west to south-east aligned ridgeline the crest of which runs through the Hills Showground Precinct East with the former Council Chambers and Administration building situated on the crest at approximately 100 m AHD, with the balance of the site falling down away from this ridge. The western portion of De Clambe Drive and Carrington Road (apart from the north-most portion) both fall toward the south/south-west in the vicinity of the site, whilst Showground Road falls toward the east and a localised low point at the intersection with Carrington Road. The southern portion of De Clambe Drive at the south-west extent of the site was relatively level.

The northern most portion of the site falls in a north-easterly direction toward Showground Road and beyond. The balance of the site falls with gentle slopes toward Cattai Creek situated to the south-west of the site. At the time of the assessment, ground levels of approximately 100 m AHD were present in the north-east of the site sloping to approximately 78 m AHD adjacent to the site's boundary with the Cattai Creek riparian zone.

As a result of previous development works, including the recent SMNW activities, significant changes in site topography has occurred, including for the construction of the new station and public domain areas. The Doran Drive Precinct falls in a south-westerly direction across the parcel, with constructed batters to the site boundaries retaining ground levels at up to approximately 1 – 1.5 m above the new street reserves. Within the southern portion of the site, the new carpark facilities to the south-east and south-west of the Hills Showground Precinct West have been constructed with ground levels consistent with the intersection of Carrington Road and De Clambe Drive (approx. 83 m AHD), being significantly lower than the western portion of De Clambe Drive (approx. 89 m falling toward the south) and Doran Drive (approx. 90 m AHD) ground levels. As a result, the Hills Showground Precinct West is characterised by constructed batters of up to approx. 6 m above the carpark ground level, retaining the road reserves to the north-west and north-east. Beyond De Clambe Drive to the south the site is retained by a range of retention measures ranging from batter slopes to gabion walls, above the riparian zone. Further batters to the west of De Clambe Drive retain the adjoining Showground site in the south, noting that in the north, the road reserve is retained by shallow batters toward the Showground.

2.7 Hydrology

The nearest surface water body is Cattai Creek abutting the south-western boundary of the site (**Figure 2**). As discussed within the topography (**Section 2.6**), site ground surfaces generally slope toward Cattai Creek, apart from a very minor portion at the northern most extent that falls toward Showground Road. The Showground Road catchment site portion is anticipated to ultimately drain to Castle Hill Creek approximately 300 m to the north of the site, which is also a tributary of Cattai Creek.

Cattai Creek is an urbanised fresh water tributary which flows through mixed rural/residential and commercial/industrial areas before discharging into the Hawkesbury River at Cattai, approximately 20 km to the north-west of the site.

Areas of hardstand pavements were observed at the site, with excess surface water present during periods of rain anticipated to be captured within the newly constructed local stormwater network and discharged to Cattai Creek via a combination of overland flow and infiltration into shallow groundwater.

[8] *'Spatial Information Exchange Viewer'*, NSW Land and Property Information, Accessed 2 September 2019, https://maps.six.nsw.gov.au/

The current site condition, as described in **Section 2.1**, is characterised by a combination of sealed hardstand pavements associated with the Council Chambers and Administration building in the north-east (Hills Showground Precinct East) and newly installed asphaltic/concrete hardstands and buildings associated with the recent construction of the Hills Showground Railway Station and associated road reserves which capture and direct overland water flow towards installed stormwater infrastructure, ultimately discharging to the municipal stormwater system (Cattai Creek). Unsealed surfaces are present across the Precinct West and Doran Drive Precincts, most of which have been recently imported and/or graded on the site as part of the SMNW Project works. It is anticipated that rainfall landing on unsealed areas would typically be directed towards existing onsite stormwater infrastructure or follow the topography of the land toward Cattai Creek, with minor percolation into underlying soils.

2.8 Hydrogeology

As discussed in **Section 2.3**, the assessment area lies within an environment characterised by the Glenorie Landscape, comprising podzolic soils overlying Wianamatta Group Shale, and the Hawkesbury Landscape comprising shallow bedrock and the potential for minor colluvial sediments within the south-western most portion of the site. Two relevant groundwater systems are anticipated to operate in the vicinity of the Showground Station Precinct area:

- A shallow unconfined to semi-confined aquifer system within the unconsolidated soils of the Glenorie Landscape; and
- A deeper confined groundwater system resident in primary and secondary porosity of the Ashfield Shale/Hawkesbury Sandstone.

Registered groundwater bore information was obtained from the NSW Department of Primary Industries groundwater mapping tools (NSW DPI 2018[9]) (**Appendix E**) indicated that there are two licensed bores located within an approximate 1.5 km radius of the site. Available information for the wells is summarised below in **Table 2.2**. A plan showing the locations of groundwater bores within a 1.5km radius of the site, along with data for the individual bores, has been included in **Appendix E**.

Table 2.2: Registered Groundwater Bore Search Summary

Well ID	Distance from site	Direction from site	Depth (m)	Standing water level (m below ground surface (bgs))	Purpose
GW100981	550 m	North-east	102.00	8.0	Domestic
GW107601	150 m	North-west	35.34	-	Monitoring

Based on the above it is anticipated groundwater is present at a shallow to moderate depth below the site, with previous investigations (JBS 2009, **Section 4**) reporting groundwater within the south-western portion of the site at between 2.98 m below top of casing (btoc) (MW3) and 5.34 m btoc (MW5). Groundwater was inferred to flow toward the south west (toward Cattai Creek). Although it is noted that since this information was obtained, significant ground disturbance works, including construction of the SMNW tunnel and excavation works to reduce site levels that have occurred at the site.

2.9 Meteorology

A review of average climatic data for the nearest Bureau of Meteorology monitoring location (Pennant Hills[10]) indicates the site is located within the following meteorological setting:

- Average minimum temperatures vary from 5.2 ^{o}C in July to 16.1 ^{o}C in January and February;

[9] *Groundwater Monitoring Overview Map*. NSW Department of Primary Industries, 2015 Http://allwaterdata.water.nsw.gov.au/water.stm Accessed 14 August 2018

[10] http://www.bom.gov.au/climate/averages/tables/cw_066037.shtml, Commonwealth of Australia, 2013 Bureau of Meteorology, Product IDCJAC0001 prepared on 21 September 2017 and accessed by JBS&G on 2 September 2019

- Average maximum temperatures vary from 15.8 ^{o}C in July to 27.6 ^{o}C in January;
- The average annual rainfall is approximately 1066.1 mm with rainfall greater than 1 mm occurring on an average of 85.0 days per year; and
- Monthly rainfall varies from 56.1 mm in September to 124.0 mm in March with the wettest periods occurring on average in December to April.

3. Site History

3.1 Historical Aerial Imagery

Historical aerial photographs dated 1930, 1950, 1961, 1970, 1986, 1994 and 2002 were obtained from the Land and Property Information Division of the Department of Finances and Services. Aerial imagery from between 2012 and 2019 was obtained from Nearmap imagery. All aerials were reviewed for this assessment (**Appendix F**). The aerial photograph review identified the following features in relation to the history of the site:

1930

The site appeared to comprise a combination of densely timbered vegetation and areas of cleared rural residential and agricultural land. Several earthen roadways provided access from Carrington Road to small rural residential structures and plantations (orchards, presumably citrus) in the central west and eastern portions of the site.

The surrounding area appeared to comprise land utilised for similar rural residential/agricultural purposes, with extensive orchard groves evident to the south, west and east. The Castle Hills Showground was well established to the north of the site, comprising an open, turfed oval with several structures (warehouses/sheds) noted further north.

1950

The central and western portions of the site had been subject to significant clearing of timbered vegetation. The majority of the land appeared to comprise rural residential/pastoral land with several small residential dwellings noted in the central south and north eastern portions of the site. No evidence of historic orchards were present. A small dam had been excavated at the western site extent. A series of new sheds had been constructed in the north west of the site, extending beyond the northern site boundary toward the Showground. The sheds may have been horse stables, noting the occupation of the site owner during this period (**Section 3.2**).

The surrounding area had undergone extensive clearing of timbered vegetation to the north of the site. The surrounding area appeared similar to previous aerial photographs with an increase in built structures and potential greenhouses/poultry sheds surrounding orchard groves and market gardens.

1961

The site appeared similar to the previous 1950 aerial photograph. Additional structures had been constructed surrounding existing residential buildings in the south east of the site, fronting Carrington Road. A significant amount of scattered timber and/or waste materials were apparent within the central eastern portion of the site. Minor market gardens had been re-established adjacent to the property in the north east.

The surrounding area appeared similar to the previous aerial photograph.

1970

Previous rural residential properties in the central east and west of the site had been demolished. The land appeared to be vacant with several earthen tracks (west) and a turfed football field having been constructed in the central eastern portion of the site, at a location consistent with the portion acquired by the Baulkham Hill Shire Council (**Section 3.2**). The residential property adjacent to the newly construction playing field appeared similar to the previous aerial photograph, with an increase in stockpiled timber/waste materials apparent.

The remainder of the site and surrounding area appeared similar to the previous aerial photograph with the construction of several new sheds within the Castle Hill Showground (north of the Showground fields).

1986 The site and surrounding area had undergone significant redevelopment. A large multi-storey commercial building (Council Chambers) and associated infrastructure had been constructed in the north eastern portion of the site. The Council Depot was apparent in the south western portion of the site, comprising two elongated open plan warehouse structures and circumferential hardstand pavements. Vehicle and bulk material storage was noted within the Council Depot. The Showgrounds nursery area was apparent to the north west of the Council Depot. The central portion of the site was vacant and characterised by a gravelled car park area and oval sports track.

Further expansion of the Castle Hill Showground area to the north west of the site had occurred. Land to the south and north east had been redeveloped and contained low density residential allotments. The construction of commercial/industrial warehouses was apparent to the south west of the site.

1994 The Council Depot (west) and Council Chambers and Administration office building (east) appeared similar to the previous aerial photograph. The central portion of the site had been redeveloped and contained a single, square multi-storey building and associated hardstand pavements/landscaped garden beds.

The surrounding area appeared similar to the previous aerial photograph.

2002 The site and surrounding area appeared similar to the previous aerial photograph.

13/12/2012 The site and surrounding area appeared similar to the previous aerial photograph. Land to the north east of the Council Chambers building had been cleared and replaced with bituminous hardstand pavements. Several additional buildings had been constructed as part of the Castle Hill Showground to the north.

24/12/2014 The eastern portion of the site (Council Chambers) appeared similar to the previous aerial photograph and it understood to be utilised for SMNW offices. The central portion of the site has been redeveloped, as associated with initial SMNW Project works, and the construction of several large covered construction areas/sheds had occurred. The majority of the site ground surface appeared to have been paved (replacing the former asphalt paved carpark). An elongated excavation had been formed adjacent to the southern site boundary (Carrington Road), as associated with the construction of underground railway infrastructure. A single large above ground storage tank (AST) (potentially water/concrete batching) was apparent in the north east of the works area as well as several bunded material storage yards and two centralised water treatment basins. Site surfaces within a bunded storage area in the south west were noted to be green in colour at the time of the imagery.

The Council Depot area appeared to be utilised as a storage compound for adjacent SMNW redevelopment activities. The two large buildings and surrounding pavements had been retained. A detention basin was observed in the south west of the site and several buildings in the north west of the site had been demolished and replaced with a water retention pond.

16/10/2015 Further material/equipment storage was apparent within the Council Depot area. Infrastructure had been constructed within the central portion of the site to facilitate excavation works as associated with the construction of the Hills Showground Railway Station. A network of shafts was observed which led to a storage yard/load out area where presumably excess spoil was being transported off-site.

A series of cylindrical black plastic storage tanks and several tall sheet metal ASTs had been installed adjacent to the previously observed AST and water treatment basins in the north east of the SMNW Project area, indicative of a water treatment plant.

The north eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

24/03/2016 The network of shafts and one of the two large open plan storage sheds/warehouse (western building) in the central portion of the site had been removed indicating bulk subsurface excavation of the Hills Showground Station had likely been completed. In addition, the series of plastic and sheet metal above ground storage tanks in the north west of the SMNW Project area (water treatment plant) had been removed. The single large AST, two water treatment basins and material storage yards remained within the central portion of the site. The shadowing in this image indicates that several ground levels occurred within the site during this period and a ramp area was apparent from this central portion directly down to the Council depot site portion.

Within the Council Depot area, the former site structures had been demolished and removed. Exposed surface soils were apparent within the former building footprints, with the surrounding pavements possibly still present at the time of the image. Earthmoving machinery was apparent within the building footprints. Green surface staining was apparent in the south eastern portion of the site, consistent with sprayed ground stabilisation activities (seeded polymer with marker for application).

The eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

05/06/2016 The site appeared similar to the previous aerial photograph. The central and western portions of the site were being utilised as material/equipment storage yards (to varying degrees) and a portion of the remaining warehouse structure in the central south of the site had been demolished. The portion that remained was observed to extend the width of the open excavation toward the southern boundary. Material underlying the former Council Depot structures appeared to have potentially been spread across a large portion of the surrounding hardstand pavements. This area was still being accessed via a ramp from the central portion of the site.

The eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

29/07/2016 The site appeared similar to the previous aerial photograph. The remaining warehouse structure in the central south had been removed. The majority of the SMNW Project area appeared to be free from bulk material/plant storage, with minor equipment storage and several shipping containers present in the central portion of the site. The construction site levels remained consistent with the balance of the 2016 imagery. Materials previously spread across the south western portion of the site (former Council Depot) had all been cleared and exposed soils remained apparent within the former building footprints, surrounded by retained pavements. The detention basin remained present in the west most portion of this area.

An additional shed had been constructed within the carpark area in the northern-most portion of the site, adjacent to the Council Chambers building. The site and surrounding area appeared similar to the previous aerial photograph.

13/11/2016 The site appeared similar to the previous aerial photograph. Exposed soils underlying former site structures in the former Council Depot portion south west of the site appeared to have been covered with aggregate or similar. Changes to the pavements beyond the building footprint may be consistent with works for the removal of historic UST infrastructure within the Council Depot (as outlined in Section 3.9). A stockpile of material had been placed within a bunded area (green surface staining noted in previous aerial photographs). Minor material storage was also apparent in the central portion of the site.

The eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

27/03/2017 A significant increase in material storage had occurred within the central portion of the site, with several large stockpiles of soil observed within the existing layout. The south western Council Depot area was being utilised as an equipment holding and storage yard. Cut to fill activities appeared to be occurring within the central southern portion of the site, adjacent to the Hills Showground Railway Station excavation.

The eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

07/09/2017 The majority of bulk earthworks and material storage appeared to have ceased within the central portion of the site. Excavation (cut to fill) activities were apparent within the central south western portion of the site (former Council Depot). The majority of the SMNW Project area was noted to contain equipment, stockpiled materials and plant/machinery associated with the redevelopment works.

The eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

07/12/2017 The entire western portion of the site comprised exposed soils and appeared to have been subject to grading activities, including former pavement removal and initial batter construction works. Pile foundations were evident in the central south west, across the location of the previously observed earthworks (cut activities). The initial construction of De Clambe Drive (to the south west and north) was apparent. An overflow channel had been constructed from the detention basin in the west of the site which appeared discharge directly to Cattai Creek.

Construction of the Hills Showground Railway Station (built form) had begun, with the previous open excavation along the southern boundary of the site observed to contain structural concrete cross beams. Significant materials storage activities were in progress within the central portion of the site.

The eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

18/01/2018 Construction activities consistent with the carpark were apparent, with the lift cores apparent and surrounding batters to the future De Clambe Drive road reserves. The balance of this site portion comprised disturbed ground with active indications of civil works. Material had been stockpiled along the site boundary, north of the south western excavation works. The sediment basin in the south west of the site had been partially infilled.

Further construction of the Hills Showground Railway Station was apparent, with the placement of concrete slab panels across the majority of the open excavation. The

balance of the central precinct appeared to site comprise an active construction storage/works area.

The eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

22/06/2018 The Showground Railway carpark had been partially constructed in the south western portion of the site. The surrounding area appeared to remain exposed surface soils, with the construction of two associated buildings evident to the south. Additional material had been stockpiled to the north of the construction area (across De Clambe Drive) adjacent to the northern boundary, including stockpiles which appeared to potentially comprise concrete waste.

Further construction of the Showground Railway Station had occurred along the southern boundary of the SMNW Project area. The remainder of the area appeared similar to the previous aerial photograph, with several small storage sheds having been constructed toward the south east and significant equipment storage noted across the remainder of the SMNW Project area.

The eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

19/09/2018 The construction of the Hills Showground Railway carpark and associated buildings appeared to be ongoing. Bulk earthworks were apparent surrounding the buildings, with additional batter construction activities occurring for the construction of associated roadways. Placement, stockpiling and spreading of materials within the central portion of the SMNW Project area had occurred, with the configuration (and elevation i.e. raising of site levels) of the holding/storage yard notably different to the previous aerial photographs. The single large AST in the north east of the SMNW Project area had been removed.

The eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

29/12/2018 The current layout of the site had been generally established with Doran Drive having been sealed with hardstand pavement. Bulk earthworks were apparent across the central portion of the SMNW Project area, presumably to establish the required site levels. Some minor material storage was still apparent surrounding the redevelopment area. Landscaping had also been completed around the detention basin in the west most site corner.

The eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

07/04/2019 The majority of site street reserves had been constructed, sealed with hardstand pavement and lined with landscaped garden beds and vegetation.

The current site configuration had been established with construction of the Showground Railway Station and carpark infrastructure completed. The two water treatment basins located within the central portion of the site (Doran Drive Precinct) had been removed and several minor stockpiles of soil/waste were apparent on the ground surface.

The eastern portion of the site and surrounding area appeared similar to the previous aerial photograph.

3.2 Historical Titles

Historical land title records are included in **Appendix G**. Review of the historical title documentation records for the site indicated the site was privately owned (as of the early 1900s) and utilised to varying degrees as vacant pastoral, agricultural and rural residential land. The title documentation indicates potential land uses of portions of the site included primary resources (timber/orchards) and horse training. The majority of the site was acquired by the Baulkham Hills Shire Council between the 1960s and 1970s, following which the entire site was transferred to Transport for NSW in 2013.

3.3 Council Development and Property File Records

A search of The Hills Council property enquiry database[11] did not identify any development applications (DAs) that are considered to have/potentially influenced the contamination status of the site. Several DAs had been lodged for development as associated with the Hills Showground Railway Station, detailed records are presented in **Appendix H.**

3.4 EPA Records

A review of the EPAs list of NSW Contaminated Sites Notified to the Office of Environment and Heritage (OEH) (**Appendix I**) identified that the site had not been notified to EPA under Section 60 of the *Contaminated Land Management Act* (*CLM) Act* 1997. The search yielded the following information:

- No notices have been issued under the CLM Act for the assessment area and immediate surroundings.
- The assessment area is not on the list of NSW contaminated sites notified to the EPA.

A search of the NSW EPAs public register maintained under the *Protection of the Environment Operations Act 1997* (*POEO Act 1997*) was undertaken for the site and surrounding properties. The results of the search are presented in **Appendix I**. The review identified the following with regards to the site surrounding properties:

- Approximately 350 m north west of the site an environmental protection licence (EPL 11782) had been issued at 40/5 Anella Street, Castle Hill NSW, for the generation or storage of Hazardous Group A Waste. It is noted this licence in no longer in force (as of November 2002);
- Approximately 150 m south west of the site an environmental protection licence (EPL 2847) had been issued at 9 Carrington Road, Castle Hill, NSW for the generation or storage of Hazardous Group A Waste. It is noted the licence was subsequently surrendered as of 23 May 2007;
- An environmental protection licence (EPL 20319) has been issued for railway systems activities at the North West Rail Link – Tunnels and Station Civil Works between Balmoral Road Bella Vista and Epping Railways Station as further discussed below; and
- No other prevention, clean-up or prohibition notices and no transfer, variation, suspension, surrender or revocation of an environment protection licence records were identified to have been issued under the POEO Act for the assessment area and immediate surroundings.

EPL 20319

The EPA issued an EPL to Theiss Pty Ltd for 'railway systems activities' including subsequent licence variations for 'concrete works'. Whilst the location information indicated that the licence applies to

[11] https://www.thehills.nsw.gov.au/Building/Development-Approvals, accessed 24 June 2019.

the railway corridor between Belmore Road, Bella Vista and Epping Station, Epping NSW. Review of the EPA documentation indicates that the premises designated within the EPL includes the Hills Showground Station works site, located within the site as outlined herein. Section 5 of the EPL relates to management of generated waste, with pertinent details provided below:

- *O5.1: The licensee must assess, classify and manage any waste generated at the premises in accordance with the Waste Classification Guidelines Part 1: Classifying Waste, April 2008 (Waste Guidelines) prior to dispatching the waste offsite;*
- *O5.2: The licensee must not cause, permit or allow any waste generated:*
    - *outside the premises to be received at the premises, except for recycled materials from the Sydney Trains rail corridor or the Sydney Trains recycling facility or materials that meet the EPA's Resource Recovery Exemptions.*
    - *at the premises to be disposed of at the premises, except as permitted in Condition O5.3.*
- *O5.3: Excavated material suitable for re-use within the premises may be transported from one part of the premises or the Sydney Trains rail corridor or Sydney Trains recycling facility to another part of the premises by road in accordance with Condition O5.4.*

Reporting conditions listed in Section 6 of the EPL stated that the licensee must complete and supply to the EPA an Annual Return. Three annual returns are presented on the EPA website which do not identify any non-compliances with regards to waste management at the site.

JBS&G note two properties (outlined above) which held POEO licences for the generation or storage of Hazardous Ground A Chemicals are positioned cross gradient (west and south west of Cattai Creek) of the site, and as such, are considered to be located in a separate catchment and as such unlikely to represent a potential migration of contamination to the site.

3.5 EPA Per- and Poly- Fluoroalkyl Substances (PFAS) Register

A search was undertaken through the EPAs PFAS register of contaminated sites and is included in **Appendix I**. The search identified that there are no sites in the Castle Hill area notified to the EPA with regards to PFAS contamination.

3.6 Department of Defence

A search of readily available records held by the Department of Defence was undertaken and has identified the following with regards to the assessment area and surrounding properties, records are included in **Appendix J**:

- The site and immediately surrounding properties are not identified on the Defence Environmental Remediation Program; and
- The site and immediately surrounding properties are not registered within the PFAS Investigation and Management Program.

3.7 Australian and NSW Heritage Register

A search of the Australian Heritage Trust database and the NSW Heritage Inventory was undertaken, and records are included in **Appendix K**. The search did not identify the presence of any items of national or state significance in the immediate vicinity of the assessment area.

3.8 Section 10.7 Planning Certificate

Planning Certificates (Section 10.7 (2 & 5)) were obtained for former Lot 140 DP 1180973 from The Hills Shire Council on 25 June 2019 and are included in **Appendix D**. The planning certificates included the following information regarding to the site:

- The site is subject to The Hills Local Environmental Plan (2012);

- The site falls within Zone SP2 Infrastructure, B2 Local Centre, and R1 General Residential;
- The site does not comprise critical habitat;
- The site is not located within a conservation area;
- The site does not contain an item of environmental heritage;
- The site is not subject to any road widening or road realignment certification under division 2 of Part 4 of the *Roads Act 1993*. The site/part of the site is zoned for Local Road Widening and as such, is subject to an environmental planning instrument under The Hills LEP (2012);
- The land is not within a proclaimed Mine Subsidence District;
- None of the land has been identified as bush fire prone land;
- No order has been made with respect to the trees on the land;
- The site is subject to Flood Development Controls under The Hills LEP (2021); and
- No building on the land has been identified in the Loose Fill Asbestos Insulation Register.

Under the section Matters Arising under the CLM Act (1997), it was reported that the following information is available to Council:

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

It is noted that no heritage items have been identified at the site or in the immediate surrounds.

3.9 Dangerous Goods Search

A search of SafeWork NSW records for on-site storage of Dangerous Goods was undertaken for the entire site (former Lot 140 DP 1180973). Detailed records are presented in (**Appendix L**).

The search found records for five Underground Storage Tanks (UST) and two AST have historically existed on the south western portion of the site (former Lot 2 DP 539201 and Lot A DP 376559) during operation by The Hills Shire Works Depot. Known USTs are summarised as follows:

- One 45 kL UST containing unleaded petrol (ULP);
- One 27 kL UST historically used for the storage of diesel (ADO) fuel;
- One 10 kL UST used for the storage of ADO;
- One 10 kL UST used for the storage of leaded petrol (Super); and
- One 6 KL UST (contents/location unknown).

Plans indicating their locations are shown in **Appendix L**. Records indicate that two USTs were proposed to be installed in 1976 (4,000 gallon and 2,000 gallon), however no further records pertaining to their installation or location were not reported.

Records indicated two USTs were installed in 1985 (45 KL and 10 KL). No record of installation of the other UST(s) was provided as part of the records obtained from SafeWork NSW.

Documentation supplied by SafeWork NSW indicates that the 6 KL and 10 KL tank were abandoned and filled with sand on the 17th and 25th June 1996 respectively. There are no further records that the sand-filled 6KL and 10KL tank were removed from the site.

Records indicate that the remaining three underground storage tanks (UST 1-3) and a single above ground tank (AGST01) were abandoned on the 24 June 2013 and subsequently removed from the site on 18 April 2016 by the John Holland Dragados Joint Venture (contractors for the SMNW Project).

JBS&G note the SafeWork documentation does not refer to the former small (5 kL) waste oil ASTs within the north-eastern portion of the depot area (as observed during previous investigations, JBS (2009) (**Section 4**)). However, it is noted that there this volume of waste oil did/does not meet the licensing threshold.

3.10 Site History Summary

Review of available site history indicated the majority of the site was historically utilised as rural residential and agricultural (orchards) land prior to being acquired by the Baulkham Hills Shire Council between the 1960s and 1970s. Until approximately 2013, the site was used for a combination of public open space (playing fields) prior to use for commercial (office spaces and performing arts centre) and industrial (use as a Council Depot) activities.

The site was transferred Transport for NSW in 2013 following which the central and western portions have undergone redevelopment works associated with the construction of the SMNW Project train tunnels and station infrastructure.

4. Previous Investigations

Previous assessment reports prepared by JBS&G (JBS 2009[7] and JBS&G 2013[12]) and others (Coffey 2012[13],Arup 2015[14] and Douglas Partners (DP) (2016[15]) were conducted within portions of the site pre-dating the period of occupation for the SMNW Project. The following sections provide a summary of the information and site characterisation data presented within these assessment reports. The reports include both historical and information relating to investigations conducted at that time.

Comments in relation to contaminants of potential concern (COPC) are provided in the following text in relation to assessment criteria adopted by the author at the time of report preparation. This comprises the range of health investigation levels presented in (1999[16]) and EPA (1994[17]) for investigation results generally up to and including the end of 2012; ANZECC (2000[18]) for groundwater thresholds and NEPC (2013) for results from 2012 onward (where TRH and benzo(a)pyrene TEQ values were presented in reports.

4.1 The Hills Council Depot (Previous Lot 2 DP539201 and Lot A DP376559)

The following summarises the previous investigations (JBS 2009 and JBS&G 2013) conducted at the former Hills Council Depot (previous Lot 2 DP539201 and Lot A DP 376559). The location of historic sample locations, field borelogs and exceedances of assessment criteria as provided in historic summary tables are presented in **Appendix M.**

4.1.1 Combined Phase 1/ Phase 2 Environmental Site Assessment (JBS 2009)

JBS (2009) undertook a combined Phase 1 and Phase 2 Environmental Site Assessment for the NSW Department of Planning (DPE, now known as DPIE) to assist with evaluations for acquisition of the site from Baulkham Hills Shire Council as part of the SMNW Project. At the time of the assessment, the site was actively used by the Council as a works depot.

The scope of assessment comprised a review of historical information, detailed site inspection and a program of intrusive investigation JBS&G (2009) identified AECs and COPCs, as summarised in **Table 4.1** below:

Table 4.1: JBS&G (2009) AECs an COPC for the Council Depot

AEC	COPC
Former site buildings in the south west, east and north of the site.	Heavy metals, asbestos and organochlorine and organo-phosphorous pesticides (OCP/OPPs).
Former and existing waste oil above ground storage tanks (ASTs) in the northern portion of the site	Heavy metals, total petroleum hydrocarbon (TPH), polycyclic aromatic hydrocarbon (PAHs), phenols and volatile organic compounds (VOCs) including benzene, toluene, ethyl-benzene and xylenes (BTEX).
Wash bay area in the northern portion of the site	Heavy metals, TPH, PAHs and VOCs.
Decommissioned and active USTs, bowser area and associated fuel infrastructure.	Heavy metals, TPH/BTEX and PAHs.

12 *L01 Contamination Due Diligence Advice, Former Hills Shire Depot, Carrington Road, Castle Hill, NSW*. Doc (42829-54994) Rev1. JBS&G Australia Pty Ltd, issued 26 August 2013 (JBS&G 2013)

13 *North West Rail Link Geotechnical Interpretive Report*. Doc NWRL-10039-R-GE-00005-V2.0-FINAL_GIR. Coffey Geotechnics (Coffey 2012).

14 *Showground Precinct Desktop Contamination Review*, Arup Pty Ltd. As provided in Appendix L of the Showground Station Planning Report. Volume 1. Department of Planning. Issued 1 September 2015 (Arup 2015).

15 *Report on UST Validation Sydney Metro Northwest, Showground Station, Carrington Road, Castle Hill NSW.* Douglas Partners Pty Ltd. Doc 73315.03.R.001.Rev0.UST Validation.docx. Issued 6 May 2016 (DP 2016)

16 *National Environment Protection (Assessment of Site Contamination) Measure, 1999.* National Environment Protection Council, 1999 (NEPC 1999)

17 *Contaminated Sites: Guidelines for Assessing Service Station Sites*. NSW EPA December 1994 *(EPA 1994)*

18 *Australian and New Zealand Guidelines for Fresh and Marine Waste Quality, Volume 1.* Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand, October 2000 (ANZECC 2000)

AEC	COPC
Location of former orchard in the central to eastern portion of the site.	Heavy metals and OCP/OPPs.
Storeroom area located in central portion of the site (inaccessible at time of investigation).	TPH/BTEX, PAHs, heavy metals and herbicides
Former machinery shed located in the northern portion of the site.	Heavy metals, TPH/BTEX and PAHs.
Existing residential property in north eastern corner of the site.	Heavy metals, OCP/OPPs and asbestos
Mechanic's workshop (including inspection bays).	Heavy metals, TPH, PAHs and VOCs
Potential fill material historically brought onto the site.	Heavy metals, TPH/BTEX, PAHs, OCP/OPPs, polychlorinated biphenyls (PCBs), asbestos
Fill material beneath stockpiles of bulk storage material and bulk waste in the southern and south western portion of the site.	Heavy metals, TPH and PAHs.
Nursery area located in the north western corner of the site.	Heavy metals and OCP/OPPs
Sedimentation pond located to the north west of the nursery.	Heavy metals, TPH/BTEX, PAHs

The report indicated the site had an elevation of approximately 95 m AHD and as relatively flat, with a slight fall toward the southwest. JBS (2009) noted the topography appeared to have been altered as a result of the development and construction of the site, with raised areas adjacent to Carrington Road. The report identified the presence of underground petroleum storage at the site, as evidenced by Workcover (now SafeWork) records and through interviews with site occupants located to the south and west of site warehouse structures in the north western portion of the depot.

Field works included the advancement of fifty-one soil sampling locations and installation of five groundwater wells. Sample locations identified fill materials to variable depths ranging from 0.2 m to 4.1 m bgs. Fill materials were reported to generally comprise gravelly clayey sand or gravelly sands with basalt gravel and trace sandstone inclusions. The depth of fill material was generally shallow at the northern portion of the investigation area and increased towards the west.

Natural soils consisting of residual sand and sandy clay were encountered in the majority of the borehole locations. Sandstone bedrock was encountered directly underlying fill material within the northern portion of the investigation area at depths of between 0.1 m bgs to 0.4 m bgs. Sandstone bedrock was generally encountered across the broader investigation area underlying natural soils at depths of between of 0.3 m to 0.9 m bgs. Standing groundwater was reported at depths ranging between 2.98 m btoc (MW3) and 5.34 m btoc (MW5).

JBS (2009) reported analytical results from thirty-three soil sample locations and five groundwater wells. Heavy metals, BTEX, OCPs, OPPs, PCB and VOC soil analytical results were within the adopted commercial/industrial NEPC (1999) assessment criteria.

TPH impacted soil was identified in surface soils at sampling location SB28. In addition, TPH and Benzo(a)pyrene were noted at 3.5 m bgs (SB28). JBS (2009) reported the occurrence of TPH was likely attributed to above and below ground waste oil and biofuel storage tanks adjacent to the sampling location. Asbestos fibres and an asbestos cement fragment were identified within shallow fill material (0.3 m bgs) at one location, SB4 within the northern portion of the site.

TPH C_{10}-C_{36} concentrations exceeded the adopted groundwater investigation level in monitoring well MW3, located hydraulically downgradient from the existing ADO/biofuel UST. Concentrations of cadmium (MW1), chromium (MW1), copper (MW5), lead (MW1 and MW5), nickel (MW1) and zinc (MW1, MW2, MW4 and MW5) in groundwater were detected above the adopted groundwater criteria. JBS (2009) reported the occurrence of metals in groundwater were considered to reflect background urban conditions.

4.1.2 Due Diligence Advice Hills for the Hills Shire Depot, Castle Hill (JBS&G 2013)

JBS&G (2013) undertook a review of the previous ESA of the site (JBS 2009) to provide updated advice to NSW Land and Property Information (LPI) relating to requirements for management/remediation of the site contamination.

The scope of works included review of previous ESA report (JBS 2009), site inspection to assess any significant changes from previous report, evaluation of potential requirements for management of identified contamination relating to intended land use and relevant regulatory requirements.

A review of the previous report identified AEC and COPC as per the table in **Table 4.1** above. Key aspects were also noted, which are outlined in **Section 4.1.1**.

The site inspection, undertaken on 1 July 2013 noted the following:

- The former depot site appeared to be largely unchanged from the description reported in 2009 other than the removal of various equipment, small dangerous goods stored above ground, and bulk material stores;
- Small fragments of suspected asbestos containing material (ACM) were observed on the ground surface in a square fenced area immediately inside and south of the main site entrance, off Doran Drive;
- A large fragment of suspected ACM was observed in a fenced compound south of the administration building and west of the machinery storage area;
- A single monitoring well cover was located in the eastern corner of the site, at a location approximately where soil boring SB45 is noted on JBS (2009) plans. It was noted the JBS (2009) report did not refer to a monitoring well in this location, and the boring log for SB45 includes no record of monitoring well construction (indicating other assessment works may have been completed in the interim);
- Some general rubbish appeared to either have been left or since placed at the site, in an area of the bulk storage area;
- Fuel bowsers associated with USTs had been removed;
- The orientation of the 10 kL ADO UST located west of the former bowser area appeared to be on an east-west axis, which is different from the orientation depicted on figures in the JBS (2009) report as being parallel to the building wall and site boundary;
- A cover over the existing waste oil AST that was visible in photographs included in the JBS (2009) report had since been removed and the AST and bund were noted to be uncovered;
- Water had collected in a low-point within the north-west corner of a covered structure where a former waste oil AST was reported to have been located. The water appeared to have a slight sheen and there were hydrocarbon odours noted, although these may also have been associated with heavily stained sand spread over the concrete floor within the former waste oil AST area;
- The shorter of two vehicle inspection pits within one of the buildings had been filled in, and reinstated to surface using concrete; and
- A demountable building previously located in the north-east corner of the former depot site, and reported to include asbestos cladding, in what is identified as a 'Training Area', had since been removed. Only brick footings remained. There were no obvious demolition materials noted.

JBS&G concluded that the nature of the contamination identified at the site could be readily remediated and/or managed by standard approached commonly adopted within the contaminated land management industry, and as such the site could be made suitable for standard urban land use scenarios including residential, schools, open space and commercial/industrial uses, subject to implementation and validation of an appropriate management strategy including, but not necessarily limited to, the contamination aspects identified within.

4.2 North West Rail Link Geotechnical Interpretive Report (NWRL) (Coffey 2012)

The scope of the NWRL field geotechnical investigation undertaken by Coffey Geotechnics (2012) included a site history study, advancement of boreholes and test pits that were drilled/excavated for geotechnical purposes and collection of samples for soil and groundwater laboratory testing. The NWRL investigation findings relevant to the Hills Showground Precinct focuses on the former Council Depot as follows.

Soil investigations identified potential contamination sources at the Council Depot including three petroleum USTs (one located to the south of the site buildings and two located directly west of the site buildings), maintenance workshop, number of storage facilities, a nursery and dangerous goods shed. Pesticides and herbicides were used in the nursery area. Minor amounts of asbestos associated with council operations were identified. Cut and fill operations had been undertaken to level the site, with a realignment of the Cattai Creek also apparent.

Low level nickel impacted surface soils were reported in surface soils and fill materials collected from the within the Council Depot (NWR-BH148 and NWR-TP006 to NWR-TP009) with exceedances of the phytotoxicity based criteria and the General Solid Waste threshold (DECC 2009), but below the health based criteria. Nickel elevations were considered likely to be attributed to imported fill, and to land use activities within the Council Depot. In addition, chrysotile asbestos fibres were reported in a fill sample NWR-TP010 located in the western part of the Depot. PAH impacts (including benzo(a)pyrene) exceeding the health based criteria for commercial/industrial land use were detected in a fill sample NWR-BH0147 4.0-4.1 (5.6 mg/kg) located in the western part of the depot.

Groundwater investigations resulted in generally typical of background concentrations with the exception of TPH, BTEX and PAHs (NWR-BH148 and R18-MW3). The only exceedance of criteria was for total xylenes (41 ug/L) in BH148. TPH and PAH elevations within the Depot were considered likely associated with fuel storage. Coffey (2012) concluded that the impact was relatively mild and unlikely to be widespread as part of the NWRL project.

4.3 Showground Station Precinct Desktop Contamination Review (Arup 2015)

Arup Pty Ltd (Arup 2015) conducted a desktop contamination review for the broader Showground Station Precinct, covering approximately 271 ha, which included a review of readily available site history and site setting information (geology, hydrology, historic aerial photographs etc.) and a desktop review of the North West Rail Link (NWRL) environmental impact statement (EIS) report.

The review included summary of the findings of Coffey (2012) (**Section 4.2**) and presented a detailed review of additional areas across the broader precinct area which may present a risk of contamination. The review concluded AEC included the Council Depot, Castle Hill Showground and land occupied by car servicing/repairs, light and dangerous goods industries, production of pharmaceuticals and/or veterinary products, an electrical substation, a hotel and areas that may produce metal waste.

Arup (2015) recommended that should areas within the identified areas of potential contamination require rezoning to a more sensitive land use, then future investigations would be required to be undertaken to confirm the sites can be made suitable for the proposed development, in accordance with Clause 6 of *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55).

4.4 Report on UST Validation - Sydney Metro Northwest, Showground Station, Carrington Road, Castle Hill NSW (DP 2016)

DP conducted a validation assessment following the removal of three USTs (UST01 to UST03) identified to be present on the former Council Depot site portion. In addition, DP conducted the sampling and analysis of associated tank pit fill materials to facilitate an assessment for site suitability (on-site reuse) and waste classification (off-site disposal).

The validation included the visual inspection of the excavation voids following removal of each tank for evidence of gross contamination. Where soils were identified to be visually contaminated, impact was 'chased out' prior to sampling and analysis. Soils were screened in field using a PID.

A total of five samples were collected per excavation (one from each wall and one from the base). DP also collected six samples from stockpiled material per tank pit. In addition, DP collected a single validation sample from the base of the junction pit, which had been previous excavated and removed by others.

Validation samples were analysed for VOCs, TRH, PAHs, OCPs, PCBs, Phenols, OPPs and asbestos. It is noted that asbestos samples were analysed for absence/presence only. All samples were compared against commercial/industrial (HIL-D) criteria in accordance with NEPC (2013).

The validation results indicated no exceedances of the adopted human health criteria for all excavation extents (noting exceedances of the adopted ecological criteria at one location were not chased out, as discussed below) and one stockpile (UST02-SP2) was considered suitable for general re-use.

Concentrations of benzo(a)pyrene and naphthalene in validation sample UST03-F02 (base of excavation) exceeded the adopted site ecological criteria and was not chased out as it was reported to be from a sample located more than 2 m below the (then) site levels (i.e. not an ecological risk). Further, stockpiled material (UST01-SP1 and UST02-SP1) which failed the ecological criteria was proposed to be re-used at depths of not less than 2 m bgs. Whilst JBS&G considers the approach to generally have been appropriate, consideration should have been included of the final development levels, not just levels present at the time of the works. It is noted that it appears the area has since undergone significant cutting to facilitate construction of the carpark and this may have resulted in the presence of these soils at a depth of shallower than 2 m bgs.

Stockpile samples UST01-SP2 and UST03- SP1/SP2 failed the land use criteria and were identified as requiring off-site removal. Soils were assessed by DP as falling within the General Solid Waste (non-putrescible) waste category as per EPA (2014). JBS&G note that no disposal records were provided for materials deemed unsuitable for retention on site.

DP indicated a decommissioned (filled) UST was also identified during excavation of UST01 and was subsequently removed. JBS&G note the exact location of this tank was not provided and no validation sampling of the subsequent excavation void or associated fill materials was conducted to assess the potential for residual contamination. Further, photographs in DP (2016) indicate the potential presence of remaining fuel line infrastructure which did not appear to have been removed and/or validated as part of this validation assessment. DP considered that the UST removal validation assessment identified the excavations as resulting in conditions suitable for the proposed carpark use.

4.5 Hazardous Materials Survey (JBS&G 2019[19])

JBS&G conducted a Hazardous Building Material Survey (HBMS) for the former Council Chambers and Administration building located within the eastern portion of the site (Hills Showground Precinct East).

During completion of the pre-demolition HMS, the former Council Chambers building was inspected for the following hazardous materials:

- ACM;
- Asbestos containing dust (ACD);
- Lead based paints (LP);

[19] *Hazardous Building Material Survey*. Doc 54813-121844 (Rev 0) JBS&G Australia Pty Ltd. Issued 3 May 2019 (JBS&G 2019)

- Lead containing Dust (LCD);
- Synthetic Mineral Fibres (SMF);
- Polychlorinated biphenyls (PCB); and
- Ozone depleting substances (ODS).

The investigation identified that the building contained hazardous building materials in the form of non-friable (bonded) ACM in wall sheeting, mastic and within vinyl floor tiles, synthetic mineral fibres and lead dust. No lead paint was detected and ODS containing items were observed in good condition.

JBS&G (2019) concluded hazardous materials should be removed in accordance with the relevant health and safety regulations and/or EPA made or endorsed guidelines, by suitably trained/licenced practitioners.

4.6 Desktop Geotechnical Review for the Hills Showground Precinct (PSM, 2019)

Pells Sullivan Maynink (PSM) completed a State Significant Development Application (SSDA) stage geotechnical desktop assessment which provided a summary of previous investigations and interpretive data as publicly available. The report is provided in **Appendix C**. The following summarises the key findings outlined in the report:

- The Doran Drive Precinct and Hills Showground Precinct West have recently been primarily a construction site for the SMNW Project (since May 2013), noting the station and associated multi-storey carpark have now been completed;
- Bulk earthworks (cut to fill) activities have occurred (between May 2013 to August 2019) within the current construction site areas to provide a levelled surface;
- Shallow topsoil and fill cover the majority of the site, overlying residual natural soils to a depth of approximately 3 m bgs. Residual natural soils comprise stiff to very stiff, silty sandy clays of low to medium plasticity;
- Soils overly underlying bedrock, noted to comprise a combination of Ashfield Shale comprising siltstones and claystones (anticipated to be 5 to 6 m thick), Mittagong Formation fine grained sandstones and interbedded siltstones (anticipated to be 1 to 3 m thick) overlying weathered Hawkesbury Sandstone anticipated to be encountered at depths of between 5 and 8 m bgs; and
- Groundwater is expected to lie at approximately RL 80 m (AHD), with depths from ground surface varying from 5 to 20 m. 'Perched' groundwater may also be encountered, particularly after prolonged rainfall at 3 to 5 m bgs. Groundwater migration is expected to be slow.

The desktop geotechnical investigation concluded site conditions are not unusual from a geotechnical perspective, for a site located in north western Sydney. Typical environmental constraints to development were not reported. Normal civil engineering and building approaches were generally assessed to be suitable.

5. Conceptual Site Model

5.1 Potential Areas and Substance of Environmental Concern

Based on the site history review and previous investigation, AECs and associated COPC have been identified and are presented in **Table 5.1**.

Table 5.1 AECs and associated COPC

AEC	Location	COPC	Potential Impacted Media
AEC 1: Existing and/or former site structures that may/are known to contain hazardous building materials	Whole site	Lead and asbestos	Soil
AEC 2: Uncontrolled fill material used to form historic and/or existing site levels, including those as may have been imported as part of the SMNW Project.	Whole site	Heavy metals, TRH, PAH, OCP, OPP, PCB, VOC and asbestos	Soil Groundwater Soil Vapour
AEC 3: Impacts from historic agricultural activities including orchards and the former council nursery	Whole site	Heavy metals, OCPs/OPPs	Soil Groundwater
AEC 4: Spills or leaks associated with the storage and/or maintenance, vehicle washing etc. of plant and machinery	Hills Showground Precinct West Doran Drive Precinct Western margin of Hills Showground Precinct East	Heavy Metals, TRH/BTEX, PAH, VOCs	Soil Groundwater Soil Vapour
AEC 5: Former waste oil, underground Petroleum Storage Systems (UPSS), including diesel, unleaded, super fuel, waste oil USTs and ASTs	Hills Showground Precinct West Doran Drive Precinct	Heavy Metals, TRH/BTEX, PAH, VOCs	Soil Groundwater Soil Vapour
AEC 6: Former sedimentation ponds/washout areas	Hills Showground Precinct West Doran Drive Precinct	Heavy metals, TRH/BTEX, PAHs.	Soil

Review of the site history and environmental setting (**Section 3**) has not identified historical aviation, fire-fighting, commercial/industrial production facilities or reasonable potential for use, storage or disposal of PFAS.

5.2 Potentially Contaminated Media

Potentially contaminated media comprise:

- Fill materials;
- Underlying natural soils;
- Accumulated fill of the current/former sediment basins;
- Surface waters within sediment basins and dams; and
- Groundwater.

Existing site structures within the Hills Showground Precinct East have been identified to contain hazardous building materials (JBS&G 2019), including ACM. Further, former surface/near surface soils within the former council depot were identified to be impacted with ACM and/or asbestos fibres, prior to commencement of SMNW Project works. As such, surface soils within vicinity of existing site structures are considered to be potentially contaminated. Contamination in fill material has been previously reported (**Section 4**), impacted with asbestos, heavy metals and PAHs. Potential remains for contamination in fill material resultant from historical land uses, importation of fill materials of unknown origin or use of site waste materials to create former/existing site levels, and as may be associated with recent earthworks during the SMNW Project to remain at the site given the absence of records available to confirm remediation/removal of site material.

Natural soils and/or bedrock underlays fill materials in various areas of the site and may potentially be impacted by the downward migration of contaminants through fill, particularly in open areas where infiltration is possible. Preliminary investigations (JBS 2009) identified the presence of hydrocarbon impacted natural soils at depth, reported in proximity to historical UPSS within the former Council Depot. Subsequent removal and validation of the tanks occurred, as outlined in **Section 4.4** in 2016. Notwithstanding, given the absence of groundwater validation sampling (as per NSW EPA guidance) and the residual concentrations of TRH in base validation samples, there is the potential for contamination to have migrated through the soil profile to underlying groundwater at the site. Natural soils/rock may also be impacted by contaminated groundwater migration. There is the potential for the leaching of contaminants vertically from fill into groundwater and/or potential off-site impacts.

Given the potential for leaks associated with the fuel storage infrastructure and the potential volatile nature of some contaminants potentially present within fill, natural materials and groundwater, there is a potential for soil vapour to be a contaminated medium.

Fill material at the base of the constructed detention basins may have been impacted as a result of surface water impacted with COPCs, as such fill materials within historic/current basins are considered potentially contaminated.

Based upon assessment of geological conditions at the site including consideration of the potential future development activities in accordance with ASSMAC (1998), it has been concluded that there are no risks from potential ASS at the site that require consideration during future development activities and/or proposed land uses.

5.3 Potential for Migration

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The propensity for contaminants to migrate is dependent on:

- The nature of the contaminants (solid/liquid/gas and mobility characteristics);
- The extent of the contaminants (isolated or widespread);
- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The potential contaminants identified as part of the site area history review and previous investigation are generally in either a solid form (e.g. heavy metals, asbestos, etc.) and liquid form (e.g. fuel, lubricants, pesticides, etc.). Dependent upon concentrations, there is the potential for volatile compound impacts to occur in a vapour form in soils underlying the site.

Onsite detention basins provide potential for accumulation of COPCs washed in by overland surface water flow. Migration of contaminants to the municipal stormwater system may occur.

There is considered to be a moderate potential for the generation of windblown dust generated from recently placed (potentially imported) fill materials (SMNW Project). In areas of unsealed surfaces, windblown dust may present a contaminant migration pathway requiring further assessment. The potential for contamination migration via surface water movement and infiltration of water and subsequent migration through the soil profile is considered generally to be low given the extent of low permeability soils in the assessment area.

Natural soils at the site comprise relatively impermeable clays overlying residual siltstone and/or sandstone with the potential for slightly more permeable sandy soil/sandstone towards Cattai Creek. Notwithstanding, migration of potentially impacted groundwater may occur over moderate to long

time periods. Migration of contaminants from the site via infiltration into groundwater is considered to be a potential pathway if there is significant liquid or liquid soluble (e.g. hydrocarbon) COPCs.

If petroleum hydrocarbon contamination occurs in soil or groundwater, there is the potential for these impacts to also occur in soil vapour underlying the site. Vapour movement in proximity to buildings can be highly influenced by potential advective effects as caused by local pressure gradients associated with the extent of the building footprint.

5.4 Potential Exposure Pathways

Based on the COPC identified in various media, as discussed above, and proposed site/assessment area development activities, the exposure pathways for the assessment area during and following development works include:

- Inhalation of contaminated dust liberated from fill material of unknown origin or impacted surface soils resulting from historical leaks/spills, agricultural activities etc.; and/or
- Potential dermal and oral contact to impacted soils, surface water and groundwater as present at shallow depths and/or accessible by future basement and/or service excavations across the extent of the site; and/or
- Inhalation of COPC vapour migrating or accumulating in current and future voids, from impacted fill, natural soils and groundwater resulting from historical leaks or migration of contaminants; and/or
- Potential contaminant uptake by vegetation within landscaped areas.

5.5 Receptors

Potential human populations who may be exposed to assessment area impacts in the future (if they are not remediated or appropriate management is not implemented prior to or during development) include:

- Future occupants of residential developments;
- Current and future commercial workers, construction workers and maintenance personnel; and
- Current and future recreational users of public open spaces.

Off-site sensitive potential receptors also include childcare centre users to the south-east of the site beyond Carrington Road.

Potential ecological receptors within the assessment area include existing/future flora species established within future open spaces that may occur with the redevelopment of the assessment area. Off-site ecological receptors may potentially be impacted by, surface water and windblown dusts discharged from the assessment area. Surrounding public open spaces and water bodies (the freshwater ecosystem of Cattai Creek) are also ecological receptors.

5.6 Preferential Pathways

For the purpose of this assessment, preferential pathways have been identified as natural and/or man-made pathways that result in the preferential migration of COPC as either liquids or gases.

Man-made preferential pathways are present throughout the assessment area, generally associated with fill materials, and at near surface depths over the remainder of the assessment area. Fill materials are anticipated to have a high permeability.

Sub-surface services will be present as part of site redevelopment, throughout the assessment area. Preferential pathways can be created by the generally higher permeability backfill used to re-instate these trenches.

Preferential pathways are also important in the assessment of potential off-site sources of COPC. Preferential pathways are potentially present in the adjoining road network, as associated with service easements.

6. Discussion

A detailed inspection of the site was conducted from publicly accessible places within the Showground Station Precinct. No indicators of gross and/or widespread contamination were identified at the site during the inspection. Based on the site history review as outlined herein, there remains the potential for historical site activities and/or environmental incidents ancillary to the recent construction works to have resulted in contamination of site media, as discussed below.

Hills Showground Precinct East

Based on review of historic aerial photographs (**Section 3.1**), the significant ground disturbance activities have primarily been limited to the central and south-west portions of the site, with little apparent ground level works being completed within the Hills Shire Council parcel in the north-east of the site (Hills Showground Precinct East). Previous investigations pertaining to the Hills Showground Precinct East have recently included a HBMS (JBS&G 2019) which identified the presence of hazardous building materials within the former Council Chambers and Administration building.

JBS&G note no investigations pertaining to the contamination status of soils/groundwater within the Hills Showground Precinct East were identified and/or made available for review as part of this investigation. Notwithstanding, based on the desktop review outlined herein, the potential for contamination in this area of the site is low and considered to be likely associated with fill of unknown origin (used to form current site levels), former agricultural/open space uses and/or associated with the presence of hazardous building materials within existing/former site structures that may have cross-contaminated surface soils. It is also noted that the depth to bedrock, being located at the crest of the ridge is likely shallow, and groundwater may be at greater depth that has been encountered at the balance of the site, being situated at the top of the catchment.

Doran Drive Precinct

Within the central portion of the site, substantial ground disturbance activities were completed during the SMNW Project activities. These included significant regrading of the site upon completion of works within this site portion to generate current site levels following construction activities related use during the SMNW development. In the absence of Project period management records, it is considered that the operation (storage, refuelling, working, maintenance etc.) of plant/machinery, construction/filling of temporary detention basins, operation of waste water treatment plants, stockpiling of materials, etc comprise activities with low to moderate potential to have introduced contamination to the site.

Hills Showground Precinct West

The former Council Depot area in the south western portion of the Site, now occupied by the commuter carpark, comprising the Hills Showground Precinct West and surrounding public domain areas has undergone significant ground disturbance during the SMNW Project activities.

Preliminary investigations conducted prior to the commencement of the SMNW Project construction period, as summarised in **Section 4**, identified historical AEC and isolated soil/groundwater contamination within the former Hills Council Depot. These included in-situ fuel infrastructure and associated soil/groundwater impacts. Asbestos had also previously been identified as fragments on the ground surface and as fibre bundles by JBS (2009) and Coffey (2012) within shallow fill materials in the southern, northern and western portions of the Council Depot. Isolated heavy metal and PAH impacted soils were also identified during these investigations.

The area appears to have been subject to bulk cut/fill activities to establish current site levels, including generation of the significant batter faces within the Hills Showground Precinct West. A review of records as held by SafeWork NSW (**Section 3.9**) indicated three USTs within the former Council Depot site had been abandoned and were removed during the Project activities, with

records indicating two USTs potentially remained abandoned *in-situ* at the site prior to the Project activities. A review of client supplied documentation (**Section 4.4**) confirmed 4 former petroleum storage tanks (one decommissioned UST was encountered during removal of the other three) were excavated and removed from the site during Project Activities, with some of the associated materials validated for reuse within the site.

It is noted that the available validation report did not include documentation of the off-site disposal of contaminated stockpiles unsuitable to remain on-site, or the completion of validation works as per NSW EPA endorsed guidelines (the absence of groundwater characterisation and validation of fuel line and bowser locations). In addition, it is noted that whilst previous investigations had identified asbestos in soil impacts at the site, in the absence of further Project implementation stage validation documentation, the status of previously identified asbestos impacts, in addition to the fate of stockpiled petroleum hydrocarbon material reported as unsuitable for reuse on site, and/or other potential contamination known to previously occur at the site is currently uncertain. Should additional SMNW Project implementation station site contamination validation reports become available, these may close out the remaining data gaps at the site. Alternatively, if this material was not removed during SMNW project works, there is the potential for that these contaminated materials may remain within the Hills Showground Precinct West site portion.

General Site Discussion

JBS&G note that SMNW Project Approval conditions identified obligations for the remediation and validation of site areas to meet the requirements of the NSW CLM Act (1997). Where remediation was required, the conditions require a site auditor to be engaged to review and endorse the remedial action plan (RAP) and the final validation reports.

In the event that SMNW Project activity documentation including additional validation assessment reports (and site audit statements) as required by the Project Approval conditions can be identified documenting the outcomes of site management/remediation works, it is anticipated that these may confirm the suitability of at least the Hills Showground Precinct West and Doran Drive Precincts for the proposed development. Alternatively, where either the reports cannot be identified and/or the conclusions do not extend to confirmation of the suitability of the site portions for the proposed landuses, further characterisation investigation/data assessments may be required to close the current data gaps and enable confirmation of the suitability of the site for the proposed land uses and/or identify the management actions required such that the site can be made suitable.

With consideration of the above, subject to implementation of an appropriate staged contamination assessment framework and development of any required management strategies, it is anticipated that either the developable site areas (Precincts) will be identified as suitable for the proposed uses and/or that the developable site areas (Precincts) are able to be made suitable for the proposed uses via implementation of relevant actions to address site contamination. Such conclusions are consistent with the approach as nominated under SEPP 55 and allows for consideration of the future specific landuse proposals in a staged manner such that a suitable scope of assessment may be completed specific to the development proposal.

It is also noted that, with consideration of the most sensitive future land use (residential/children's day care centres), recent site activities may have resulted in the introduction of numerous aesthetic impacts (general site related rubbish, anthropogenic waste in soils, etc.) which will require to be identified and/or managed prior to the site being considered suitable for the proposed land uses.

Review of the environmental landscape of the Showground Station Precinct indicates that there is no appreciable risk of ASS occurrence in natural soils and/or rock at the site. On this basis, there is no further requirement for consideration of ASS conditions and/or management of such conditions during future ground disturbance activities.

7. Conclusions and Recommendations

Based on the scope of investigation undertaken, and in accordance with the limitations in **Section 8**, the following conclusions are provided:

- This desktop assessment of potential contamination included a review of available (pre-SMNW Project) site investigation reports, more general site history and regional condition information and a site inspection to evaluate the potential for contamination concerns in relation to three proposed development Precincts at the site.
- Prior to the commencement of the SMNW Project activities, the site comprised three main areas: the Hills Shire Council Chambers and Administration building and surrounds (Hills Showground Precinct East); the former performing arts centre and associated carparking area (central portion including Showground Station and Doran Drive Precinct); and the Council Works Depot (Hills Showground Precinct West and constructed carpark infrastructure).
- Historical site investigation reports available for assessment were limited to the former Council Works Depot footprint. These investigations identified the presence of small scale soil and groundwater contamination and underground fuel infrastructure (considered significant point sources of potential contamination), prior to the commencement of the SMNW Project activities. Records obtained from SafeWork NSW and validation documentation have indicated removal of the majority of the identified fuel infrastructure. Notwithstanding, in the absence of further validation documentation and/or a RAP as may have been prepared as required by Project Approval consent conditions, there remains uncertainty as to the fate of previously identified asbestos impacts and the current contamination status of this portion of this site.
- In addition, significant ground disturbance works have been completed within the central portion of the site (Doran Drive Precinct) during the SMNW Project activities. This site portion is currently surfaced with exposed fill material. Subject to the availability of validation documentation confirming the status of ground conditions in this portion of the site, there is also a remaining data gap as to the current characterisation of this site portion given the potentially contaminating activities that have occurred within this area.
- Within the eastern portion of the site, occupied by the former Council Chambers and Administration building, the potential for site contamination has been identified as relatively low, being associated with historical agricultural/open space management, the historical use of hazardous building materials (asbestos and lead paint) and the potential presence of limited profile of fill material of unknown origin. However, the absence of existing characterisation data, again remains an open data gap with regard to drawing conclusions on the suitability of the site for the proposed landuses.
- With consideration of the above, it is considered that the site can be made suitable for the proposed land uses, subject to implementation of an appropriate staged data gap contamination assessment (that may include verification reviews of SMNW stage validation reports) and appropriate management of any small scale remaining contamination issues in accordance with NSW EPA guidance as appropriate prior to commencement of future final construction activities.
- Review of ASS conditions identified there is no appreciable risk of ASS presence within natural residual soils at the site given the formation environment, and therefore no future management for the potential presence of ASS is required during future ground disturbance works.

8. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

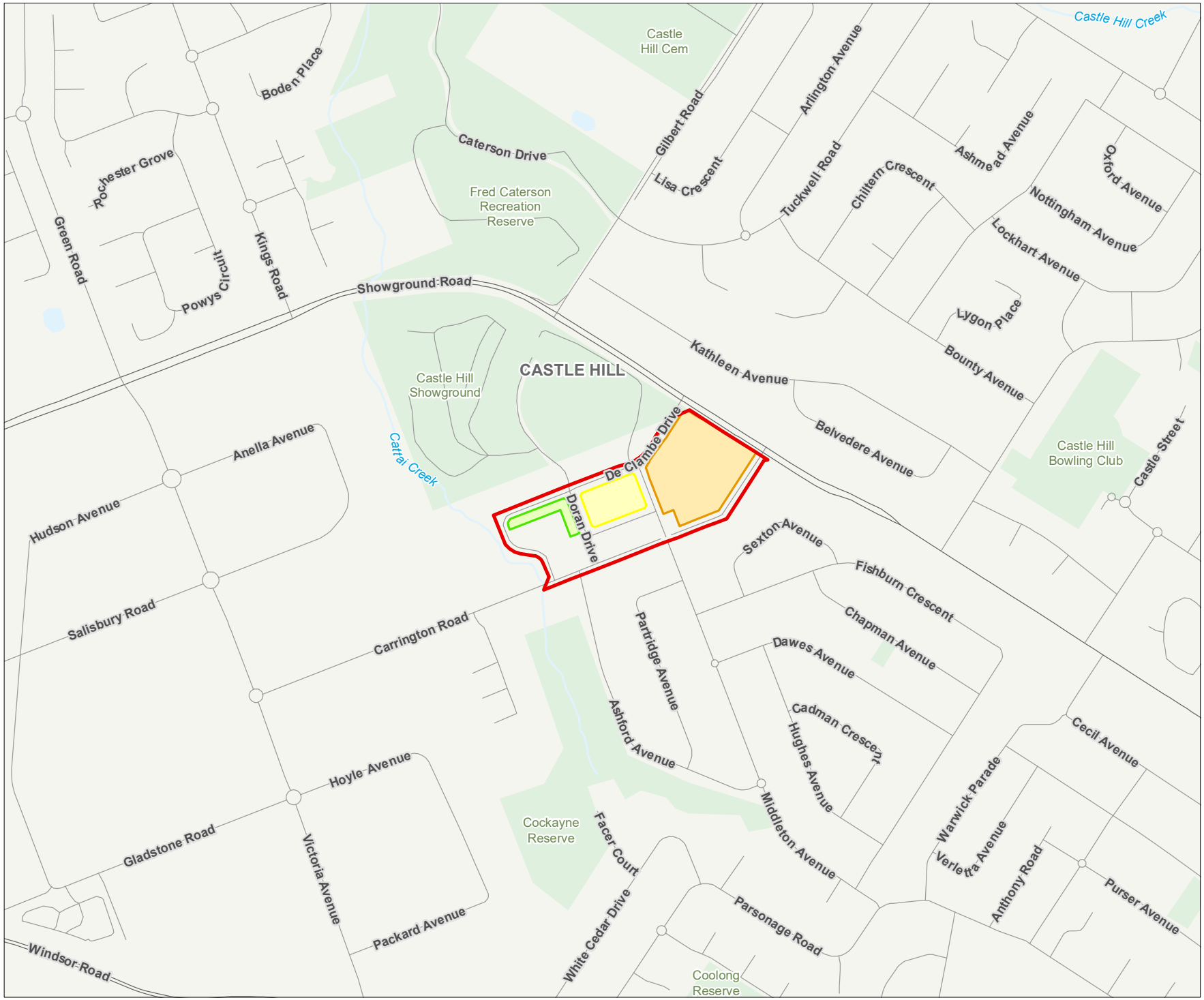
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Figures



Legend:

- Approximate Site Boundary
- Hills Showground Precinct East
- Doran Drive Precinct
- Hills Showground Precinct West
- Parks and reserves
- Waterbody area
- Waterway
- Primary Road
- Local Road

JBS&G

Job No: 54813

Client: Landcom

Version: R02 Rev 0	Date 17/10/2019
Drawn By: FH/RF	Checked By: AS

Scale 1:10,000

0 125 250
metres

Coor. Sys. GDA 1994 MGA Zone 56

Cnr Showground/Carrington Rds Hazmat Former Council Chambers Castle Hill, NSW

SITE LOCATION

FIGURE 1

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Landcom\54813 Showground Road SSDA\GIS\Maps\R02 Rev 0\54813_01_Site_Location.mxd
Reference: SixMaps Clip n Ship Data



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Landcom

Version: R02 Rev 0	Checked By: JR
Date 29/10/2019	Drawn By: FH/AV

Scale 1:3,000

0 30 60

metres

Coor. Sys. GDA 1994 MGA Zone 56

1-5 Carrington Road
Castle Hill, NSW

SITE LAYOUT

FIGURE: 2

File Name: N:\Projects\Landcom\54813 Showground Road SSDA\GIS\Maps\R02 Rev 0\54813_02_Site_Layout.mxd
Reference: www.nearmap.com - Imagery 20190816



Legend:

- Approximate Site Boundary
- Hills Showground Precinct East
- Doran Drive Precinct
- Hills Showground Precinct West

JBS&G

Job No: 54813

Client: Landcom

Version: R02 Rev 0	Checked By: JR
Date 18/10/2019	Drawn By: FH/AV

Scale 1:3,000

0 30 60
metres

Coor. Sys. GDA 1994 MGA Zone 56

1-5 Carrington Road
Castle Hill, NSW

PROPOSED SITE LAYOUT

FIGURE: 3

File Name: N:\Projects\Landcom\54813 Showground Road SSDA\GIS\Maps\R02 Rev 0\54813_02_Site_Layout.mxd
Reference: www.nearmap.com - Imagery 20190816

Appendix A Conceptual Design Plans


Pedestrian link
New Local Street
Doran Drive Plaza
SHOWGROUND ROAD
DE COMBE DRIVE
DORAN DRIVE
MANDALA PARADE
CARRINGTON ROAD
Precinct East Park

Appendix B Photographic Log

PHOTO 1: SHOWGROUND STATION (CENTRAL SOUTH OF THE SITE)

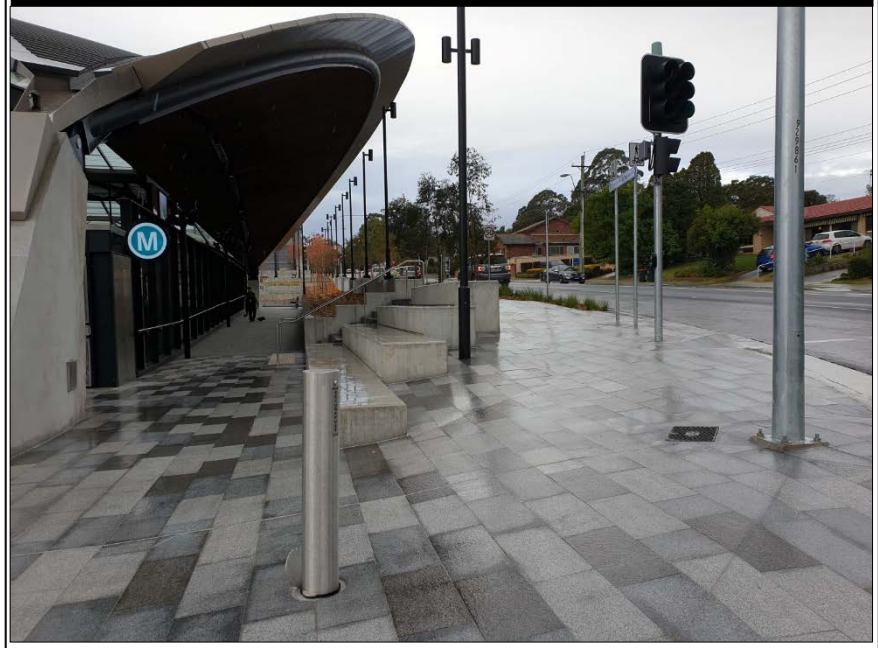


PHOTO 2: NEWLY CONSTRUCTED BUILDING, WALKWAYS AND LANDSCAPED GARDENS (CARRINGTON RD FACING WEST)



PHOTO 3: LANDSCAPED AREAS NORTH OF THE NEWLY CONSTRUCTED SHOWGROUND STATION COMPLEX

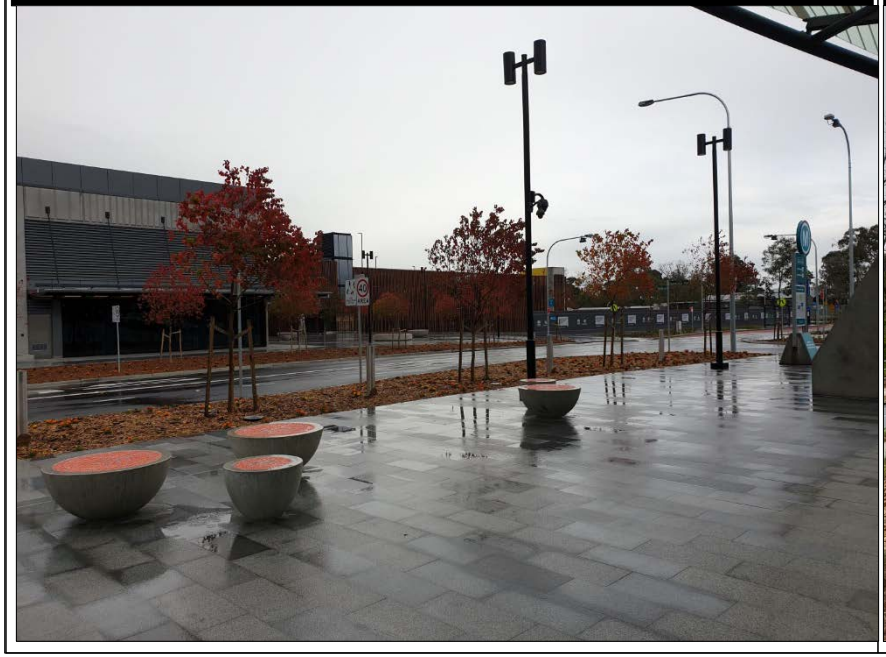
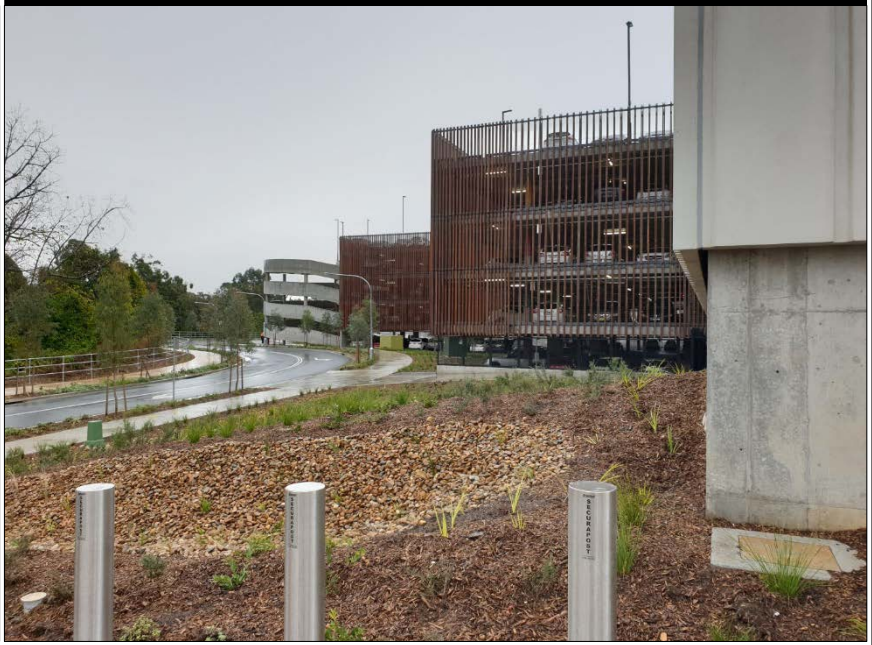


PHOTO 4: SHOWGROUND STATION CARPARK, FACING NORTH FROM CARRINGTON RD



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Job No: 54813	
Client: Landcom	
Version: Rev A	Date: 14/09/2019
Drawn By: CK	Checked By: JR
Not to Scale	
Coord. Sys n/a	

Showground Station Precinct

ATTACHMENT 3

PHOTO 5: CATTAI CREEK IN THE SOUTH WEST OF THE SITE, URBANISED AND SURROUNDED BY INVASIVE PLANT SPECIES

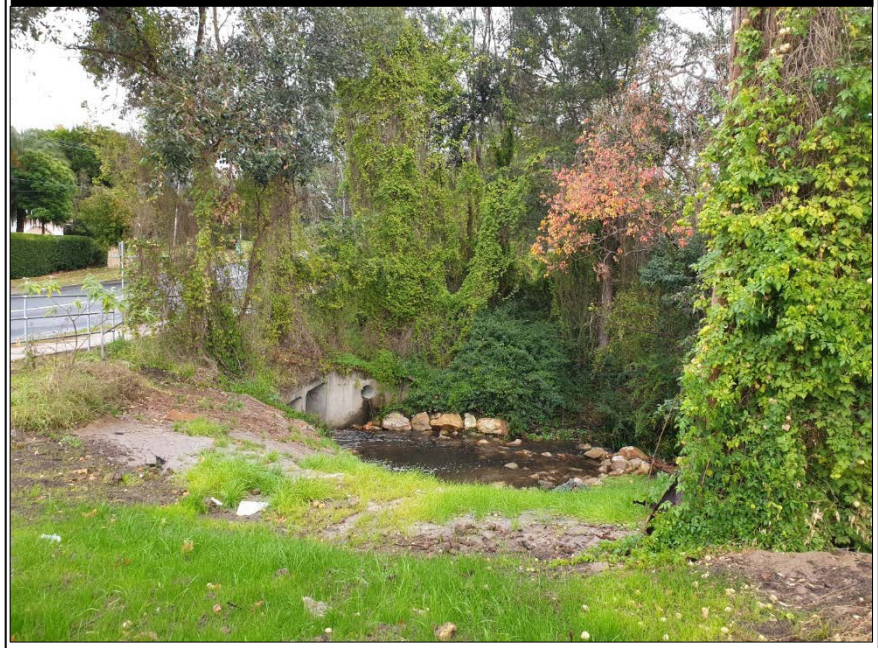


PHOTO 6: SHOWGROUND CARPARK AND NEWLY CONSTRUCTED INFRASTRUCTURE IN THE WESTERN PORTION

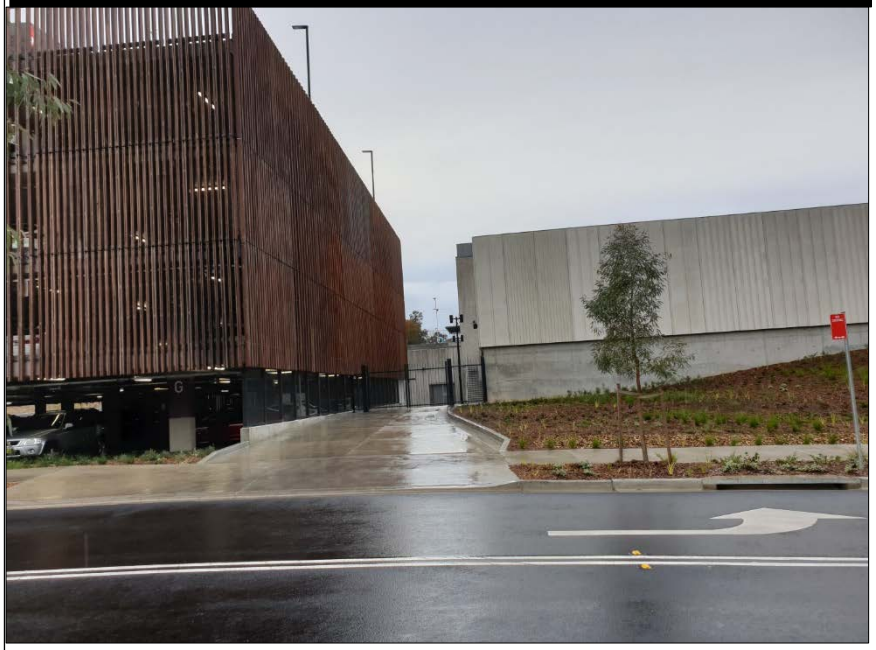
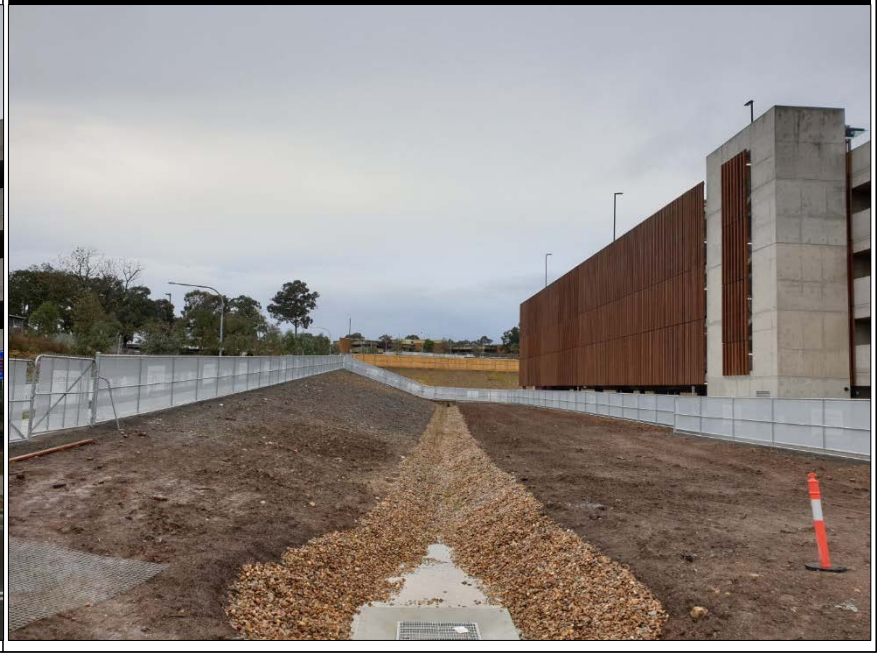


PHOTO 7: NORTH WEST OF THE SITE FACING EAST ACROSS SHOWGROUND PRECINCT EAST



PHOTO 8: SHOWGROUND PRECINCT EAST (FACING EAST) WITH NEWLY CONSTRUCTED STORMWATER NETWORK



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Client: Landcom	
Version: Rev A	Date: 14/09/2019
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Not to Scale	
Coord. Sys n/a	

Showground Station Precinct

ATTACHMENT 3

PHOTO 9: THE DORAN DRIVE PRECENT (FACING EAST)



PHOTO 10: NEWLY CONSTRUCTED SHOWGROUND STATION AND ASSOCIATED LANDSCAPED AREAS (FACING STH EAST)



PHOTO 11: FACING NTH EAST ACROSS THE NEWLY CONSTRUCTED DORAN DRIVE



PHOTO 12: FACING NTH WEST ACROSS DE CLAMBE DRIVE TOWARD THE FLOOD RETENTION BASIN



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Version: Rev A	Date: 14/09/2019
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Not to Scale	
Coord. Sys n/a	

Showground Station Precinct

ATTACHMENT 3

PHOTO 13: FLOOD RETENTION BASIN IN THE NORTH WEST OF THE SITE



PHOTO 14: EXPOSED SANDSTONE BEDROCK ALONG THE NTH WESTERN BOUNDARY (DE CLAMBE DRIVE)



PHOTO 15: EVIDENT FILL MATERIALS, DRAINAGE AGGREGATES AND POSSIBLE NATURAL MATERIALS

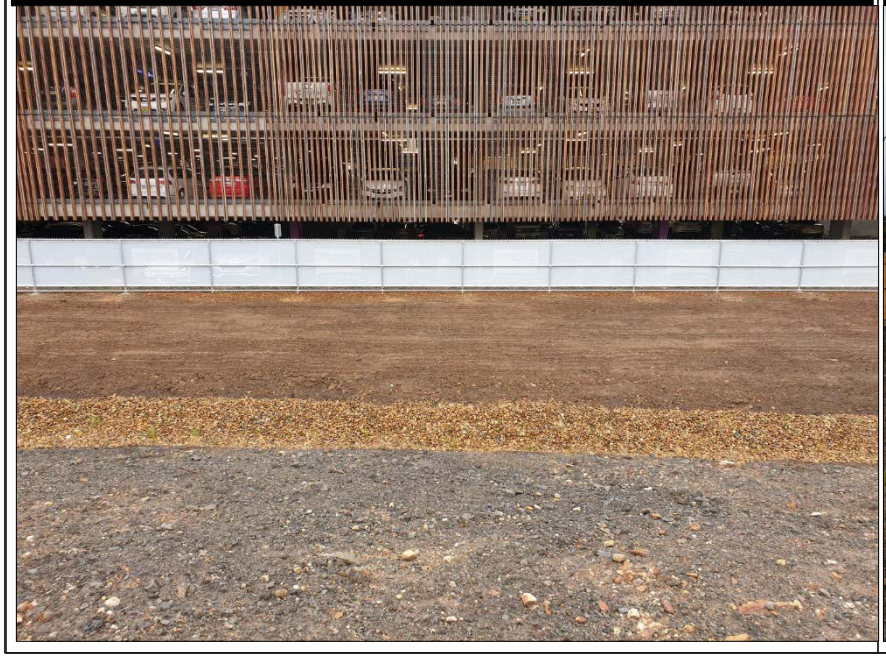


PHOTO 16: STEEP GRADIENT OBSERVED ON THE EASTERN PORTION OF THE SHOWGROUND EAST PRECINCT AREA



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Version: Rev A	Date: 14/09/2019
Drawn By: CK	Checked By: JR
Not to Scale	
Coord. Sys n/a	

Showground Station Precinct

ATTACHMENT 3

PHOTO 17: FILL MATERIAL OBSERVED SURROUNDING NEWLY INSTALLED SERVICE INFRASTRUCTURE



PHOTO 18: SITE LEVELS WITHIN THE DORAN DRIVE PRECINT AREA (NOTABLY RAISED/FILLED)



PHOTO 19: NEWLY PAVED ROADWAYS (DE CLAMBE AND DORAN DRIVE IN THE NORTH OF THE SITE) FACING WEST



PHOTO 20: NEWLY CONSTRUCTED PEDESTRIAN WALKWAYS AND LANDSCAPED GARDEN BEDS



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Client: Landcom	
Version: Rev A	Date: 14/09/2019
Drawn By: CK	Checked By: JR
Not to Scale	
Coord. Sys n/a	

Showground Station Precinct

ATTACHMENT 3

PHOTO 21; FACING NORTH TOWARD THE CASTLE HILL SHOWGROUND AREA



PHOTO 22: FORMER COUNCIL OFFICE BUILDING IN THE NORTH EAST OF THE SITE



PHOTO 23: FORMER CARPARK INFRASTRUCTURE SURROUNDING THE COUNCIL CHAMBERS BUILDING



PHOTO 24: NORTH EASTERN PORTION OF THE SITE (UNSEALED TURFED AREA)



JBS&G

Job No: 54813

Client: Landcom

Version: Rev A | Date: 14/09/2019

Drawn By: CK | Checked By: JR

Not to Scale

Coord. Sys n/a

Showground Station Precinct

ATTACHMENT 3

Appendix C PSM Hills Showground Geotechnical Assessment

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Our Ref: PSM3911-003L Rev2

29 October 2019

JBS&G
Level 1, 50 Margaret Street
Sydney NSW 2000
JRosner@jbsg.com.au

Attention: Joanne Rosner

Dear Joanne

RE: SYDNEY METRO NORTHWEST
HILL SHOWGROUND STATION PRECINCT
SSDA STAGE GEOTECHNICAL ASSESSMENT

1. Introduction

This letter presents the results of a geotechnical desktop assessment, prepared for Landcom on behalf of Sydney Metro, to support a concept development application (DA) for the Hills Showground Station Precinct (the Site).

This geotechnical assessment has considered information which is in the public domain including geological maps and factual and interpretive data supplied to tenderers for the SMNW project. It has also benefited from the extensive experience gained from our intimate involvement in the SMNW project from design through to construction. PSM were the geotechnical and mined tunnel designers engaged by the contractor that was awarded the Tunnel, Station and Civil (TSC) contract (from Bella Vista to Epping). In addition, PSM also completed the construction phase services scope which included completing additional geotechnical investigations, mapping and verifying the ground conditions during station and tunnel excavations across the full TSC alignment (including the Hills Showground Station box excavation).

In addition, the following documents supplied by the Client were reviewed:

- Department of Planning and Environment amended SEARs (ref. SSD 9653, dated 9 October 2019)
- Concept Proposal (ref. COX 2019)
- Over tunnel Building J Proof of Concept (ref. COX 2019)

2. Proposed Development

Based on the supplied documents, we understand that the Site is located adjacent to (on the north side of) Carrington Road, bound by Showground Road to the northeast, De Clambe Drive to the north and Cattai Creek to the west. The Site forms part of the broader Showground Station Precinct covering 271 hectares, rezoned in 2017 as part of the Department of Planning, Infrastructure and Environment's (The Department) priority precinct program. The rezoning of the Precinct, along with changes to height, density, and lot size controls, as well as other supporting controls will:

- transform the area around the new Hills Showground Station into a vibrant urban centre
- provide for a maximum of 5,000 new dwellings and 2,300 new jobs over 20 years

- deliver nearly two hectares of parks and new open space
- provide community facilities, recreation areas and a mix of housing choice for people at all life stages.

The Site is envisaged to be developed to accommodate a high-density mixed-use precinct in line with the planning controls:

- Hills Showground Precinct West (Lot 53 DP 1253217) is zoned B2 Local Centre with maximum height of 68 m (20 storeys)
- Doran Drive Precinct (Lot 55 DP 1253217) is zoned B2 Local Centre with maximum height of 68 m (20 storeys)
- Hills Showground Precinct East (Lot 56 DP 1253217) is zoned R1 General Residential with a maximum building height of 52 m (16 storeys)

Inset 1 presents the location of the Hills Showground Precinct, subdivided into three areas, Hills Showground Precinct East, Hills Showground Precinct West and Doran Drive Precinct.



Inset 1: Hills Showground Station Precinct

3. Ground Conditions

3.1 Surface Conditions

The Doran Drive Precinct and Hills Showground Precinct West was primarily a construction site for the SMNW project with construction of the station and multi-storey carpark completed. The natural landform generally slopes gently down from the east (Showground Road) to the west towards Cattai Creek with an elevation change of approximately 15 m.

Historical aerial photographs from May 2013 to August 2019 (sourced from Nearmap) are presented in Appendix A. Based on our knowledge of the Site and review of the historical aerial photographs, bulk earthworks (cut to fill) have been completed within the construction sites to provide a level surface.

The existing building in the Hills Showground Precinct East (former Hills Shire Council administration building) was used as the Sydney Metro Northwest construction office and comprises of a two-storey building with an internal perimeter road and carparking areas. We understand that it does not have a basement, only undercroft parking. Further, we understand that it will soon be demolished by way of a separate DA to Council (304/2020/LA), which was lodged on 9 September 2019, and currently under assessment.

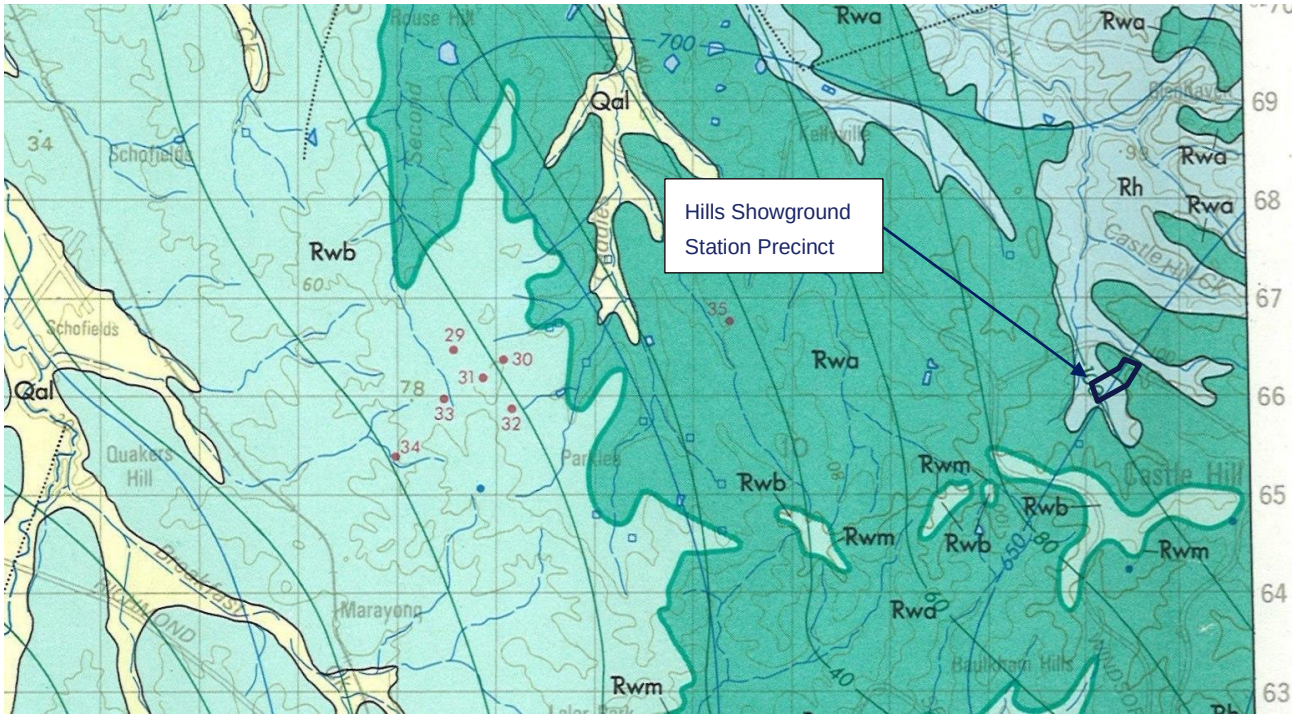
3.2 Geological Setting

The 1:100,000 Penrith Geological Map (Ed 1 1991) indicates the Site is at the boundary of Ashfield Shale (Rwa) and Hawkesbury Sandstone (Rh) (refer Inset 2). This is consistent with the available geotechnical data and site observations.

3.2.1 Ashfield Shale

Ashfield Shale is the basal unit of the Wianamatta Group (which overlies the Mittagong Formation and Hawkesbury Sandstone units). It comprises dark grey to black claystone and siltstone grading into a distinct laminite of fine sandstone and siltstone. The Ashfield Shale unit is up to about 60 m to 70 m thick comprising four siltstone and laminate sub units (youngest to oldest) namely, Mulgoa Laminite, Regentville Siltstone, Kellyville Laminite, Rouse Hill Siltstone.

- The laminated subgroups (Mulgoa and Kellyville) tend to remain intact and can form relatively steep quarry faces, while the siltstone subgroups (Regentville and Rouse Hill) tend to fret and weather more readily.
- The distinct character of the Kellyville Laminite provides a distinct marker unit. It is typically observed as regular equally spaced laminations of dark grey siltstone and fine-grained grey sandstone.
- The Rouse Hill Siltstone contains more geological structures than the overlying Ashfield Shale subgroups such as faults, shears, clay seams and slickensided defects.



Inset 2: Site location on geological map (source: 1:100,000 Penrith Geological Map 1991)

3.2.2 Mittagong Formation

The Mittagong Formation is a transitional formation that separates the Ashfield Shale from the underlying Hawkesbury Sandstone. It comprises fine grained brownish sandstone typically 0.5 to 1.5 m thick, over a 1 to 3 m thick (but up to 10 m) fine grained sandstone and interlaminated or interbedded dark grey siltstone.

The upper and lower boundaries of the Mittagong Formation are often difficult to identify. In places, the upper contact with the Ashfield Shale appears to be sharp and disconformable.

3.2.3 Hawkesbury Sandstone

Hawkesbury Sandstone is often described as a medium to coarse grained, quartzose sandstone deposited in 1 to 3 m thick layers (primary bedding planes). Shale breccia is common in the vicinity of bedding contacts.

Sandstone between the primary beds is described as either massive or cross bedded, the latter being referred to as 'sheet facies'. Sheet facies make up approximately 70% of the Hawkesbury Sandstone and ranges in thickness from less than 0.5 m to greater than 5 m but generally occur between 1 to 2 m.

Siltstone interbeds (laminites) form a minor part of the unit at around 5%. These laminites typically range in thickness from 0.5 to 3 m but generally occur less than 1 m and rarely up to around 12 m.

There is little data on the lateral extent of individual siltstone or laminite beds within the Hawkesbury Sandstone. Where exposed in outcrop they appear to be sheet-like and can be truncated laterally by erosional surfaces in contact with sandstone beds. Experience in Sydney suggests extents in excess of 500 m do occur.

3.3 Subsurface Conditions

Hawkesbury Sandstone has been observed in excavations and investigation for the majority of the Site. The typical subsurface profile is expected to comprise:

- Topsoil and fill over most, or all, of the Site. The topsoil is expected to be of relatively shallow depth and fill depth is expected to be variable due to the bulk earthworks completed as part of SMNW site establishment and demobilisation works
- Residual soil derived from sandstone bedrock to 3 m thick, comprising silty clay to sandy clay and generally have a stiff to very stiff consistency, of low to medium plasticity. In areas where the SMNW bulk earthworks are in cut, some or all of the residual soil could have been removed
- Hawkesbury Sandstone — extremely to moderately weathered, to between 5 m and 8 m depth comprising Class III to Class V Sandstone (rock mass classification per Pells et al. 1998)[1]
- Hawkesbury Sandstone — slightly weathered to fresh, to depths greater than 30 m comprising Class I to II Sandstone, with minor localised pockets of Class III due to closer defect spacing.

The Rouse Hill Siltstone (lowest sub unit of Ashfield Shale) overlying the Mittagong Formation and Hawkesbury Sandstone has been observed from site investigations towards the south eastern part of the Site (East Precinct). The siltstone (including some residual soil) is expected to be approximately 5 m to 6 m thick overlying fresh Hawkesbury Sandstone and is expected to grade from extremely weathered near the surface to slightly weathered at depth.

3.4 Geological Structures in Hawkesbury Sandstone

Based on a review of available information and experience with local conditions of the Site, no major regional geological structures such as significant faults or shears have been identified.

The sedimentary succession in the Sydney Basin is generally sub-horizontal. The regional dip of bedding is near horizontal with warping (gentle folding) producing regional dips of between 5° to 10° in places.

---

[1] Pells PJN, Mostyn G & Walker BF. (1998), Foundations on Sandstone and Shale in the Sydney Region, Australian Geomechanics, Vol 33(2) 17-29.

Cross bedding in the Hawkesbury Sandstone typically dips 20° towards the northeast. In less weathered and fresh sandstone, it forms a fabric in the rock but is essentially isotropic whereas in more weathered rock it may impart strength anisotropy.

Joints in the Hawkesbury Sandstone are usually widely spaced and vertical to sub-vertical. Occasionally, joints dip between 30° and 45°. Joints in the Hawkesbury Sandstone generally comprise an orthogonal pair of sub-vertical joint sets trending approximately north-northeast and a less developed set commonly observed striking east-southeast. Numerous lineaments can be observed in aerial photographs and topographic maps that align with these orientations. Individual joints in sandstone are typically not vertically continuous for more than 15 to 30 m but can be horizontally persistent for up to 100 m or more. Few joints were observed from the Hills Showground Station excavation.

Records of faulting within the Hawkesbury Sandstone in the Sydney region show that the main fault strikes are approximately north to northeast and to the northwest. Pervasive north to northeast-striking dip-slip faults mostly with normal displacements occur in the region. These faults occur between northwest-striking strike-slip faults which are the largest structures. Most faults in the Sydney area have normal net displacement of less than 1 m although some fault displacements could be up to several metres.

Summary sheets presented by Bertuzzi (2014)[2] provide useful example core photographs and typical geotechnical characteristics for the various classes of Hawkesbury Sandstone that are relevant to the subsurface conditions of the Site. Example photographs of excavated faces in Hawkesbury Sandstone are presented in Appendix B.

3.5 Groundwater

The regional groundwater table is expected to be within the Hawkesbury Sandstone at approximately RL 80 m(AHD), varying depths from the ground surface (i.e. depth from surface between 5 to 20 m). However, some “perched” groundwater is likely to be present in the soils in the top 3 to 5 m, especially after prolonged rainfall.

The hydraulic conductivity of the sandstone is low, and flow is essentially limited to seepage through rock defects such as joints, bedding partings and other defects where present. Bedding results in significant horizontal anisotropy.

Significant groundwater inflow was not observed during the excavation of the Hills Showground Station box.

4. Geotechnical Commentary

This section presents high level commentary on the various geotechnical aspects of the Site and the proposed development.

4.1 Excavation

4.1.1 Excavatability

The expected subsurface conditions are typical for many parts of Sydney and, based on our experience, excavation will be able to be undertaken using conventional approaches (e.g. large excavators with rock hammers and rock saws, and often where space permits with large bulldozers equipped with ripping tynes). It is expected that any excavation would be undertaken by contractors with suitable experience in rock excavation close to existing structures. The contractor will need satisfy itself regarding the suitability of its plant to the site conditions.

[2] Bertuzzi R. (2014), Sydney Sandstone and Shale Parameters for Tunnel Design, Australian Geomechanics, Vol 49(1) 4-39, Vol 49(2) 95-104.

4.1.2 Shoring

The conventional shoring system in these conditions is to construct bored reinforced concrete soldier piles around the excavation perimeter prior to excavation commencing, down to competent sandstone to support the soils and weathered rock. Ground anchors are then installed to support the piles as excavation progresses. The number of rows of anchors will be dependent on depth of excavations and ground conditions and is a matter of design. Shotcrete is typically applied to support the ground between the piles. This design approach would need a contingency to stabilise pile toes that are underlain by rock defects, and a contingency to install rock bolts/anchors to stabilise any faulted or jointed rock faces below the pile toes. A higher level of geotechnical construction oversight would also be required for such a design.

Where site constraints permit, batters and other retention systems could also be considered to support the soils and weathered rock.

Competent sandstone is often able to be excavated vertically and supported by spot or pattern bolting and shotcrete in some instances. Examples of typical excavation support types are shown in Appendix B.

4.1.3 Ground Movement due to Excavation

The road and rail authorities would often require assessment of the excavation induced ground movements on the adjacent infrastructure. A predicted effects assessment (geotechnical and structural) is generally undertaken to assess effects of new developments on existing infrastructure. Pre and post construction dilapidation surveys of adjacent infrastructure should also be allowed for, as well as survey of ground movement during the works which will likely include monitoring of the development and where required, monitoring of the existing infrastructure. Refer to Section 4.6 for discussion on impact assessments on Sydney Metro infrastructure.

4.2 Site Classification

Based on the available information, we have classified the site as Class “P” in accordance with Australian Standard AS 2870-2011 “Residential slabs and footings – Construction” due to the likely presence of fill on the Site. The Site may be reclassified following further investigation and assessment for specific lots.

4.3 Foundations

We expect that the building foundations are likely to be shallow pad footings founded on structural fill, residual soils or bedrock (dependant building type and loads). Where building loads are high, piles extending to the better-quality sandstone could be adopted, or the foundation design could involve larger/embedded pads or strip footings to reduce the bearing pressures. Where basements extend to the competent sandstone, pad footings founded on sandstone are likely to be suitable. All these options are conventional foundation types and the type adopted will depend on the structure and is a matter of design.

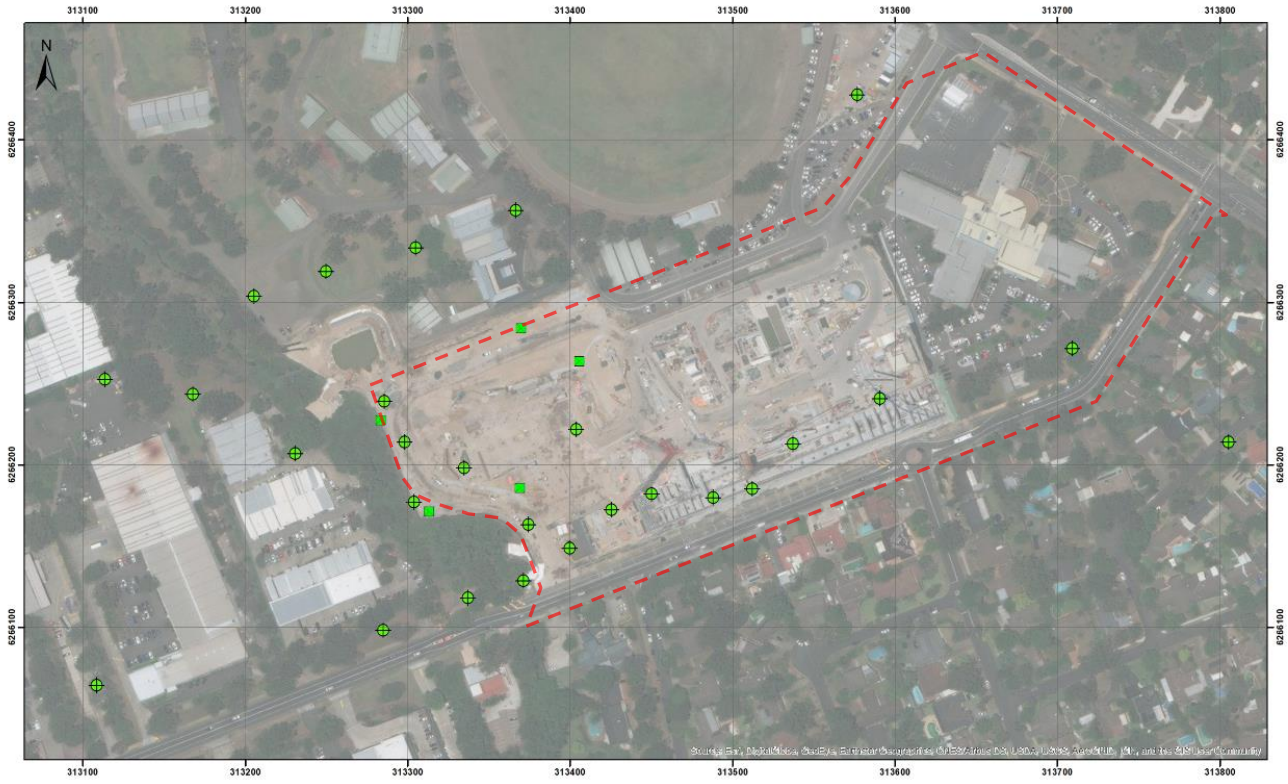
4.4 Civil Surface Works

Civil surface works such as pavements and low embankments should not present any unusual geotechnical challenges. Material won from any bulk excavation should be suitable to use as general compacted fill subject to development of a suitable earthworks specification. We expect that site won material will be able to be used on site or disposed of as VENM or ENM provided it is not contaminated. Further advice on material disposal should be sought from an environmental consultant at the appropriate future stage.

4.5 Geotechnical Investigation

Geotechnical investigations have been completed for the SMNW comprising boreholes and testpits. These investigations were focused around the SMNW alignment but do extend to the northern boundary of the Site towards De Clambe Drive (refer Inset 3). In addition, detailed mapping from the Hills Showground Station excavation could be available as an additional source of reliable data. We consider that the level of investigation completed to date is adequate for development concept planning and SSDA purposes. Further targeted geotechnical investigations are expected to be required at detailed design stage to supplement the existing information and fill any gaps identified by the designers. Investigation requirements will be

dependent on the specific development and should be considered at the detailed design stage together with the historical data. In addition, Sydney Metro is likely to require investigation to be completed as part of the engineering impact assessment of the development on its infrastructure.



Inset 3: Historical investigation locations

4.6 Impact assessment of Sydney Metro infrastructure

Any planned development in the vicinity of Sydney Metro infrastructure will need to consider the protection corridor around such infrastructure. Development within the existing SMNW protection corridor would be required to meet the requirements set out in the TfNSW document specific to developments around Sydney Metro infrastructure, "Sydney Metro Underground Corridor Protection – Technical Guidelines" (ref NWRLSRT-PBA-SRT-TU-REP-000008, rev1, 16 October 2017) and TfNSW ASA Standard "Development Near Rail Tunnels" (ref. T HR CI 12051 ST, v2.0, 15 November 2018). The former is included as Appendix C for convenience.

The Sydney Metro Technical Guidelines sets out specific requirements at all stages of development including requirements for investigations and engineering assessments. We recommend that the Technical Guidelines be reviewed in detail as part of the planning stage works to understand TfNSW's / Sydney Metro's expectations. For example, Table 4 of the Sydney Metro Technical Guidelines also sets out various construction restrictions for the First Reserve and Second Reserve (reproduced as Inset 4). Further advice should be sought for specific developments proposed within the protection reserves with regards to investigation and engineering assessment requirements.

Table 4.5 Construction restrictions

Types of construction	First reserve	Second reserve
Excavation for basements, footings	Not allowed	▪ Excavations less than 2.0 m depth from surface level, assessment not required. ▪ Excavation greater than 2.0 m depth, assessment required.
Shallow footings or pile foundations	Not allowed	Allowed, subject to load restrictions. Assessment required.
Tunnels and underground excavations	Not allowed	Allowed, subject to assessment
Ground anchors	Not allowed	Allowed, subject to assessment
Demolition of existing subsurface structures	Not allowed	Allowed, subject to assessment
Penetrative subsurface investigations	Allowed away from support zone, Assessment required	Allowed, subject to assessment

Inset 4: Construction restrictions within protection reserves (source: Sydney Metro Technical Guidelines)

4.7 Proposed Development over SMNW Running Tunnels (subject to further detailed design and assessment)

4.7.1 Preamble

This section of the report specifically considers the part of the development located over the Sydney Metro Northwest (SMNW) running tunnels just to the east of the Hills Showground Station as highlighted in Inset 5. We understand that the current proposal is to locate a high rise building here (approximately 12 storeys, with at least two basement levels).



Inset 5: Hills Showground Station Precinct (source: Landcom presentation)

4.7.2 Local Ground Conditions

The existing topography at the highlighted site in Inset 5 grades gently from east to west and is at approximately RL100 m(AHD). The crown level of the existing SMNW running tunnels is approximate 20 m to 22 m below the existing surface level at this location.

A borehole (NWR-BH155) that was drilled as part of the SMNW geotechnical site investigation is located within the site. The encountered conditions within this borehole is summarised in Table 1. Rock mass has been classified into the Sydney Rock Mass Classification per Pells et al (1998).

Table 1 – Summary of ground conditions from borehole NWR-BH155

Approx. depth (m)	Ground description
0 to 2	Thin fill layer over residual soil comprising stiff to very stiff clay of low to medium plasticity.
2 to 4.5	Class V Siltstone – Extremely to moderately weathered and very low to low strength
4.5 to 6.5	Class III Siltstone – Moderately to slightly weathered and low to medium strength
6.5 to 35 (end of hole)	Class II Sandstone – Fresh Sandstone with some interbedded siltstone and laminate. Medium to high strength.

4.7.3 Foundations

Based on the encountered conditions, we expect that shallow pad footings should be able to be founded on the Class III Siltstone or Class II Sandstone. For preliminary design, the structural designer may proportion pad footings on the basis of an allowable bearing pressure (ABP) for centric vertical loads provided in Table 2. We understand that Wood & Grieve Engineers have assessed that for a 12 storey building with 2 to 2.5 basements, footings founded on Class III Siltstone with an ABP of 2 MPa would be in the order of 2 m x 2 m (plan dimensions).

Based on the proposed development and given the expected conditions, we do not expect that piles would be required. This will be confirmed with the structural designer at future detailed design stages.

Table 2 – Preliminary foundation engineering parameters of inferred geotechnical units

Inferred unit	Ultimate bearing pressure under vertical centric loading (MPa)[1,2]	Allowable bearing pressure under vertical centric loading (MPa)[1,3]
Class III Siltstone	6	2
Class II Sandstone	60	6

Notes: 1. Minimum plan dimension of 1.0 m and a minimum embedment depth of 0.5 m.
2. Ultimate values occur at large settlement (>5% of minimum footing dimensions).
3. End bearing pressure to cause settlement of <1% of minimum footing dimensions).

4.7.4 Interaction with Tunnels

Based on the above-referenced Technical Guidelines, any development at the site over the running tunnels (Inset 5) would fall within the Second Reserve. The construction restrictions are set out in the Table 4.5 of the Technical Guidelines (reproduced as Inset 4).

While excavations and foundations are allowed to be constructed within the Second Reserve, an assessment is required. The Technical Guideline is not explicit on the limit of applied loads but rather, requires the developer to demonstrate that the imposed loads from the proposed development does not adversely impact the Sydney Metro Northwest tunnels.

Without having undertaken any engineering analysis, it is difficult to provide certainty on the exact limits of development that would not adversely impact the tunnels. For this report we have provided a preliminary assessment based on our experience with similar projects.

Based on the inferred ground conditions, and approximate depth of the SMNW running tunnels, construction of a 12 storey building on the Site should be feasible. We understand that the current development proposal would require at least 2 levels of basement. Two levels appear feasible based on precedent in similar ground conditions. However, we also consider that deeper basements would be technically feasible.

The preliminary advice provided in this letter is subject to confirmation by further investigation and engineering impact assessment and shall not be relied on for detailed design.

5. Summary and Closure

In summary, we do not expect geotechnical conditions that are unusual for north western Sydney to exist on this Site. In general, normal civil engineering and building approaches will be satisfactory for geotechnical aspects of the proposed development.

We consider that development directly over the SMNW running tunnels is feasible and should be able to satisfy TfNSW / Sydney Metro requirements. At least two basement levels would appear feasible, based on previous similar projects.

We trust that this letter meets your requirements. Should there be any queries, do not hesitate to contact the undersigned.

For and on behalf of
PELLS SULLIVAN MEYNINK



BERNARD SHEN
PRINCIPAL

Appendix A
Historical Aerial Photographs



Notes:

1. Photograph source: Nearmap
2 Site boundary shown is schematic only

JBS&G

Hills Showground Station Precinct

Castle Hill NSW

HISTORICAL AERIAL PHOTOGRAPH

14 MAY 2019

PSM3911-003L	**APPENDIX A1**



Notes:

1. Photograph source: Nearmap
2 Site boundary shown is schematic only

JBS&G

Hills Showground Station Precinct

Castle Hill NSW

HISTORICAL AERIAL PHOTOGRAPH

26 JUNE 2014

PSM3911-003L	APPENDIX A2



Notes:

1. Photograph source: Nearmap
2 Site boundary shown is schematic only

JBS&G

Hills Showground Station Precinct

Castle Hill NSW

HISTORICAL AERIAL PHOTOGRAPH

19 JANUARY 2016

PSM3911-003L	**APPENDIX A3**



Notes:

1. Photograph source: Nearmap
2 Site boundary shown is schematic only

JBS&G

Hills Showground Station Precinct

Castle Hill NSW

HISTORICAL AERIAL PHOTOGRAPH

22 JULY 2017

PSM3911-003L	**APPENDIX A4**



Notes:

1. Photograph source: Nearmap
2 Site boundary shown is schematic only

JBS&G

Hills Showground Station Precinct

Castle Hill NSW

HISTORICAL AERIAL PHOTOGRAPH

16 AUGUST 2019

PSM3911-003L	**APPENDIX A5**

Appendix B
Example Photographs of Excavations in Sandstone



Photo 1: Exacation face in highly weathered Mittagong Formation and Hawkesbury Sandstone



Photo 2: Vertical excavation face in moderately weathered Hawkesbury Sandstone

JBS&G

Hills Showground Station Precinct

Castle Hill NSW

EXAMPLE PHOTOGRAPHS OF

EXCAVATIONS IN HAWKESBURY SANDSTONE

PSM3911-003L	**APPENDIX B1**



Photo 3: Vertical exacation face in fresh Hawkesbury Sandstone excavated by rock hammer



Photo 4: Typical excavation support in sandstone (cut batter, pattern rockbolts, shoring piles with anchors)

JBS&G

Hills Showground Station Precinct

Castle Hill NSW

EXAMPLE PHOTOGRAPHS OF

EXCAVATIONS IN HAWKESBURY SANDSTONE

PSM3911-003L	**APPENDIX B2**

Appendix C
Sydney Metro Underground Corridor Protection – Technical Guidelines

Transport for NSW

Sydney Metro – Technical Services

Sydney Metro Underground Corridor Protection

Technical Guidelines

16 October 2017

Document No: NWRLSRT-PBA-SRT-TU-REP-000008

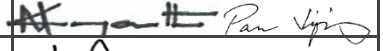
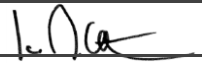
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Appendix A Sydney Metro

Glossary

CBD	Central Business District
IV	Independent Verification
TfNSW	Transport for New South Wales
Developer	The person or organisation responsible for the new construction and/or alteration works
Easement	A right to use for a specific purpose land owned by others. The easement can be limited in either height or depth or width or all. This is also referred as easement land
Stratum	Land owned for the metro which is limited in either height or depth or width or all. This is also referred as stratum land
Substratum	Land owned for the metro which is below surface level.
Development	The term "Development" in this document means new construction and/or alteration works that change the existing asset configuration and could affect existing or future underground metro infrastructure. These works may include demolitions, alterations of existing structures, basements, foundations, anchors, temporary and permanent groundwater drawdown, pipe jacking, site investigations, tunnel and retaining wall constructions.
NSW	New South Wales
Qualified Person	A person who is registered as a professional engineer or an architect or a surveyor under any law relating to the registration of engineers or architects or surveyors, as the case may be, and who under law is allowed to practice or carry on the business of a professional engineer or an architect or a surveyor.
SEPP	State Environmental Planning Policy
Support Zone	Zone where tunnel supports are located. Tunnel support can comprise permanent concrete linings, rockbolts and anchors, ground improvement measures such as grouted zones, rock pillar stich bolts, steel sets, lattice girders, brick lining, cast-in-situ lining, shotcrete lining and waterproof membranes
TfNSW	Transport for New South Wales
Underground Structures	Any engineering works below the surface of the ground

1. Introduction

Developments near existing metro underground infrastructure, such as running tunnels, station caverns and shafts have the potential to have an adverse impact on the structural stability and operations of this infrastructure. Similarly, developments proposed near planned metro underground infrastructure have the potential to impact on the feasibility of future metro construction.

TfNSW has an obligation to review the development applications of projects near to underground metro infrastructure, both planned and existing, on a case-by-case basis to ensure that their consequential impacts are appropriately assessed and managed. This guideline document has been developed to provide the requirements and technical guidance to assist developers with their assessment of development induced effects and the associated risks.

2. Purpose of this document

This guideline document provides the technical requirements to assess and manage the risks associated with developments near existing and future underground metro infrastructure. This document is based and builds on the ASA Standard T HR CI 12051 ST Developments Near Rail Tunnels.

The purpose of this guideline document is to assist external developers in the planning, design and construction near underground metro rail infrastructure. This guideline supports the key objective of the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) to protect the safety and integrity of key transport infrastructure from adjacent developments.

2.1 Scope

This guideline document covers the specific requirements and provides guidelines to be followed for new developments near existing and future underground Sydney Metro rail infrastructure (termed 'metro underground infrastructure' throughout this document) during development planning, designing, constructing and operating stages. In the context of this guideline document, future infrastructure is defined as infrastructure that has yet to be constructed but has an established rail corridor in accordance with the Infrastructure SEPP.

This guideline document primarily covers the developments near the following existing, under construction and future metro lines:

- Sydney Metro Northwest
- Sydney Metro converted Epping to Chatswood Rail Line (ECRL) and
- Sydney Metro City & Southwest.

It applies to new developments near Sydney Metro running tunnels and other underground infrastructure such as: cross passages between running tunnels; station caverns and adits; crossover caverns; station boxes and shafts; nozzle enlargements; ventilation shafts and dive/portal structures. Information regarding existing and planned new metro infrastructure can be sourced from TfNSW.

3. Reference Documents

The following documents have been referenced to prepare this document:

Transport for NSW standards

- T HR CI 12051 ST Developments Near Rail Tunnels.
- TS 20001 System Safety for New or Altered Assets
- T HR CI 12070 ST Miscellaneous Structures
- T HR CI 12075 ST Airspace Developments
- T HR CI 12080 ST External Developments
- T HR EL 12002 GU Electrolysis from Stray DC Current

Legislation and guidelines

- The Environmental Planning and Assessment Act 1979
- The Heritage Act 1977
- State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)
- Development Near Rail Corridors and Busy Roads 2008 – Interim Guidelines – Department of Planning, NSW Government

Other reference documents

- CIRIA C580, Embedded Retaining Walls, Guidance for Design, 2003

4. Protection reserves

Protection reserves define the extent of zones that have been established to protect existing metro infrastructure and protect the feasibility of planned metro infrastructure from future adjacent development activities.

For the purpose of assessing the effects of adjacent developments, underground metro infrastructure includes, but is not limited to, the following:

- running tunnels and interconnecting cross passages
- station caverns and adits
- crossover caverns
- station boxes and shafts
- nozzle enlargements
- ventilation shafts and
- dive and portal structures.

Appendix A includes descriptions of Sydney Metro infrastructure for each of the existing and future metro lines. These descriptions provide an overview of the metro alignments and general location of the underground elements for each section.

Protection reserves are defined in this document. Developers must establish the reserve zones based on the requirements provided within this document and ensure that the design and construction meet the stated requirements.

4.1 Protection reserves

The protection reserves are categorised as either the 'first reserve' or 'second reserve'. Figure 4.1 and 4.2 represent the zones that form the first reserve and the second reserve around metro underground infrastructure.

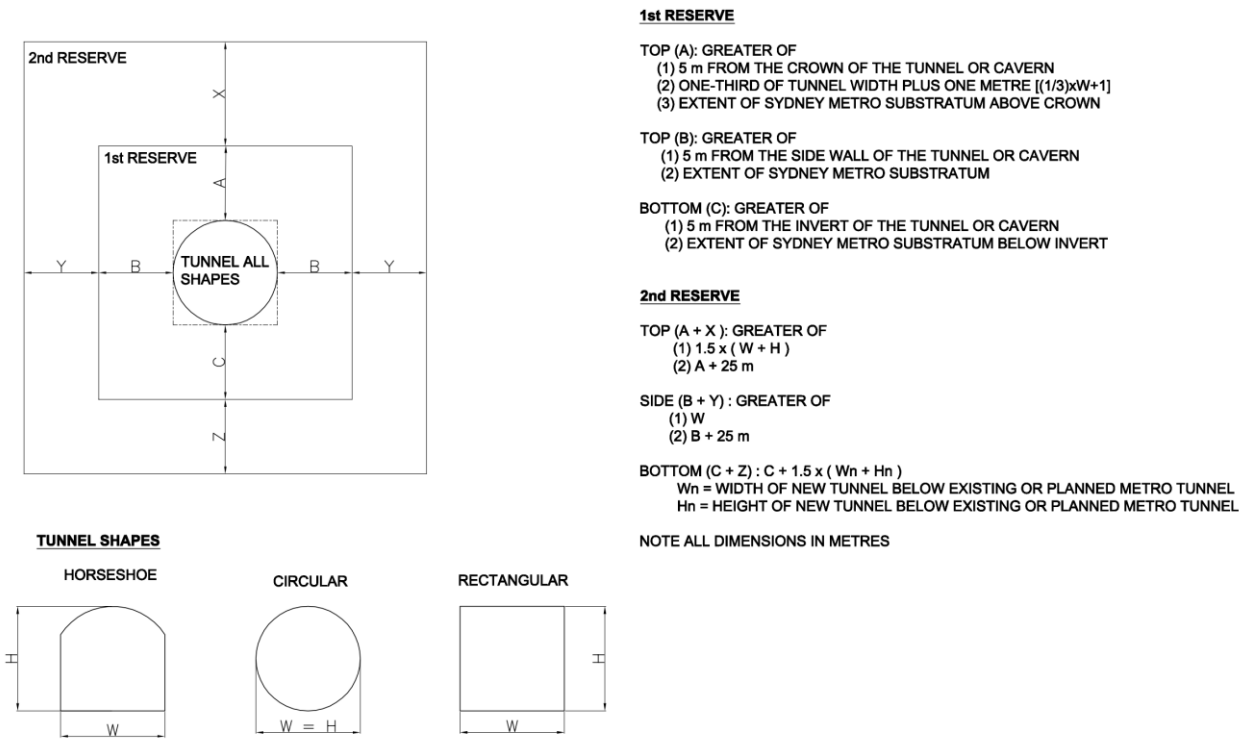


Figure 4.1 **Protection reserves for metro tunnels and caverns**

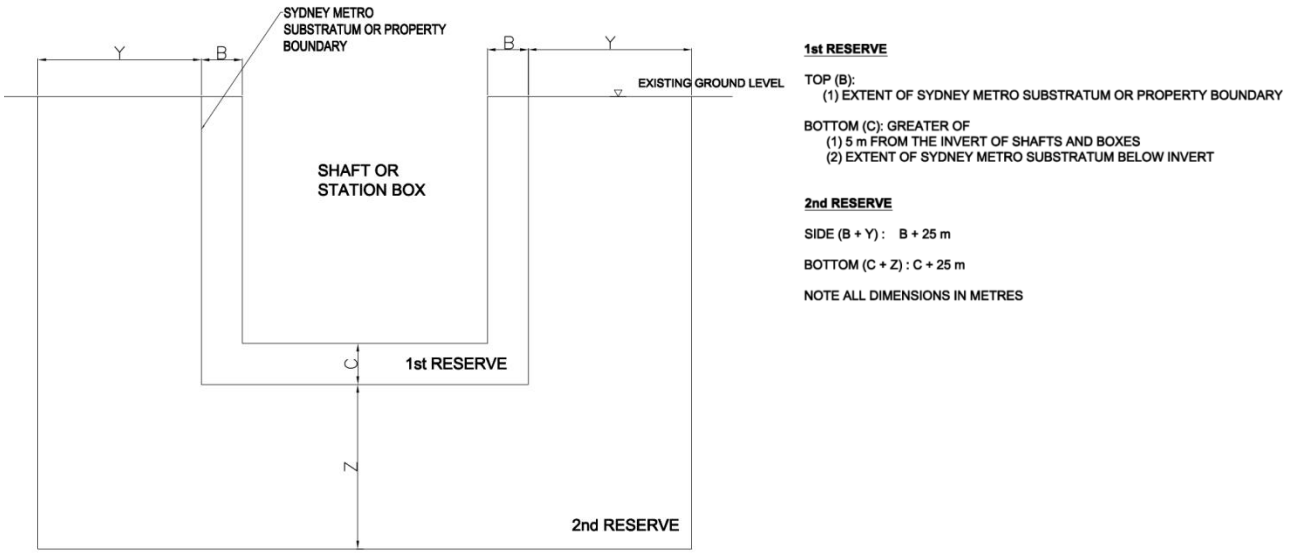


Figure 4.2 **Protection reserves for shafts and station boxes**

4.2 First Reserve

The first reserve encompasses the ground that immediately surrounds the underground metro infrastructure. This zone represents the area that must not be encroached upon by any future development and its construction.

The limits of this zone are indicated in Figure 4.1 and Figure 4.2. These limits are determined based on an appreciation of general ground support principles and the substratum acquired for the Sydney Metro.

Table 4.1 Definition of first reserve for tunnels and caverns

Boundary (Dimension Reference as shown in Figure 4.1)	Reserve dimensions (m)
Top (A)	The greater of the following: ■ 5 m from the crown of tunnel or cavern ■ Support zone based on 1/3*tunnel width plus 1 metre (1/3*W+1) ■ Extent of Sydney Metro substratum above crown
Side (B)	The greater of the following: ■ 5 m from side wall of tunnel or cavern ■ Lateral extent of Sydney Metro substratum
Bottom (C)	The greater of the following: ■ 5 m below the invert of the tunnel or cavern ■ Extent of Sydney Metro substratum below invert

Table 4.2 Definition of first reserve for shafts and station boxes

Boundary (Dimension Reference as shown in Figure 4.2)	Reserve dimensions (m)
Side (B)	■ Lateral extent of Sydney Metro substratum or property boundary
Bottom (C)	The greater of the following: ■ 5 m below the invert of the shafts or boxes ■ Extent of Sydney Metro substratum below invert

4.3 Second reserve

The second reserve zone surrounds the first reserve and covers the areas where development works have the potential to adversely impact on the performance of the support elements of underground infrastructure, metro operations or the feasibility of planned metro infrastructure.

Any developments that take place within the second reserve require an engineering assessment of the works to predict their effects on the underground rail infrastructure.

The limits that apply to the second reserve are summarised in Tables 4.3 and 4.4 below.

Table 4.3 Definition of second reserve for tunnels and caverns

Boundary (Dimension Reference as shown in Figure 4.1)	Reserve dimensions (m)
Top (A+X)	The greater of the following: ■ 1.5 x (W+H) ■ A+25 Where 'W' and 'H' are width and height of the existing rail tunnel
Side (B+Y)	The greater of the following: ■ W ■ B+25
Bottom (C+Z)	C + 1.5 x (W_n + H_n) Where, 'W_n' and 'H_n' are width and height of new tunnel under the existing metro tunnel or cavern

Table 4.4 Definition of second reserve for shafts and boxes

Boundary (Dimension Reference as shown in Figure 4.2)	Reserve dimensions (m)
Side (B+Y)	■ B+25 m
Bottom (C+Z)	■ C+25 m

The following factors have been considered to establish the extent of the second reserve:

- potential stress and displacement influence zones associated with external developments that consider the expected zone of negligible ground stress changes due to the construction
- extent of shear displacement of horizontal rock defect or bedding and joints during construction
- potential groundwater drawdown influence zone and
- vibration influence zone.

4.4 Construction restriction placed on protection reserves

Table 4.5 provides the construction restrictions that are applied to each reserve zone as shown in Figure 4.1 and Figure 4.2.

Table 4.5 Construction restrictions

Types of construction	First reserve	Second reserve
Excavation for basements, footings	Not allowed	▪ Excavations less than 2.0 m depth from surface level, assessment not required. ▪ Excavation greater than 2.0 m depth, assessment required.
Shallow footings or pile foundations	Not allowed	Allowed, subject to load restrictions. Assessment required.
Tunnels and underground excavations	Not allowed	Allowed, subject to assessment
Ground anchors	Not allowed	Allowed, subject to assessment
Demolition of existing subsurface structures	Not allowed	Allowed, subject to assessment
Penetrative subsurface investigations	Allowed away from support zone, Assessment required	Allowed, subject to assessment

5. Developments

5.1 General

Any new construction above, below or alongside the existing or future metro infrastructure, that is located within the protection reserves, are considered developments that fall within the scope of this guideline document. Any construction that is located outside these protection reserves, but still has the potential to cause construction-induced groundwater drawdown and vibration that will affect underground metro infrastructure are considered developments that fall within the scope of this guideline document.

Developments near metro infrastructure must be planned, designed, constructed and maintained to ensure the protection of existing and future metro infrastructure. These developments must not affect the metro operations including either the operational capacity or the efficiency of the network during any stage of the life cycle of that development.

Development related loads and ground displacements can cause deformation of existing tunnels and other associated structures and, in extreme situations, can cause structural failure and collapse. Deformation of the tunnel and cavern support elements and the surrounding ground is of concern as movement of structural lining can cause structural instability, groundwater ingress and encroachment of support into rail functional areas, such as rolling stock kinematic envelopes.

The following sections discuss those aspects of developments where construction restrictions are placed within the second reserve and includes safety and environmental considerations.

5.2 Construction restrictions

The following summarises key construction activities that are permitted, but have a potential to affect metro infrastructure, as such restrictions may apply to construction activity within the second reserve:

- Excavation for basements and shafts – above / beside or below
- Ground anchors – above / beside or below
- Shallow footing or pile foundation – above / beside or below
- Tunnels and underground excavations – above / beside or below
- Demolitions or existing structure – above or beside
- Geotechnical investigations / instrumentation – above / beside or below

Whilst these restrictions focus mainly on impacts to existing underground infrastructure, in many cases they are equally applicable to future metro infrastructure. In these cases the intent of the construction restrictions is to ensure the feasibility of future metro construction and operations is not adversely affected by new developments and their construction.

As a general note, the construction of new developments must take into account the construction constraints, particularly live road and rail operating conditions, noise and vibration restrictions and track possession constraints that are inherent to working near to an operating rail environment. Further consideration must be given to access requirements that may be necessary for inspection and maintenance purposes.

5.2.1 Open excavations

Open excavations can be above and/or to the side of underground metro infrastructure. Such excavations can alter the insitu stress regime in the ground that directly affects support elements of underground infrastructure and other sensitive infrastructure. The excavations can additionally reduce the structural support provided by the surrounding rock where the rock provides active support.

Temporary and permanent anchors can be part of the development to support open excavations, underground excavations and provide uplift resistance for construction cranes and basements. High stress concentrations around ground anchors can affect the surrounding ground locally and potentially impact on the stability of the rock and existing underground structures.

A range of excavation methods are available to excavate ground for new developments. Activities such as rock breaking, pile driving and rock drilling/cutting works have the potential to impose temporary loads and excessive noise and vibration on metro infrastructure. Vibration can dislodge rock wedges on existing metro tunnels and caverns, as well as impose additional non-uniform load patterns on the support of metro tunnels and caverns.

Ground improvement works such as grouting and ground freezing works can also affect existing metro tunnel and cavern structures. Grouting can block water drainage paths and impose excessive hydrostatic loads on tunnel and cavern support. Specialised techniques such as ground freezing can cause volume increase that can impose loads on nearby tunnel and cavern support.

In addition, excavation activities will induced ground borne vibration with the potential to affect metro infrastructure.

5.2.2 Foundations

Additional pressures from shallow spread footings and piled foundations designed to support new developments can increase the stresses in the permanent concrete structural linings of metro tunnels and caverns and the surrounding rock. The effects of the foundation loads must be considered, including opportunities to redistribute bearing pressures away from the protection reserves to minimise the impacts.

Of interest are the changes in stress distribution from foundations within the ground above or surrounding existing (or future metro) underground infrastructure as a consequence of development construction. Issues of potential concern relate to increase in vertical or horizontal pressures beneath foundation elements, increases in shear stress along known existing bedding planes in the rock mass and uplift pressures below the invert of metro underground infrastructure.

Ground borne vibration from activities such as pile driving or bored piles installation and sheet pile installation must be considered.

5.2.3 Underground excavation

Underground excavations include the construction of adjacent rail and road tunnels (above, to the side and below), utility tunnels, cable conduits, drainage pipes, and pedestrian walkways and underpasses. Such underground excavations can significantly alter the insitu stress field in the surrounding ground resulting in stress concentrations, stress relief and displacements. These changes can significantly affect the existing metro tunnel and cavern support elements.

In cases where underground excavations are designed to be drained structures (that is, the structural lining and ground support of tunnel and caverns are built to support the ground but permit groundwater to flow into the excavation) consideration must be given to the groundwater drawdown that this will cause and the impacts that this will have on nearby metro infrastructure.

Ground borne vibration caused by tunnelling must also be considered.

5.2.4 Demolition

The demolition of any existing buildings or basements has the potential to adversely affect existing metro underground infrastructure and cause disruption to metro operation. Where necessary, measures may be needed to protect metro assets during demolition works of existing buildings and structures as part of development construction.

5.2.5 Geotechnical investigations

Development activity requires geotechnical and subsurface investigations that can include drill holes, geophysical exploration, in-situ tests and permeability tests. During construction, instrumentation holes such as inclinometers, piezometers and extensometers can be drilled to measure the ground reaction and the impacts.

Importantly, the drilling of boreholes and installation of instrumentation must be planned to avoid existing metro infrastructure and avoid disruption to metro operations.

5.3 Safety

Developments near underground metro infrastructure must address the following aspects of safety in respect of the metro and its operation at any stage of the life cycle of that development:

- structural safety
- operational safety
- fire safety
- inspection and maintenance and
- floor protection.

Consideration must be given to maintenance and to future users of the development. Importantly, new development must not obstruct emergency access to metro infrastructure and any maintenance access requirements.

Approvals from TfNSW are required to enter into the metro assets for dilapidation survey, installation of instruments, monitoring and visual inspections. Persons carrying out these activities must be accompanied by safety personnel from TfNSW or from TfNSW approved organisations when entering metro tunnels.

5.4 Protection of environment

The developer must take into account the environmental impacts that can affect the metro with a view to minimising any effects during the whole life cycle of development. Typical considerations for developments in the urban environment are as follows:

- stormwater management
- noise and vibration
- air quality, particularly dust
- traffic impacts
- visual impact and amenity
- ability and ease to maintain and 'retro-fit' improvements over time
- disposal and re-use at life cycle end
- ecological impact due to draw-down

- groundwater contamination and
- construction materials to be as low toxicity as possible.

6. Development applications and construction

Proposed development which triggers the Infrastructure SEPP will require concurrence from TfNSW (or in some cases Sydney Trains). Different documentation is required at different stages to enable TfNSW to assess the potential impact on future corridors.

To assist TfNSW with their assessment, documentation must be provided at the planning stage and development application stages. Depending on the finding of the assessment by TfNSW documentation and supporting information may also need to be provided at the design, construction and operation stages of the development.

6.1 Planning stage

Where new developments are within the purview of the Infrastructure SEPP criteria it is recommended that the developer consult with Sydney metro and prepare the following documents during the planning stage (or pre-lodgement of DA stage) for preliminary comment and discussion purposes based on the development concept:

- location of site layout
- existing easements on land and for the metro underground infrastructure
- architectural layout showing the general arrangement of the development
- plans and drawings of existing metro infrastructure obtained from TfNSW that show protection reserve boundaries based on this guideline document
- section view and plan view of the proposed development (including the reduced level of basements) and protection reserves and
- site investigation plans (if they involve drilling within the protection reserves).

6.2 Development application (or concurrence) stage

The developer must submit the following documents to TfNSW as part of their development application:

- legal boundary alignment along the length of the proposed site identified by a NSW registered surveyor
- drawings showing the development in relation to the metro infrastructure in plan, elevation view and sectional view with dimensions and reduced levels
- easements (including right of ways) or stratums, covenants and caveats identified by a NSW registered surveyor, specifying the purpose of the easement and whom it is in favour of
- location of metro underground infrastructure and its dimensions, relative distances and reduced levels to the proposed excavation face and levels, foundations
- geotechnical investigation report with details in accordance with Section 7.1 of this guideline document
- impact assessment report with details in accordance with Section 7.2 of this guideline document and
- risk assessment report in accordance with Section 7.3 of this guideline document.

The following may also be requested by TfNSW based on the information provided at the planning stage:

- Detailed dilapidation survey report in accordance with section 7.4 of this guideline document.

6.3 Post development application

Based on the information provided to support the development application TfNSW may require the developer to provide the following information and documentation at the following stages of project development.

6.3.1 Prior to construction

The following documents may need to be submitted prior to construction commencement:

- detailed ground and vibration monitoring plan including trigger levels, action plans and remedial measures, details of the instrumentation and baseline monitoring readings (refer to Section 10)
- construction schedule, construction management plan including sequence plan identifying impacts
- construction layout of equipment relative to metro infrastructure
- final detailed work method statements (refer to Section 8)
- temporary safety plans and measures
- temporary works plan, temporary access, vehicle, plant and equipment such as cranes (including mobile cranes) and stockpiling
- noise, vibration and electrolysis studies and control measures
- a rail related risk assessment and management plan
- list of machinery to be used
- groundwater control plans, environmental aspects including contamination
- design loadings and certified drawings for construction related works that affect metro infrastructure
- agreed interface activities plan with TfNSW and
- condition and dilapidation survey reports of all metro infrastructure affected by the development (refer to Section 8.2).

6.3.2 During construction

The following documentation may need to be submitted to TfNSW at agreed intervals by the developer, during the development construction phase:

- monitoring report at agreed intervals, which includes monitoring results and assessment by the geotechnical or structural consultant
- notification of work progress at agreed intervals, which is applicable during excavations, foundations and support installations, superstructure construction up to the ground level
- interim dilapidation survey reports as appropriate
- any changes to the design and construction methods for approval by TfNSW and
- rock face mapping, inspection and assessment reports.

6.3.3 After construction completion and prior to issue of occupation certificate

TfNSW may request the following documentation from the developer, after completion of the construction:

- one set of as-built structural and foundation plans signed by qualified person
- one set of as-built drawings for ground anchors and other support details near the affected metro infrastructure
- monitoring summary report
- copy of the geotechnical mapping report carried out during excavation works
- dilapidation survey report conducted after construction completion (refer to Section 8.2)
- structural safety report
- operational safety report and
- current mitigation verification report, including maintenance base line measurements referenced to measured locations (refer to Section 9.4)

7. Engineering investigations and assessments

The developer must prepare the following documentation in support of their DA:

- geotechnical investigation report
- impact assessment report
- risk assessment report
- dilapidation survey report
- drainage report and
- a summary report that presents the main conclusion and results from the above reports.

This section of this guideline document provides an explanation of the information that needs to be included in these reports to enable TfNSW to ascertain the relative impact of the development on existing and future Sydney Metro underground infrastructure. In terms of the engineering investigations and assessments undertaken for future metro infrastructure, the intent of these is to ensure the feasibility of future metro construction is not adversely affected by new developments and their construction.

The main aim of these assessments and investigations is to demonstrate that there will be no adverse effects arising from the proposed development within the defined protection reserves. The acceptability of the effects predicted (as determined through investigation and assessment) must be viewed against the performance requirements described in section 9 of this guideline document, as well as compliance with relevant standards and codes.

The developer should approach TfNSW for information that defines the extent of existing and future metro infrastructure in order to undertake these investigations and assessments.

7.1 Geotechnical investigation

If required by TfNSW, the developer must carry out detailed geotechnical investigations of the soil or rock strata above, alongside and below existing and future Sydney Metro underground infrastructure, as appropriate, to establish the existing ground conditions within the area affected by the proposed development. Geotechnical investigations must be undertaken by suitably qualified and experienced consultant. The results of the investigation must be presented in a geotechnical investigation report.

The intent of these geotechnical investigations must be as follows:

- Provide information that enables a geological model to be developed. Based on this model sections should be able to be must be prepared that illustrate the ground conditions in and around the interface of the proposed development with the Sydney Metro underground infrastructure of concern.
- Establish the likely insitu stress conditions within the soils and underlying rockmass surrounding the interface.
- Define, if present, critical geological features such as bedding planes, joints and dykes.
- Present an interpretation of relevant rock and soil properties based on the results any insitu and laboratory testing that has been undertaken.
- Provide an interpretation of the existing groundwater regime within and surrounding the interface.
- Identify and describe the presence of any human-made features within the development site.

The scope of the geotechnical investigation undertaken to support the development application may comprise the following:

- drilled boreholes
- insitu testing
- geological mapping and
- geophysical exploration.

Whilst the installation of instrumentation and the drilling of investigation boreholes is permissible near to metro infrastructure, they should be located and orientated to avoid the supporting systems of existing metro underground infrastructure. This will require a detailed study of existing arrangements to demonstrate that risk to the underground infrastructure is appropriately managed for approval from TfNSW prior to the drilling of boreholes.

In some cases TfNSW may require that before drilling can take place a surveyor must establish the co-ordinates of the borehole at surface. In these cases drilling may only proceed after obtaining approval from TfNSW.

All boreholes must be carefully grouted to their full depth with a bentonite and cement grout mixture upon completion.

As a minimum the geotechnical investigation report will need to present the following information:

- borehole location plan, borehole logs, test results, geological mapping, photographic documentation and other relevant information
- description of the soil profile of the area
- critical geological features such as bedding planes, joints and dykes
- other relevant data from geotechnical investigation
- rock and soil properties, laboratory and insitu test results
- existing insitu stress states in soils and rocks
- groundwater levels and condition.
- detailed geotechnical model for the analysis including geotechnical design parameters
- recommended footing design, methods of shoring and excavation and
- a copy of all plans, geotechnical data, operations and maintenance records with any qualifications and limitations provided by TfNSW to the developer.

7.2 Engineering impact assessment

The developer must carry out an engineering analysis and impact assessment to demonstrate that the effects of the proposed development on tunnels and underground facilities will not cause unacceptable adverse impacts on future or existing Sydney Metro infrastructure. The engineering assessment must be carried out by suitably qualified persons with experience in tunnel design and analysis. In some cases TfNSW may request the developer to arrange independent verification of the engineering analysis and impact assessment based on the project complexity and the potential effects on metro infrastructure.

The results of the analysis and assessment must be presented in an engineering report. The engineering assessment report must be prepared and endorsed by a suitably qualified person and submitted to TfNSW.

The engineering analysis and impact assessment must take into account any other adjacent development activities planned for the future or that are taking place at the time of analysis. This information can be obtained from TfNSW.

Depending on the complexity of the development, a two-dimensional or three-dimensional numerical modelling (finite element [FE] or finite difference [FD]) may be requested by TfNSW to predict the effects on the underground construction at different stages of construction and the eventual or current operation of the metro. The modelling must also consider the effects of associated temporary works, such as construction loading (e.g. cranes and material stockpiling).

If undertaken, numerical modelling must fulfil the following requirements:

- be based on a realistic geological model derived from the subsurface information gathered through the geotechnical investigation
- must incorporate critical geological features that may be present, such as bedding planes, weak layers, joints and other discontinuities and
- take account of the existing condition of the tunnel lining including defects such as cracks, drainage conditions and support conditions as determined by dilapidation survey and insitu strength tests.

If necessary, the results from this numerical modelling may need to be validated during construction by comparison with the results from the field monitoring of installed instrumentation.

As a minimum the impact assessment report must include the following:

- Details of the scope of the development.
- Verified survey plans by a NSW registered surveyor that show the location of the proposed development in relation to the metro easements, protection reserves and the planned or existing metro alignment including track centre lines and details of the and underground structures.
- The metro underground infrastructure must be shown in plan and various sections with the inclusion of the protection reserves as defined in this guideline document to clearly illustrate the comparative position of the development in relation to the existing or planned metro infrastructure. They must also extend to the expected physical zone of influence, which is the extent to which the development is expected to affect the surrounding ground.
- Detailed drawings depicting structural layout, foundation layout, foundation loads, drainage plans, temporary works such as dewatering, shoring and anchoring and permanent works of the proposed development.
- Structural drawings that show the designs for shoring, as recommended by the developer's geotechnical consultant.
- Predicted displacements of existing or planned metro underground infrastructure (if constructed prior to the proposed development) due to proposed development at various stages, namely pre-construction (including demolition), excavation, development construction and post-construction.
- Predicted displacements, stresses and structural actions as imposed on the structural support of metro infrastructure structure at various stages of construction, namely pre-construction (including demolition), excavation, development construction and post-construction. In most cases this support will be in the form of watertight structural concrete linings.
- Structural assessments of these predicted effects on existing and planned metro infrastructure (if constructed prior to the proposed development). This must include as appropriate the structural integrity of underground support (such as structural linings), track beds, existing drainage structures, waterproofing measures and structural clearances.
- Appropriate sensitivity analysis to ensure that the predictions are not adversely affected by reasonable variations in input parameters and different conditions that can occur during all stages of development construction.
- Assessment of the effects of construction techniques and methodology on the underground metro infrastructure.

- Provide discussion on any design assumptions, qualifications or limitations that have been applied. This discussion must indicate how these have been considered as part of the sensitivity analysis and then integrated as identified risks as part of the risk assessment (as discussed below).
- Recommendations regarding any planned preventive or remedial action that may be required to limit development induced impacts on metro infrastructure.
- Noise and vibration assessment report (refer section 8.6).
- Stray currents report, including a risk assessment (refer to Section 9.4).
- Certification that the proposed development will not induce unacceptable adverse effects on metro infrastructure.

7.3 Risk assessment

The developer has a legal duty to eliminate risks to safe rail operations so far as is reasonably practicable (SFAIRP). As such the developer must identify all reasonably foreseeable safety risks and hazards to the metro or its operations and eliminate these risks where reasonably practicable and where it does not minimise each risk SFAIRP.

The identified risks and their SFAIRP demonstration must be documented in a manner that can be provided as assurance evidence to TfNSW. TS 20001 System Safety for New or Altered Assets describes the assurance for changes impacting rail or transport assets. Reference should also be made to T HR CI 12075 ST when preparing the risk assessment.

A rail related risk assessment report must be prepared and submitted for consideration and approval by TfNSW in accordance with the safety management system for TfNSW and address/include the following:

- safety in design that covers and the whole of asset life cycle, including all stages of construction
- identify all hazards and risks to the development and metro facilities including metro support elements and other infrastructure
- present the risk identification process that has been adopted which considers the entire asset life cycle of the metro infrastructure
- apply and present a risk ranking in accordance with the TfNSW safety management system
- confirm that all risk can and will be managed so far as is reasonably practicable (SFAIRP) and
- present the controls that are needed to manage risks from the development to metro infrastructure. These may include early warning criteria for monitoring.

7.4 Dilapidation survey

Dilapidation surveys of existing metro infrastructure may be requested by TfNSW during the planning stages and may need to be submitted as part of the development application. If required, the developer must arrange for a dilapidation survey to be undertaken of metro infrastructure in proximity to the development. The existing condition of the metro infrastructure must be established and considered as part of the risk assessment.

7.5 Drainage report

Where relevant TfNSW may request that a drainage report is prepared that details the proposed means of drainage that will be adopted to manage the collection of water, including groundwater, within basement levels of the proposed development.

7.6 Independent verification

Depending on the details of the proposed development and the proximity of planned or future metro infrastructure, TfNSW may request that an independent verification of the engineering analysis and impact assessment be carried out. If required, the independent verification must be arranged by the developer.

The independent verification must be carried out by an organisation that is independent of the organisation that prepared the engineering analysis. The independent verification organisation will be subject to the approval of TfNSW.

The independent verification must include detailed engineering proof checking of all aspects of the engineering analysis and impact assessment including any proposed temporary works.

The independent verification organisation must prepare a report that describes its verification activities and includes certification that the proposed development will produce no unacceptable adverse effects on existing metro infrastructure. The independent assessment report must be submitted to TfNSW with the engineering assessment report.

8. Construction requirements

8.1 General

All metro property must be fully protected during construction of the development and all site work (including clearances to metro tracks and protection reserves) must comply with the requirements outlined in this guideline document, as well as other relevant TfNSW standards relating to air space developments, external developments and tunnels, and safe working requirements.

All construction carried out on metro property must comply with the requirement of the relevant authorities and legislation including workplace health and safety (WHS) requirements and environmental requirements.

In the event that concurrence is provided by TfNSW the construction requirements described in this section apply.

8.2 Dilapidation survey

Before construction of the development can commence and an occupation certificate can be issued, a joint inspection of the existing metro near the proposed development may be requested by TfNSW. If requested the survey must be carried out by representatives of the developer and TfNSW. The existing condition of the metro infrastructure must be agreed and recorded. Additional joint inspections may be required during construction.

The extent of metro infrastructure that must be surveyed will be determined by TfNSW.

Detailed dilapidation reports must be submitted to TfNSW describing conditions before commencement of works and after completion of works.

The dilapidation report must include the following as a minimum:

- details of existing defects
- dimensions of existing cracks
- photos of defects with labels that indicate their locations and
- signs of wetness, staining and seepage from existing defects.

This inspection must establish the extent of any existing exposed cracks, such as those observed on the surface of concrete linings which support metro tunnels and caverns. These cracks must be suitably marked and identified to enable any deterioration to be monitored.

8.3 Risk assessments

Prior to commencing any works the risk assessment report issued in support of the DA must be updated based on the detailed design at construction. The updated risk assessment report must take into account any modifications to the design and the impact these may have on identified risks.

Safe work method statements must also be prepared that include, as a minimum, the following:

- detailed work methods including the incorporation of the controls as stated in the risk assessment plan and
- an emergency response plan.

The developer must submit the safe work method statements and updated risk assessment report to TfNSW for approval.

8.4 Demolition works and construction impacts

The demolition of any existing buildings or basements must be planned in such a way that no adverse risk is imposed on existing metro underground infrastructure. The developer is required to take every possible action to minimise imposed risks and is required to meet the costs of any protection of the metro infrastructure and any incurred disruption to metro rail operations.

The impact of any proposed underground demolition work (including de-stressing, unloading and resulting ground vibrations) must be assessed to ensure that there are no adverse effects on metro infrastructure. If large-scale demolition works are involved, then the developer is required to install a vibration monitoring system to monitor vibration levels near adjacent metro infrastructure.

Hydraulic rock breakers must not be used within five metres of any existing metro infrastructure.

The developer is required to arrange a structural investigation by appropriately qualified person to address the impacts.

Refer to T HR CI 12075 ST for further details.

8.5 Excavation works

The developer must submit the following for TfNSW's approval prior to commencing excavation for the development:

- An engineering assessment report which through the use of numerical modelling techniques (if required) demonstrates that the excavation will not cause any adverse effect on the underground metro infrastructure.
- Design reports that detail the shoring system that support excavations must be provided to TfNSW prior to construction and must include evidence of independent verification certification.
- A detailed monitoring plan for ground deformation, tunnel convergence, stress, crack width monitoring, vibration monitoring and reporting protocol for each party.
- Risk assessment and contingency plans.
- Detailed work method statements which include hold points at various stages of excavation and are linked to the acceptable monitoring results.

The following requirements apply to excavation and piling works at construction:

- The positon of underground metro infrastructure (outer walls) and protection reserves must be marked clearly on the ground for easy identification.
- All piling contractors must be made aware of the existing underground metro infrastructure adjacent to construction site.
- TfNSW must be informed of the progress of piling and excavation works on a daily basis.
- The results of field monitoring undertaken during excavation or piling works must be assessed by a suitably qualified person and reported to TfNSW at an agreed frequency.

Depending on the project complexity and potential impact on metro infrastructure, TfNSW can require the developer to engage a geotechnical consultant during the time of excavation process for visual verifications of substrata as identified during investigation, geological mapping where required and an assessment of monitoring results.

The developer must submit the monitoring results together with geotechnical consultant's assessment to TfNSW at agreed frequencies and stages of construction. A TfNSW nominated observer may be involved with the monitoring.

Monitoring must continue until construction of the building structure or superstructure is complete. With prior agreement with TfNSW, monitoring frequencies may be decreased when the basement construction is completed. Monitoring must continue after the completion of the construction activities until no changes occur in three consecutive monitoring cycles. TfNSW must be informed before termination of the monitoring activities.

8.6 Noise and vibration

The effects of noise and vibration on existing metro infrastructure and on the development must be considered as part of the design and construction of developments.

The construction of the development must be carried out such that the effects of noise and vibration on nearby metro structures and facilities are minimised. Prior to construction, an acoustic and vibration assessment report, including a vibration monitoring plan, must be prepared by a qualified person and submitted to TfNSW. This assessment must cover acoustic and vibration levels arising from the proposed development during construction and its operation after completion (including any machinery causing heavy vibration levels). The assessment must also determine the effects of noise and vibration on the metro infrastructure and its operations.

8.7 Contaminants and hazardous materials

The storage of potential contaminants and hazardous materials within the protection reserves will be subject to TfNSW approval. A risk assessment and appropriate safety precautions must be provided for storage of potential contaminants within any of the protection reserves, where there is potential for the contaminants to migrate to or come in contact with the metro underground infrastructure. This assessment must address the potential impact on the durability of concrete, grout, resin, steel, waterproofing gaskets and membranes and any other material forming the permanent works of the metro underground infrastructure.

The storage of potential contaminants and hazardous materials may be permitted if the results from the risk assessment demonstrate that the risk to the metro underground infrastructure can be appropriately managed.

9. Performance requirements

The design and construction of the development must be carried out with full recognition of the potential effects that could be imposed on the performance of the existing metro or the feasibility of the future metro. As an overarching principle the development must not affect the stability and integrity of the metro infrastructure and its safe operation. Broadly, the developer must ensure that the development and its construction do not adversely affect the performance of metro infrastructure in respect of the following:

- amenity
- aesthetics
- structural integrity
- durability
- function
- user/customer benefits
- safety during construction and operation and
- environmental performance.

It should be noted that throughout the developer's activities, the developer must monitor the actual effects of construction against design predictions and in accordance with the project-specific construction phase monitoring requirements.

Aspects of the development and its construction which could adversely affect the metro infrastructure include the following:

- loading or unloading from the development
- ground deformation resulting from excavations and external loading
- induced vibrations during construction and operation
- ground borne noise impacts
- electrolysis from earth leakage currents
- discharge of stormwater from the development
- changes to groundwater levels affecting design assumptions
- loss of support to any underground rail facility (including rockbolts and anchors)
- temporary structures and
- load from anchors

This section details the design and performance requirement that must be adhered to by the developer in order to address these issues.

9.1 Structural integrity

Development induced load and displacements must not have any adverse effects on the support structure or system of metro infrastructure in both the short and long term conditions.

Structures that are proposed to be constructed over and/or adjacent to metro underground structures must be suitably designed to take into account the presence of the existing metro infrastructure and future construction of metro infrastructure. Construction work methods must be developed as part of the design process.

The effects on metro support elements and other metro infrastructure at any stage of the whole life cycle of the development must be assessed to ensure that the works must remain compliant with relevant standards. These structural elements include, but not limited to, concrete (precast, insitu or sprayed) linings, load bearing columns, walls and roof beams, slabs, rock pillar supports, permanent rock anchors (or bolts), track slabs, drainage structure, shafts and underground stations.

Of particular interest is the possibility of increases in structural actions, such as axial loading and flexural bending, to support elements and structural linings of metro underground infrastructure, as a consequence of development loading.

9.1.1 Imposed loading

Any temporary or permanent works adjacent to the metro could be subject to the influence of train loading and as such will need to be assessed in accordance with AS 5100 for live load surcharge. Parts of the development that could be affected must be designed to comply with T HR CI 12070 ST Miscellaneous Structures, T HR CI 12075 ST Airspace Developments and T HR CI 12080 ST External Developments.

Permanent works adjacent to metro must take into account the design actions resulting from any proposed future metro construction. TfNSW will provide advice in relation to planned future metro infrastructure.

9.1.2 Induced movement

Displacement of metro infrastructure as induced by the development must not affect the operational functionality and durability of the affected infrastructure. Also, the developer must consider the possibility that future metro construction may induce movement on the development.

The following displacements limits apply:

- For metro cast insitu cavern and tunnel concrete linings, the allowable total movement in any direction is 10 mm and differential movement in any plane is 10 mm or 1:2000 whichever is less.
- For metro running tunnels that are supported by a precast concrete segmental lining, the allowable total movement in any direction is 10 mm and differential movement in any plane is 10 mm or 1:2000 whichever is less. The main purpose of these limits is to ensure that the watertightness of the lining through joints is not compromised as consequence of gasket decompression and/or damage.
- Shear movement across rock bedding as induced by the development activities must not exceed 10 mm where permanent rock bolts, installed as part of the metro infrastructure support system, intersect these bedding planes.

Any development activity, whether beneath or adjacent to contained metro tracks, that has the potential to cause track displacement must comply with the requirements of SPC 207 Track Monitoring Requirements for Undertrack Excavation. The track must be monitored and managed in accordance with the requirements stated in SPC 207 for monitoring, notification and intervention levels and emergency procedures.

9.1.3 Induced cracking

The extent of dilapidation surveys undertaken (and described previously in this document) of metro infrastructure must be determined based on predictions of deformation and the load influence zone imposed by the proposed development. The survey must establish the extent of any existing cracks. Where present these must be suitably marked and identified to enable any deterioration during and after the construction to be monitored.

The following technical criteria must be met regarding cracking, including the presence of pre-existing cracks on the face of metro concrete structures:

- No new cracking of metro concrete structures (both inside and outside of structures such as tunnel linings or other support elements) is allowed to be induced by the development and its construction. Compliance with this requirement must be confirmed by performing impact assessments during the design stage.
- Any existing cracks must not increase by more than 0.2 mm in width or increase in length by more than 300mm in total over the stages of development construction.
- The propagation of these existing cracks must comply with the following requirements:
  - The configuration of cracks must not result in concrete spalling or affect the safe operation of the metro system.
  - In the event that water seepage is observed (previously absent) through the cracks during development construction then TfNSW will on behalf of the developer seal the cracks by grouting the cracks until this seepage ceases.
- Engineering analysis and assessment undertaken for the development (as discussed within this guideline document) must take into account the presence of existing cracks of metro infrastructure.

The monitoring of existing cracks and critical structural elements during construction must form part of the overall monitoring plan.

9.2 Excavation and groundwater

Excavation for the development and all associated retaining works (along with other ground disturbance works associated with the proposed development) must not affect the safety and operational integrity of the metro or cause the destabilisation of metro infrastructure. The methods of excavation employed are of particular relevance in this regard, especially where methods employ chiselling, percussive pile driving or similar methods. Importantly, explosives must not be used for the splitting and removal of rock and excavation.

Typical issues associated with excavation works include slippage, slumping, creation of fissures or cracks, rock or earth falls, exacerbated ground movements, water inflows, cracking the supporting structural elements and in extreme cases structural failure. Excavation works must be undertaken in a manner that minimises the risk of such occurrences.

Sections of temporary shoring installed to support excavations for the development must have a minimum service life of 3 years, if their stability has the potential to affect metro infrastructure. Shoring systems must be designed by an approved design organisation and verified by an independent qualified person. Allowance should be provided for minimum unplanned excavation in accordance with CIRIA C580 Embedded Retaining Walls, Guidance for Design, 2003.

Ground anchors are not allowed within the first reserve zone. Any ground anchors within the second reserve must be assessed for their effect on metro underground infrastructure. Anchors must not be tested in cases where this testing could cause collapse or failure, or both, in the surround soil and rock structure.

Assessment of metro infrastructure from development excavation must also consider the loading that cranes (including their foundation anchorage) will impose within the excavation on metro infrastructure.

Construction near metro underground infrastructure can also impact the local groundwater regime. These impacts have the potential to cause adverse loading of the infrastructure, not contemplated and thus designed for over the design life of the metro. Critically, the watertightness and waterproofing must not be adversely affected or damaged.

The developer must carry out an engineering assessment of the impact of any changes to the groundwater regime that the development could cause. Issues of concern that have the potential to impact on metro infrastructure include the following:

- The development and its construction could create a water barrier that dams groundwater flow above the metro underground infrastructure.
- Groundwater ingress into excavations associated with the development can cause dewatering of the local water table. Importantly, dewatering must not commence without prior approval from TfNSW.

Consequently, the engineering assessment must address any temporary dewatering (at any stage of the development) to demonstrate that effects on underground metro infrastructure are acceptable.

9.3 Noise and vibration

The noise from construction and rail operation must be considered against statutory and project noise vibration limit requirements. TfNSW does not accept liability for the generation of noise and vibration from normal railway operations (including track maintenance), or for its transmission into developments above or adjacent to rail tunnels.

When designing developments above or adjacent to rail tunnels (existing or planned), consideration must be given to operational and construction vibration; as well as ground or structure borne noise emissions in accordance with Developments Near Rail Corridor and Busy Roads – Interim Guideline, Department of Planning, NSW Government 2008.

In planning development construction the following requirements apply.

Any development that occurs within a screening distance of 25 m horizontally from first reserve must consider the vibration on the metro infrastructure with the following assessment criteria of maximum peak particle velocity (PPV):

- 15 mm/s for tunnel and cavern cast insitu concrete linings that are in good condition.
- 20 mm/s at the running tunnels supported using a precast concrete segment lining.

It is important to note that more stringent limits may apply if rail equipment, that is sensitive to vibration, has the potential to be affected by the development and its construction.

During development construction vibration monitoring may be required of the underground metro support, such as concrete linings. This monitoring must be conducted based on the selection of appropriate trigger levels.

If the vibration levels exceed tolerable limits, then the developer must modify the construction methodology in such a way that the vibration limits are satisfied.

9.4 Stray currents and electrolysis

When designing developments above or adjacent to underground metro infrastructure consideration must be given to operational stray currents that may be present. The risk assessment must also consider the potential presence of stray currents.

TfNSW does not accept liability for the generation of stray currents from an operating electrified railway.

The potential effects of stray electrical currents and electrolysis in the electrified area of the metro network must be considered in accordance with T HR CI 12080 ST and T HR EL 12002 GU during the design of the development.

A suitable test program must be established during the early design phase to quantify a stray current signature for the development site prior to undertaking enabling works. Suitable stray current mitigation strategies must be integrated into the design of the development.

Following construction, stray current testing must be carried out to verify that electrolysis mitigation strategies are proven to be effective, which includes undertaking a comparison with the pre-development stray current signature. This information must also be used to establish maintenance baselines for the life of the development.

10. Monitoring

Monitoring provides a means of validating assumptions made to design the development and prove the acceptability of impacts that could affect metro performance.

The structural performance of the metro underground infrastructure must be monitored as necessary during construction of the development to verify predicted displacements, stress levels in structural elements and vibration levels. The monitoring regime must be developed by a qualified tunnel engineering consultant.

Where required, the developer must implement monitoring system that incorporates early warning criteria developed in agreement with TfNSW. The developer's geotechnical consultant must assess the monitoring results continually, and submit monitoring assessment reports to TfNSW for review.

The tables below indicate the circumstances where various types of monitoring are required. These requirements must be provided as a minimum. Figure 10.1 provides typical extents that monitoring must be provided in each case.

Table 10.1 Minimum monitoring requirement for development activities near rail tunnels - In ground

Type of instrument	Deep open excavations	Foundation works- shallow or deep	New underground excavation or new tunnel
Inclinometer	Yes	Yes	Yes
Water standpipe	If required by TfNSW	If required by TfNSW	If required by TfNSW
Piezometer	Yes	Yes	Yes
Extensometer	Yes	If required by TfNSW	Yes
Ground settlement markers	Yes	Yes	Yes
Building settlement markers	Yes	Yes	Yes

Table 10.2 Minimum monitoring requirement for development activities near rail tunnels – within existing rail tunnels

Type of instrument	Deep open excavations	Foundation works- shallow or deep	New underground excavation or new tunnel
Tunnel convergence	Yes	Yes	Yes
Tiltmeter	Yes	If required by TfNSW	Yes
Crack meter	Yes	Yes	Yes
Vibration sensor	Yes	Yes	Yes
Rail track monitoring (distortion)	Yes	If required by TfNSW	Yes
Strain gauges in lining	If required by TfNSW	If required by TfNSW	If required by TfNSW
Pressure cells in lining	If required by TfNSW	If required by TfNSW	If required by TfNSW
Real time monitoring such as EL beams, optical prism laser scanning	If required by TfNSW	If required by TfNSW	If required by TfNSW

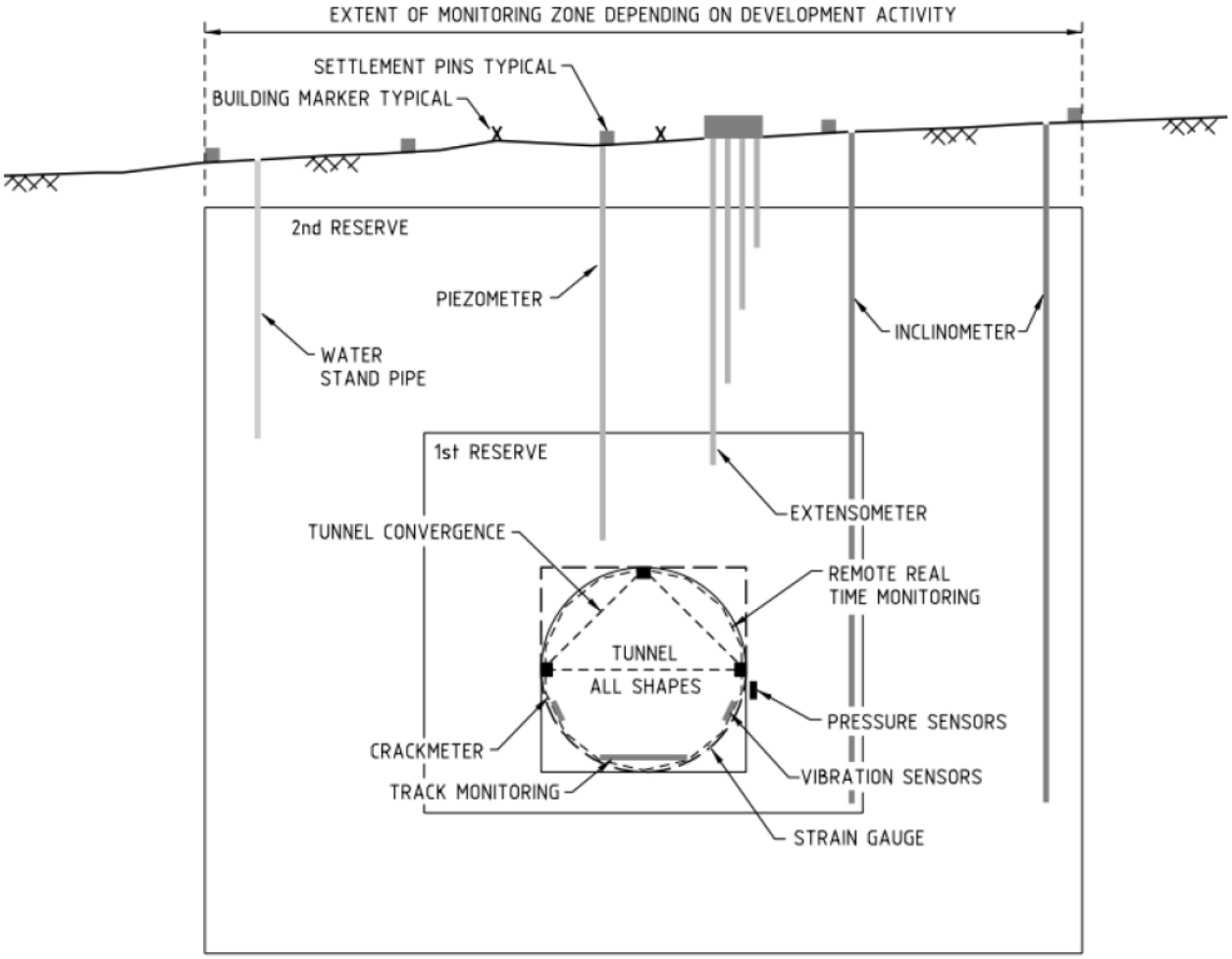


Figure 10.1 Typical instrumentation layout

Baseline data for each monitoring parameter must be established before commencement of development construction. The developer must provide as a minimum, three sets of monitoring data to establish a baseline prior to excavation.

The equipment that is used for remote monitoring (particularly for alarm or warning systems) must have proven reliability in similar applications.

Any alarm or warning system should have a visual and audible alarm system to activate and to stop all works as necessary and notify relevant personnel such as site manager, geotechnical consultant and nominated TfNSW representative.

Depending on the project complexity, physical inspections of existing metro infrastructure may be required on a regular basis during critical stages of construction. If necessary, these inspections should be undertaken jointly with the developer and TfNSW representative (including a representative from the metro operator as necessary).

Monitoring plans must be submitted to TfNSW for review and approval prior to the commencement of development construction. The monitoring plan must include a response regime and contingency plan. These must be agreed with TfNSW before work can commence.

Appendix A

Sydney Metro

Sydney Metro – Northwest

The Sydney Metro Northwest is the first dedicated metro line to be constructed for the metro and extends from Chatswood through to the Northwest. Sydney Metro Northwest incorporates 13 km of track and rail infrastructure between Epping and Chatswood that has been modified and segregated to form part of the Sydney Metro. The following are key features of the Sydney Metro Northwest.

Sydney Metro – Northwest Epping to Cudgegong Road

- 23 km of new track and rail infrastructure delivered through 15.5 km of twin tunnels and 4 km of elevated structure, with the remaining 3 km of rail infrastructure provided at-grade with some sections in cutting.
- Eight new stations are located at Cherrybrook, Castle Hill, Showground (to be known as Hills Showground), Norwest, Bella Vista, Kellyville, Rouse Hill and Cudgegong Road.
- The stations at Castle Hill, Showground and Norwest are contained within cut and cover concrete boxes, whilst stations Cherrybrook and Bella Vista follow an open cut station configuration. Stations at Kellyville and Rouse Hill are elevated. Cudgegong Road station is the only station that is at grade.
- The 15.5 km of twin running tunnels have an internal diameter of approximately 6.2 m and have been excavated predominantly through shale and sandstone using tunnel boring machines (TBMs). The tunnels are supported using a precast concrete segmental lining.
- There are 61 cross passages between running tunnels. These cross passages have been mined and are supported using a permanent cast insitu concrete lining.
- There are services shafts at Epping and Cheltenham area which are cut and cover structures. These shafts are supported using permanent cast insitu concrete lining.
- Other structures includes nozzle enlargement at the ends of stations at Castle Hill, Showground and Northwest. These have been mined and are supported using a permanent cast insitu concrete lining.
- A 159 m long mined crossover cavern is immediately east of Castle Hill Station. The cavern has a span of 21 m wide and has a height that varies from 14 m to 17 m. The cavern is supported by a permanent cast insitu concrete lining.

Sydney Metro – Northwest Epping to Chatswood (Existing ECRL)

- The 13 km length of existing track and rail infrastructure between Epping and Chatswood, which known as Epping to Chatswood Rail Link (ECRL), will be converted to form part of the Sydney Metro System.
- The underground infrastructure of ECRL comprises twin single track tunnels about 7 m in diameter and four underground stations completed in 2008. The depth of rail level varies from about 15 m at the portal to in excess of 60 m in other sections.
- The underground station structures at North Ryde, Macquarie Park and Macquarie University Stations consist of large span platform caverns typically of about 19 m in span and 13 m in height, together with concourse caverns, access tunnels, adits, shaft and associated plant and equipment rooms. The station caverns have been excavated in mainly competent, horizontally bedded sandstone and shales permanently supported using composite linings consisting of rock reinforcement in the form of rock bolts and shotcrete.
- Epping Station comprises two platform caverns connected by cross passages and accessed through escalator tunnels, lift shafts and two large plant room ventilation shafts. This station is located beneath the existing surface station.
- The running tunnels were excavated by rock tunnel boring machines (TBMs) and underground stations and associated structures were excavated using roadheaders, rock hammers and rock saws. The running tunnel support consists of temporary primary support using rock bolts and shotcrete, and final support using unreinforced cast-in-situ concrete lining, nominally 200 mm thick. A section of the running tunnels was lined with shotcrete for construction reasons. The invert of the tunnel consists of precast reinforced segments with a floating track slab.

Sydney Metro – City & Southwest

Sydney Metro City & Southwest will extend the metro rail under Sydney Harbour, through new stations in the lower North Shore, Sydney CBD and south west to Bankstown. This planned metro section will extend the network from Cudgegong Road through to Bankstown. The following are key features of this planned section of the metro system.

Sydney Metro - City

- The city section of the Sydney Metro will consist of underground infrastructure that extends from a dive and portal structure at Chatswood, under North Sydney and Sydney Harbour and then beneath the Sydney CBD to Central and through to Sydenham where the metro will daylight at a portal and dive structure at Marrickville.
- Seven new stations of varying configuration will be constructed at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street, Central and Waterloo.
- Twin running tunnels of approximately 14 km in length (portal to portal) will be excavated using TBMs and supported using a precast concrete segmental lining to create a watertight environment. The tunnels will predominantly align through siltstone and sandstone, except below the Sydney Harbour where TBM tunnelling will be required through marine ground sediments for a length of around 170 m.
- A total of 57 mined cross passages will be provided between running tunnels at regular intervals, with a maximum spacing of around 240 m. Of these cross passages eight will contain sumps at low points. The cross passages will be excavated using mechanical methods and supported using a watertight permanent lining, formed using cast insitu concrete. A services shaft will connect with a cross passage at Artarmon. The shaft will also be supported by permanent cast insitu concrete lining.
- Waterloo Station, Central Station, Barangaroo Station and Crows Nest Station will be constructed as cut and cover box structures that contain island platforms. The station will be typically 24 m in width and range from 200 m to 215 m in length. Pitt Street Station and Martin Place Station will have binocular platform caverns that connect with two entrance and services shaft structures, whilst Victoria Cross Station will have a single span cavern with an island platform, which also connects with two entrance and services shaft structures.
- At Martin Place Station and Pitt Street Station the platform caverns will range in length from 193 m to 246 m and have spans of approximately 12 m with an approximate height of 11 m. At the Victoria Cross the platform cavern will be approximately 174 m in length and have a span of 23 m with a height of 13 m. All the caverns and adits will be excavated using mechanical methods and supported using a watertight permanent lining, formed using cast insitu concrete.
- A mined cross over cavern which is 226 m in length will be constructed immediately north of Barangaroo Station. This cavern will have an internal span of 23 m wide and have a height that varies from 14 m to 17 m. The cavern will be supported using a watertight cast insitu concrete lining.
- Mined twin tunnel enlargements that are up to around 17 m in length will be provided to house tunnel ventilation fans at either end of the Victoria Cross Station caverns, the northern end of the rail crossover at Barangaroo, the southern end of Waterloo Station and at the northern end of Crows Nest Station. The nozzle enlargements will be excavated using mechanical methods and supported using a watertight permanent lining, formed using cast in-situ concrete.
- Dive structures and portal structures will be located at Marrickville and Chatswood. A stabling yard will be constructed at the Marrickville portal site.

Sydney Metro – Southwest

- This section of the metro is currently part of the Bankstown Line, but will be converted to form part of the metro system from Sydenham to Bankstown.
- The extension of the metro in the south west will be 13.4 km in length and will require existing rail track and stations to be upgraded.

- Eleven existing stations at Sydenham, Marrickville, Dulwich Hill, Hurlstone Park, Canterbury, Campsie, Belmore, Lakemba, Wiley Park, Punchbowl and Bankstown will be converted to the metro rail system.

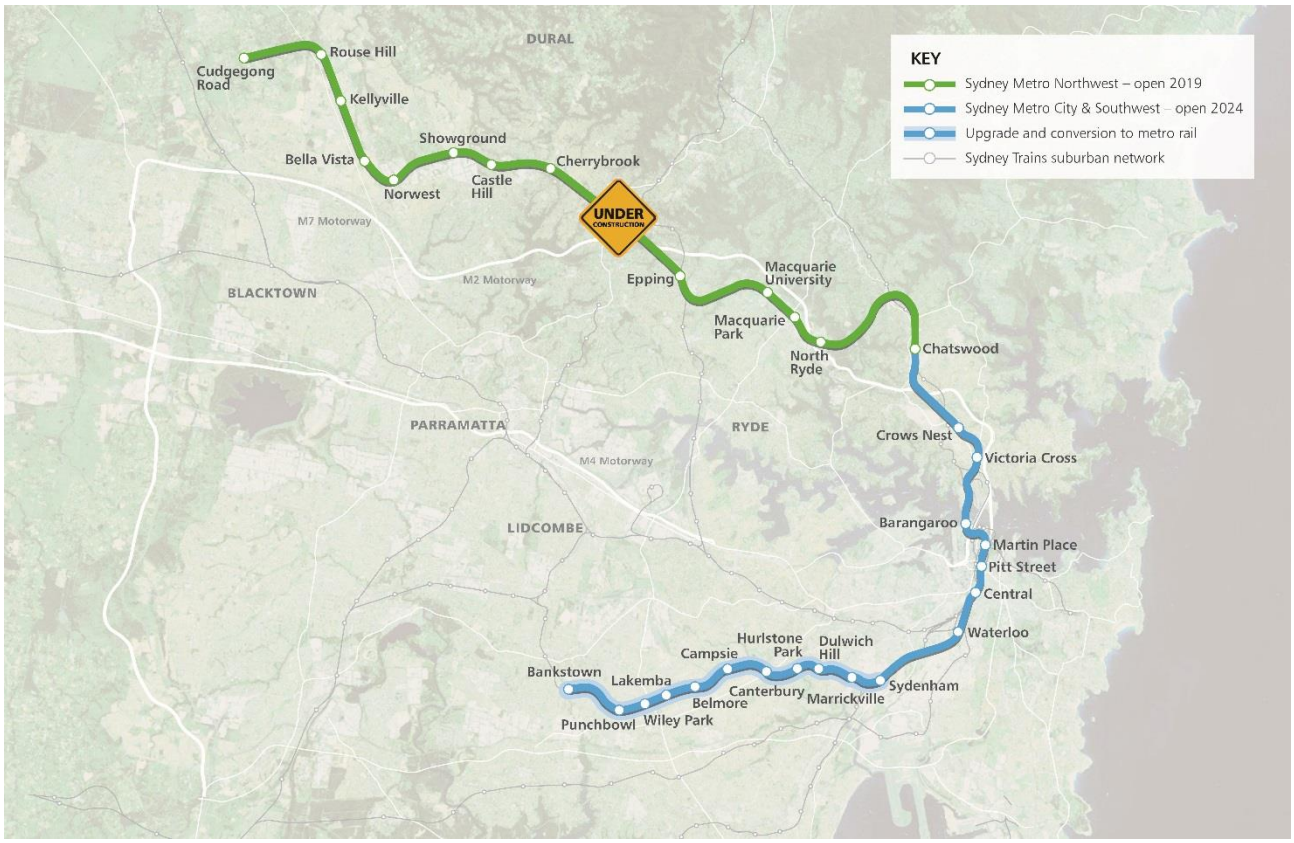


Figure A.1 Sydney Metro

Appendix D Council Planning Certificate

THE HILLS SHIRE COUNCIL
3 Columbia Court, Norwest NSW 2153
PO Box 7064, Norwest 2153
ABN 25 034 494 656 | DX 9966 Norwest

PLANNING CERTIFICATE UNDER SECTION 10.7 (2) & (5)

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 AS AMENDED.

Certificate Number:	**64473**
Reference:	54813:141647
Issue Date:	25 June 2019
Receipt No:	6028221
Fee Paid:	$ 133.00

ADDRESS:	Hills Showground Railway Station, 1 Mandala Parade, CASTLE HILL NSW 2154
DESCRIPTION:	Lot 140 DP 1180973

The land is zoned:
Zone SP2 Infrastructure
Zone B2 Local Centre
Zone RE1 Public Recreation
Zone R1 General Residential

The following prescribed matters apply to the land to which this certificate relates:

The Environmental Planning and Assessment Amendment Act 1997 commenced operation on 1 July 1998. As a consequence of this Act, the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment Regulation 2000.

THIS CERTIFICATE IS DIRECTED TO THE FOLLOWING MATTERS PRESCRIBED UNDER SECTION 10.7 (2) OF THE ABOVE ACT.

1. Names of relevant planning instruments and DCPs

(1) The name of each environmental planning instrument that applies to the carrying out of development on the land.

(A) **Local Environmental Plans**

The Hills Local Environmental Plan 2012, as amended, applies to all land in the Shire unless otherwise stated in this certificate.

State Environmental Planning Policies

SEPP No.19 - Bushland In Urban Areas
SEPP No.21 - Caravan Parks
SEPP No.33 - Hazardous And Offensive Development
SEPP No.50 - Canal Estate Development
SEPP No.55 - Remediation Of Land
SEPP No.64 - Advertising And Signage
SEPP No.65 - Design Quality Of Residential Apartment Development
SEPP No.70 - Affordable Housing (Revised Schemes)
SEPP (Building Sustainability Index: Basix) 2004
SEPP (State Significant Precincts) 2005
SEPP (Mining, Petroleum Production And Extractive Industries) 2007
SEPP (Miscellaneous Consent Provisions) 2007
SEPP (Infrastructure) 2007
SEPP (Exempt and Complying Development Codes) 2008
SEPP (Affordable Rental Housing) 2009
SEPP (State and Regional Development) 2011
SEPP (Vegetation in Non-Rural Areas) 2017
SEPP (Educational Establishments and Child Care Facilities) 2017
SEPP (Primary Production and Rural Development) 2019
Sydney Regional Environmental Plan No. 9 Extractive Industry (No.2 - 1995)
Sydney Regional Environmental Plan No. 20 Hawkesbury – Nepean River (No.2 – 1997)
The following SEPP's may apply to the land. Please refer to **'Land to which Policy applies'** for each individual SEPP.

SEPP (Housing For Seniors Or People With A Disability) 2004

(2) The name of each **proposed environmental planning instrument** that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (unless the Secretary has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved).

(A) **Proposed Local Environmental Plans**
Proposed The Hills Local Environmental Plan 2012 (Amendment No.) applies to this land.

Refer Attachment 1(2)(A)

(B) **Proposed State Environmental Planning Policies**

Draft State Environmental Planning Policy (Environment)
Draft Remediation of Land State Environmental Planning Policy
Proposed Amendment to State Environmental Planning Policy (State and Regional Development) 2011.

Refer Attachment 1(2)(B)

(3) The name of each development control plan that applies to the carrying out of development on the land.

The Hills Development Control Plan 2012
Note: the land is within The Hills Development Control Plan 2012 Part D map sheet. Refer Council's website www.thehills.nsw.gov.au to view the map sheet.

(4) In this clause, proposed environmental planning instrument includes a planning proposal for a LEP or a draft environmental planning instrument.

2. Zoning and land use under relevant LEPs

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a SEPP or proposed SEPP).

(A) The Hills Local Environmental Plan 2012 applies to the land unless otherwise stated in this certificate and identifies the land to be:

Zone SP2 Infrastructure
Zone B2 Local Centre
Zone RE1 Public Recreation
Zone R1 General Residential

(B) The purposes for which the instrument provides that development may be carried out within the zone without development consent:

Refer Attachment 2(B)
Also refer to the applicable instrument for provisions regarding Exempt Development

(C) The purposes for which the instrument provides that development may not be carried out within the zone except with development consent:

Refer Attachment 2(B)
Also refer to the applicable instrument for provisions regarding Complying Development

(D) The purposes for which the instrument provides that development is prohibited in the zone:

Refer Attachment 2(B)

(E) 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?

The Hills Local Environmental Plan 2012?

NO

Any other Planning Proposal?

NO

(F) Whether the land includes or comprises critical habitat?

The Hills Local Environmental Plan 2012?

NO

Any other Planning Proposal?

NO

(G) Whether the land is in a conservation area (however described)?

The Hills Local Environmental Plan 2012?

NO

Any Other Planning Proposal?

NO

(H) Whether an item of environmental heritage (however described) is situated on the land?

The Hills Local Environmental Plan 2012?

NO

Any other Planning Proposal?

NO

2A. Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

To the extent that the land is within any zone (however described) under:

(a) Part 3 of the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (the 2006 SEPP), or*

(b) a Precinct Plan (within the meaning of the 2006 SEPP), or

(c) a proposed Precinct Plan that is or has been the subject of community consultation or on public exhibition under the ACT.

(A) State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan) applies to the land unless otherwise stated in this certificate and identifies the land to be:

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan) does not apply.

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan) applies to the land unless otherwise stated in this certificate and identifies the land to be:

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan) does not apply.

Note: This precinct plan applies to land within the Box Hill Precinct or Box Hill Industrial Precinct.

(B) The purposes for which the instrument provides that development may be carried out within the zone without development consent:

Refer Attachment 2(B)

Also refer to the applicable instrument for provisions regarding Exempt Development.

(C) The purposes for which the instrument provides that development may not be carried out within the zone except with development consent:

Refer Attachment 2(B)

Also refer to the applicable instrument for provisions regarding Complying Development

(D) The purposes for which the instrument provides that development is prohibited in the zone:

Refer Attachment 2(B)

(E) 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?

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan)?

NO

Any amendments to State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan)?

NO

Any amendments to State Environmental Planning Policy (Sydney Region Growth Centres 2006 (Appendix 11 The Hills Growth Centre Precincts Plan)?

NO

(F) Whether the land includes or comprises critical habitat?

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan)?

NO

(G) Whether the land is in a conservation area (however described)?

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan)?

NO

(H) Whether an item of environmental heritage (however described) is situated on the land?

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan)?

NO

3. Complying Development

(1) The extent to which the land is land on which complying development may be carried out under each of the codes for complying development because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

(2) The extent to which complying development may not be carried out on that land because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of that Policy and the reasons why it may not be carried out under those clauses.

(3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that a restriction applies to the land, but it may not apply to all of the land, and that council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Housing Code, Rural Housing Code and Greenfield Housing Code
Complying development under the Housing Code, Rural Housing Code and Greenfield Housing Code **may not** be carried out on the land **unless** the development is carried out on any part of the lot that is not affected by the following specific land exemption/s:
The land is reserved for a public purpose in the environmental planning instrument. Refer to the Land Zoning Map of the applicable instrument.

Housing Alterations Code and General Development Code
Complying Development under the Housing Alterations Code and General Development Code **may be** carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code
Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on the land **unless** the development is carried out on any part of the lot that is not affected by the following specific land exemption/s:
The land is reserved for a public purpose in the environmental planning instrument. Refer to the Land Zoning Map of the applicable instrument.

Commercial and Industrial Alterations, Container Recycling Facilities, Subdivision, Demolition and Fire Safety Codes
Complying Development under the Commercial and Industrial Alterations, Container Recycling Facilities, Subdivision, Demolition and Fire Safety Codes **may be** carried out on the land.

Note: Where reference is made to an applicable map, this information can be sourced from the following websites:

The Hills Local Environmental Plan 2012 - www.thehills.nsw.gov.au
State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct) or (Appendix 11 The Hills Growth Centre Precincts Plan) – http://www.planning.nsw.gov.au/Plans-for-your-area/Priority-Growth-Areas-and-Precincts/North-West-Priority-Growth-Area

4, 4A **(Repealed)**

4B. **Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works**

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 (within the meaning of section 553B of that Act).

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**

Whether or not the land is proclaimed to be a mine subsidence district within the meaning of section 15 of the *Coal Mine Subsidence Compensation Act 2017*?

NO

6. **Road widening and road realignment**

Whether or not the land is affected by any road widening or road realignment under -

(A) Division 2 of Part 3 of the *Roads Act 1993*; or

NO

(B) any environmental planning instrument; or

YES

The Hills Local Environmental Plan 2012 identifies the land as being zoned for Local Road Widening.

Refer Part 2(A) of this certificate for the applicable zoning and environmental planning instrument.

(C) any resolution of council?

a) The Hills Development Control Plan 2012?

NO

b) Any other resolution of council?

NO

7. Council and other public authority policies on hazard risk restrictions

Whether or not the land is affected by a policy:

(a) adopted by council, or

(b) 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, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding)?

Council's policies on hazard risk restrictions are as follows:

(i) Landslip

a) By The Hills Local Environmental Plan 2012 zoning?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

b) By The Hills Local Environmental Plan 2012 local provision?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

c) By The Hills Development Control Plan 2012 provision?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

(ii) Bushfire

YES

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by bushfire. That question is answered in Section 11 of this certificate.

The NSW Rural Fire Service Guidelines entitled 'Planning for Bushfire Protection 2018'. Development subject to bushfire risk will be required to address the requirements in these guidelines and can be downloaded off the RFS web site www.rfs.nsw.gov.au

The Development Control Plan may also contain provisions for development on Bushfire Prone Land and Bushfire Hazard Management. Refer Part 1(3) of this certificate for the applicable Development Control Plan.

(iii) Tidal inundation

NO

Please note this is a statement of Council policy only and NOT a statement on whether or not the property is affected by tidal inundation.

(iv) Subsidence

NO

Please note this is a statement of Council policy only and NOT a statement on whether or not the property is affected by subsidence.

(v) Acid sulphate soils

NO

(vi) Land contamination

NO

Please note this is a statement of Council policy only and NOT a statement on whether or not the property is affected by contamination or potential contamination.

(vii) Any other risk

NO

7A. Flood related development controls information

(1) Whether or not development on that 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?

YES

Please note this is a statement that flood related development controls apply to the land and is NOT a statement on whether or not the property is subject to flooding.

(2) Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls?

YES

Please note this is a statement that flood related development controls apply to the land and is NOT a statement on whether or not the property is subject to flooding.

(3) Words and expressions in this clause have the same meanings as in the standard instrument set out in the *Standard Instrument (Local Environmental Plans) Order 2006*.

8. Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 27 of the Act.

The Hills Local Environmental Plan 2012?

YES

Clause 5.1 of The Hills Local Environmental Plan 2012 variously provides for the acquisition of land within the SP2 Infrastructure, RE1 Public Recreation zones and E1 National Parks and Nature Reserves.

Any other Planning Proposal?

NO

State Environmental Planning Policy?

NO

Proposed State Environmental Planning Policy?

NO

9. Contributions plans

The name of each contributions plan applying to the land:

THE HILLS SECTION 7.12
19 SHOWGROUND PRECINCT

9A. Biodiversity Certified Land

Whether the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*?

NO

Note: Biodiversity certified land includes land certified under Part 7AA of the *Threatened Species Conservation Act 1995* that is taken to be certified under Part 8 of the *Biodiversity Conservation Act 2016*.

10. Biodiversity stewardship sites

Whether the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* (but only if the council has been notified of the existence of the agreement by the Chief Executive of the Office of Environment and Heritage)?

NO

Note: Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardship agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

10A. Native vegetation clearing set asides

Whether the land contains a set aside area under section 60ZC of the *Local Land Services Act 2013* (but only if the council has been notified of the existence of the set aside area by Local Land Services or it is registered in the public register under that section)?

NO

11. Bush fire prone land

Has the land been identified as bush fire prone land?

NO

12. Property vegetation plans

Has the council been notified that a property vegetation plan approved under Part 4 of the *Native Vegetation Act 2003* (and that continues in force) applies to this land?

NO

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 this 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 Act 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

(a) Whether there is a current site compatibility certificate (seniors housing) of which council is aware, issued under *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* in respect of proposed development on the land?

NO

(b) Whether there are any terms of a kind referred to in clause 18(2) of *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land?

NO

16. Site compatibility certificates for infrastructure, schools or TAFE establishments

Whether there is a valid site compatibility certificate (infrastructure) or site compatibility certificate (schools or TAFE establishments), of which the council is aware, in respect of proposed development on the land?

NO

17. Site compatibility certificates and conditions for affordable rental housing

(1) Whether there is a current site compatibility certificate (affordable rental housing), of which the council is aware, in respect of proposed development on the land?

NO

(2) Whether there are any terms of a kind referred to in clause 17(1) or 38(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that have been imposed as a condition of consent to a development application in respect of the land?

NO

18. Paper subdivision information

(1) The name of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot.

NO DEVELOPMENT PLAN APPLIES

(2) The date of any subdivision order that applies to the land.

NO SUBDIVISION ORDER APPLIES

(3) Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

19. Site verification certificates

Whether there is a current site verification certificate, of which the council is aware, in respect of the land?

NO

Note. A site verification certificate sets out the Secretary's opinion as to whether the land concerned is or is not biophysical strategic agricultural land or critical industry cluster land - see Division 3 of Part 4AA of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.*

20. Loose-fill asbestos insulation

Does the land include any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989*) that is listed on the Loose-Fill Asbestos Insulation Register that is required to be maintained under that Division?

Council has **not** been notified by NSW Fair Trading that the land includes any residential premises that are listed on the register. Refer to the NSW Fair Trading website at www.fairtrading.nsw.gov.au to confirm that the land is not listed on this register.

Note: There is potential for loose-fill asbestos insulation in residential premises that are not listed on the Register. Contact NSW Fair Trading for further information.

21. Affected building notices and building product rectification orders

(1) Whether there is any affected building notice of which the council is aware that is in force in respect of the land?

NO

(2) (a) Whether there is any building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with?

NO

(b) Whether any notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding?

NO

(3) In this clause:

affected building notice has the same meaning as in Part 4 of the *Building Products (Safety) Act 2017*.
building product rectification order has the same meaning as in the *Building Products (Safety) Act 2017*.

Note. The following matters are prescribed by section 59 (2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate:

(a) that the land to which the certificate relates is significantly contaminated land within the meaning of that Act – if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

NO

(b) that the land to which the certificate relates is subject to a management order within the meaning of that Act – if it is subject to such an order at the date when the certificate is issued,

NO

(c) that the land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act – if it is the subject of such an approved proposal at the date when the certificate is issued,

NO

(d) that the land to which the certificate relates is subject to an ongoing maintenance order within the meaning of the Act – if it is subject to such an order at the date when the certificate is issued,

NO

(e) that the land to which the certificate relates is the subject of a site audit statement within the meaning of the Act – if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

NO

THIS PART IS DIRECTED TO THE FOLLOWING MATTERS PRESCRIBED UNDER SECTION 10.7 (5) OF THE ABOVE ACT

NOTE: "When information pursuant to Section 10.7 (5) is requested the council is under no obligation to furnish any of the information supplied herein pursuant to that Section. Council draws your attention to Section 10.7 (6), which states that a council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate."

A. Whether there are any provisions applying to the land that control the management of trees and bushland?

YES

Part C Section 3 of The Hills Development Control Plan 2012 contain provisions for the control and management of actions in respect of trees and bushland.

B. Does the land contain a foreshore area as identified on The Hills Local Environmental Plan 2012 Foreshore Building Line map?

NO

C. Is the land subject to a listing on a public register maintained by Council under the Protection of the Environment Operations Act 1997?
Note: This information relates specifically to the land and includes any existing or in force environmental notice, civil proceedings or prosecutions under the Act (where notified to Council).

NO

D. Is the land affected by any special provisions of Sydney Regional Environmental Plan No 9 – Extractive Industry (No 2 – 1995)?

NO

E. Is the land affected by a restricted development area as identified under The Hills Development Control Plan 2012?

NO

F. Is the land within an area where a Special Infrastructure Contribution, as determined by the Minister for Planning and Infrastructure, applies?

NO

G. Is the land in the vicinity of a heritage item or heritage conservation area as described in The Hills Local Environmental Plan 2012 **OR** State Environmental Planning Policy (Sydney Region Growth Centres) 2006?

YES

Clause 5.10 (5) of The Hills Local Environmental Plan 2012 provides specific considerations for development in the vicinity of a heritage item or heritage conservation area.

H. Whether Council has adopted a Voluntary Planning Agreement within the meaning of S93F of the Environmental Planning and Assessment Act, 1979, as amended, in relation to the land?

NO

I. Is the land within or adjacent to the Sydney Metro Northwest as identified on the maps prepared by Transport NSW?

YES

Refer to www.northwestrail.com.au. For any further enquiries please contact Transport NSW on 1800 019 989.

J. Does the land contain a proposed road as identified within a Development Control Plan under State Environmental Planning Policy (Sydney Region Growth Centres) 2006?

NO

K. Has Council been notified by NSW Land and Property Information that the land is affected by a plan of acquisition for railway purposes (Sydney Metro Northwest)?

NO

THE HILLS SHIRE COUNCIL

This land has frontage to a "Classified Road". Roads and Maritime Services, 27-31 Argyle St, Parramatta, is the responsible authority for classified roads and should be consulted for any road widening proposals.

MICHAEL EDGAR
GENERAL MANAGER

Per:

PLEASE NOTE: COUNCIL RETAINS THE ELECTRONIC ORIGINAL OF THIS CERTIFICATE. WHERE THIS CERTIFICATE REFERS TO INFORMATION DISPLAYED ON COUNCIL'S WEBSITE OR TO ANY EXTERNAL WEBSITE, IT REFERS TO INFORMATION DISPLAYED ON THE WEBSITE ON THE DATE THIS CERTIFICATE IS ISSUED.

ATTACHMENT 1(2)(A)

PLANNING PROPOSAL 1/2017/PLP - REMOVES CITY OF PARRAMATTA FROM THE HILLS SHIRE COUNCIL & CREATES LEP 2017

As a result of the State-wide Council Boundary Review process in May 2016, the Hills Shire Council area was reduced, with part of The Hills Shire becoming part of the new City of Parramatta Council Local Government Area.

This means that LEP 2012 is currently being administered by two Councils. The planning proposal seeks an administrative amendment to The Hills Local Environmental Plan 2012 to:

1. Create a new local environmental plan and associated maps which will be known as *The Hills Local Environmental Plan 2017* and which will apply to land within The Hills Local Government Area.

2. Amend *The Hills Local Environmental Plan 2012* and associated maps so that it only applies to land formerly in The Hills Local Government Area, now in the City of Parramatta. This instrument will continue to be known as *The Hills Local Environmental Plan 2012.*

The separation of LEP 2012 into two plans will allow both Councils to manage the ongoing planning framework independently. The proposal is an administrative amendment only and there is no proposal to change the planning controls that currently apply to land within The Hills Shire or the City of Parramatta.

Delegation for making of the LEP 2012 has not been issued to Council under the Gateway Determination.

For further information please contact Council's Duty Planner on 9843 0469.

The above details are in keeping with the exhibited planning proposal. Please note that changes to the planning proposal may be made post exhibition. The current status and details of the planning proposal can be viewed on Council's website www.thehills.nsw.gov.au under the 'Building & Planning' menu bar, then 'Application Tracking'.

ATTACHMENT 1(2)(A)

PLANNING CHANGES TO FACILITATE TRANSITIONAL GROUP HOMES (2/2018/PLP)

A planning proposal has been prepared to amend The Hills Local Environmental Plan 2012 to provide a floor space bonus for the delivery of Transitional Group Homes within the Hills Shire.

Transitional housing provides safe and temporary accommodation for vulnerable members of the community, including women and children experiencing homelessness and/or domestic violence.

The planning proposal will be applicable to certain higher density development within the R1 General Residential, R4 High Density Residential and B4 Mixed Use zones. It will incorporate a floor space cap which will ensure that the additional yield will be moderate and will not unreasonably impact on surrounding residents.

A draft Voluntary Planning Agreement template has been prepared to secure an agreement between Council, the developer and the chosen service provider, to ensure the

Transitional Group Home dwellings will be adequately operated and managed. In addition, a draft Development Control Plan has been prepared to guide developers on matters such as the intent of the incentive, design techniques and the operation and management of the transitional group homes.

Delegation for making the plan has not been issued to Council under the Gateway Determination.

Further details on the proposed amendments can be found in the exhibition material available on Council's website or for further information please contact Council's Duty Planner on 9843 0469.

The above details are in keeping with the exhibited planning proposal. Please note that changes to the planning proposal may be made post exhibition. The current status and details of the planning proposal can be viewed on Council's website www.thehills.nsw.gov.au under the 'Building & Planning' tab, then 'Application Tracking'.

ATTACHMENT 1(2)(B)

PROPOSED AMENDMENT TO STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

The proposed amendment to Schedule 2, Clause 13 of the State and Regional Development SEPP identifies specified types of development on government-owned land adjacent to the Sydney Metro Northwest as State Significant Development, for which the Minister for Planning is the consent authority.

The proposed amendment is to ensure a state-led, consistent and transparent planning pathway for the development of government owned land adjoining the Sydney Metro Northwest corridor.

NOTE: The above details are in keeping with the exhibited planning proposal. Please note that changes to the proposal may be made post exhibition.
The current status and details of the proposal can be viewed at NSW Department of Planning & Environment at http://planspolicies.planning.nsw.gov.au/index.pl?action=job_listing&status=exhibition

ATTACHMENT 2(B)

Zone SP2 Infrastructure

1 Objectives of zone

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.

2 Permitted without consent

Roads

3 Permitted with consent

The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose

4 Prohibited

Any development not specified in item 2 or 3

NOTE: This land use table should be read in conjunction with the Dictionary at the end of The Hills LEP 2012 which defines words and expressions for the purpose of the plan.

NOTE: Activities permitted without development consent are still subject to other provisions in Environmental Planning Instruments and/or Acts.

ATTACHMENT 2(B)

Zone B2 Local Centre

1 Objectives of zone

- To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.
- To encourage employment opportunities in accessible locations.
- To maximise public transport patronage and encourage walking and cycling.

2 Permitted without consent

Home businesses; Home occupations

3 Permitted with consent

Attached dwellings; Boarding houses; Building identification signs; Business identification signs; Centre-based child care facilities; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Home-based child care; Information and education facilities; Medical centres; Multi dwelling housing; Oyster aquaculture; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Service stations; Shop top housing; Tank-based aquaculture; Tourist and visitor accommodation; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Environmental facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Pond-based aquaculture; Port facilities; Recreation facilities (major); Research stations; Residential accommodation; Resource recovery facilities; Rural industries; Sewerage systems; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse or distribution centres; Waste disposal facilities; Water recreation structures; Water supply systems; Wharf or boating facilities; Wholesale supplies

NOTE: This land use table should be read in conjunction with the Dictionary at the end of The Hills LEP 2012 which defines words and expressions for the purpose of the plan.

NOTE: Activities permitted without development consent are still subject to other provisions in Environmental Planning Instruments and/or Acts.

ATTACHMENT 2(B)

Zone RE1 Public Recreation

1 Objectives of zone

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.

2 Permitted without consent

Environmental protection works

3 Permitted with consent

Aquaculture; Boat launching ramps; Building identification signs; Business identification signs; Car parks; Centre-based child care facilities; Community facilities; Emergency service facilities; Environmental facilities; Information and education facilities; Jetties; Kiosks; Markets; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Respite day care centres; Restaurants or cafés; Roads; Take away food and drink premises; Water recreation structures

4 Prohibited

Any development not specified in item 2 or 3

NOTE: This land use table should be read in conjunction with the Dictionary at the end of The Hills LEP 2012 which defines words and expressions for the purpose of the plan.

NOTE: Activities permitted without development consent are still subject to other provisions in Environmental Planning Instruments and/or Acts.

ATTACHMENT 2(B)

Zone R1 General Residential

1 Objectives of zone

- To provide for the housing needs of the community.
- To provide for a variety of housing types and densities.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To enable other land uses that support the adjoining or nearby commercial centres and protect the amenity of the adjoining or nearby residential areas.

2 Permitted without consent

Home business; Home occupations

3 Permitted with consent

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Business premises; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Group homes; Home-based child care; Hostels; Hotel or motel accommodation; Multi dwelling housing; Neighbourhood shops; Office premises; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Residential flat buildings; Respite day care centres; Restaurants or cafés; Roads; Semi-detached dwellings; Seniors housing; Shop top housing, Tank-based aquaculture; Any other development not specified in item 2 or 4

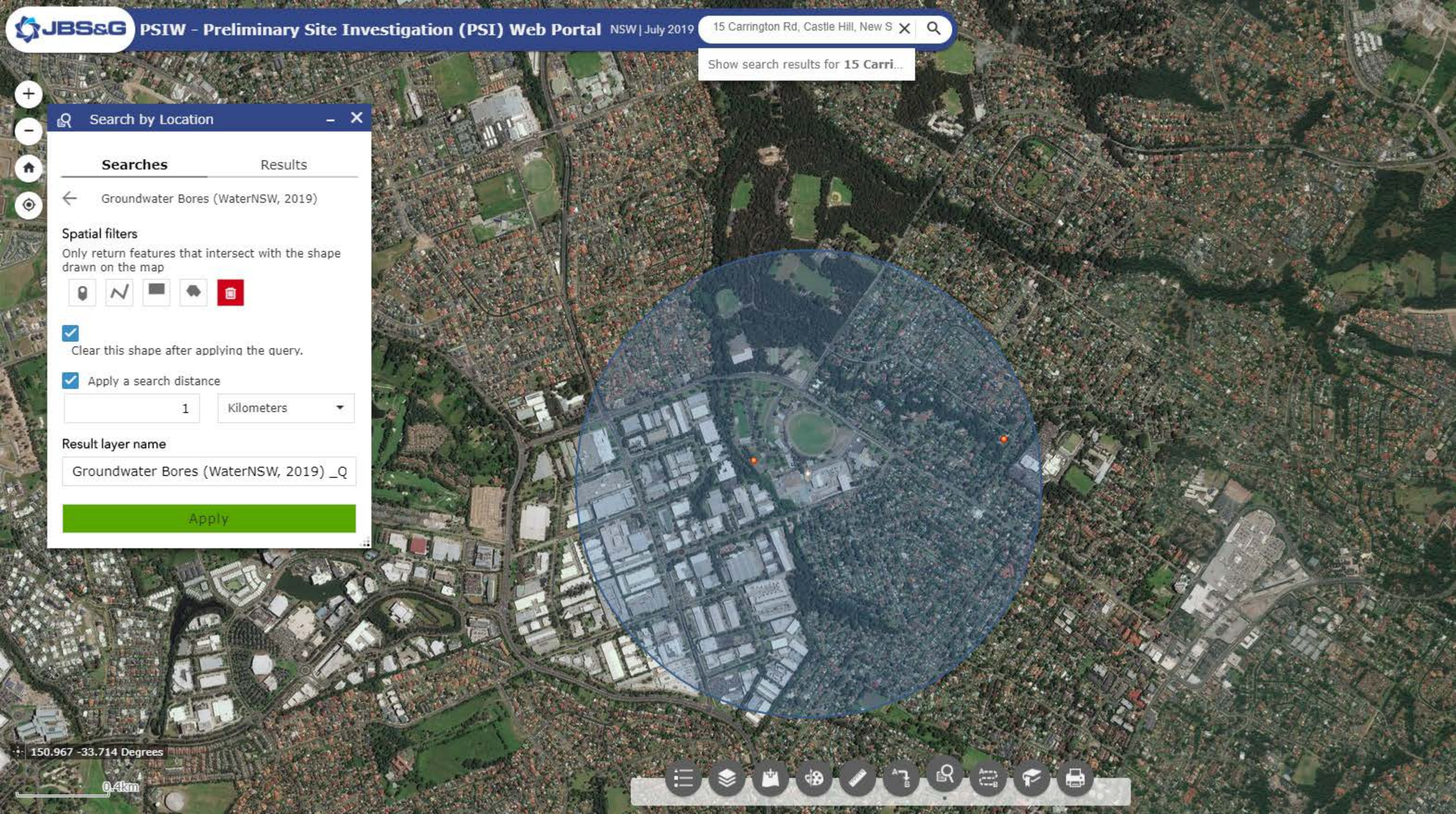
4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Environmental facilities; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Information and education facilities; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Passenger transport facilities; Port facilities; Public administration buildings; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Service stations; Sewerage systems; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Warehouse or distribution centres; Waste disposal facilities; Water recreation structures; Water supply systems; Wharf or boating facilities; Wholesale supplies

NOTE: This land use table should be read in conjunction with the Dictionary at the end of The Hills LEP 2012 which defines words and expressions for the purpose of the plan.

NOTE: Activities permitted without development consent are still subject to other provisions in Environmental Planning Instruments and/or Acts.

Appendix E Registered Groundwater Bores


JBS&G
PSIW - Preliminary Site Investigation (PSI) Web Portal
NSW | July 2019
15 Carrington Rd, Castle Hill, New S
Show search results for 15 Carri...
Search by Location
Searches
Results
Groundwater Bores (WaterNSW, 2019)
Spatial filters
Only return features that intersect with the shape drawn on the map
Clear this shape after applying the query.
Apply a search distance
1
Kilometers
Result layer name
Groundwater Bores (WaterNSW, 2019) _Q
Apply
150.967 -33.714 Degrees
0.4km

WaterNSW
Work Summary

GW100981

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): DOMESTIC

Work Type: Bore
Work Status: Supply Obtained
Construct.Method: Rotary Air
Owner Type: Private

Commenced Date:
Completion Date: 11/01/1997
Final Depth: 102.00 m
Drilled Depth: 102.00 m

Contractor Name: JH ISELT PTY LTD
Driller: John Hans Iselt
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m): 8.000
Salinity Description: Fresh
Yield (L/s): 0.470

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	CASTLE HILL	117//246101
Licensed:			

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6266444.000
Easting: 314264.000
Latitude: 33°43'32.8"S
Longitude: 150°59'43.1"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	5.00	200			Rotary Air
1		Hole	Hole	5.00	102.00	0			Rotary Air
1	1	Casing	P.V.C.	-1.00	5.00	160	150		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)
16.50	17.00	0.50	Unknown	15.00	30.00	0.03	30.00		
79.50	80.00	0.50	Unknown	10.00	85.00	0.19	85.00	01:00:00	
94.50	95.00	0.50	Unknown	8.00	102.00	0.25	102.00	01:00:00	

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	1.00	1.00	TOP SOIL	Topsoil	
1.00	2.50	1.50	CLAY, BROWN	Clay	
2.50	5.00	2.50	SANDSTONE, YELLOW	Sandstone	

5.00	16.50	11.50	SANDSTONE, WHITE	Sandstone	
16.50	17.00	0.50	SANDSTONE,WHITE W.B.	Sandstone	
17.00	79.50	62.50	SANDSTONE GREY	Sandstone	
79.50	80.00	0.50	SANDSTONE, GREY W.B.	Sandstone	
80.00	94.50	14.50	SANDSTONE, GREY	Sandstone	
94.50	95.00	0.50	SANDSTONE GREY W.B.	Sandstone	
95.00	100.00	5.00	SANDSTONE GREY	Sandstone	
100.00	102.00	2.00	SHALE	Shale	

Remarks

10/01/2013: Nat Carling, 10-Jan-2013; Added rock type codes to driller's log & added missing information (based on existing data).

***** End of GW100981 *****

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW
Work Summary

GW107601

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status:
Construct.Method:
Owner Type:

Commenced Date:
Completion Date: 24/10/2002
Final Depth: 35.34 m
Drilled Depth: 35.34 m

Contractor Name: JEFFERY & KATAUSKAS PTY LTD
Driller: Yoon Fook Chin
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	CASTLE HILL	199 752020
Licensed:			

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6266332.000
Easting: 313192.000
Latitude: 33°43'35.8"S
Longitude: 150°59'01.4"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	35.34	70			Unknown
1	1	Casing	P.V.C.	0.00	35.34	50			Seated on Bottom, Glued
1	1	Opening	Slots - Horizontal	0.00	35.34	50		0	PVC, SL: 0.5mm

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	1.20	1.20	TOPSOIL	Topsoil	
1.20	35.34	34.14	SANDSTONE	Sandstone	

***** End of GW107601 *****

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

Appendix F Historic Aerial Photographs



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

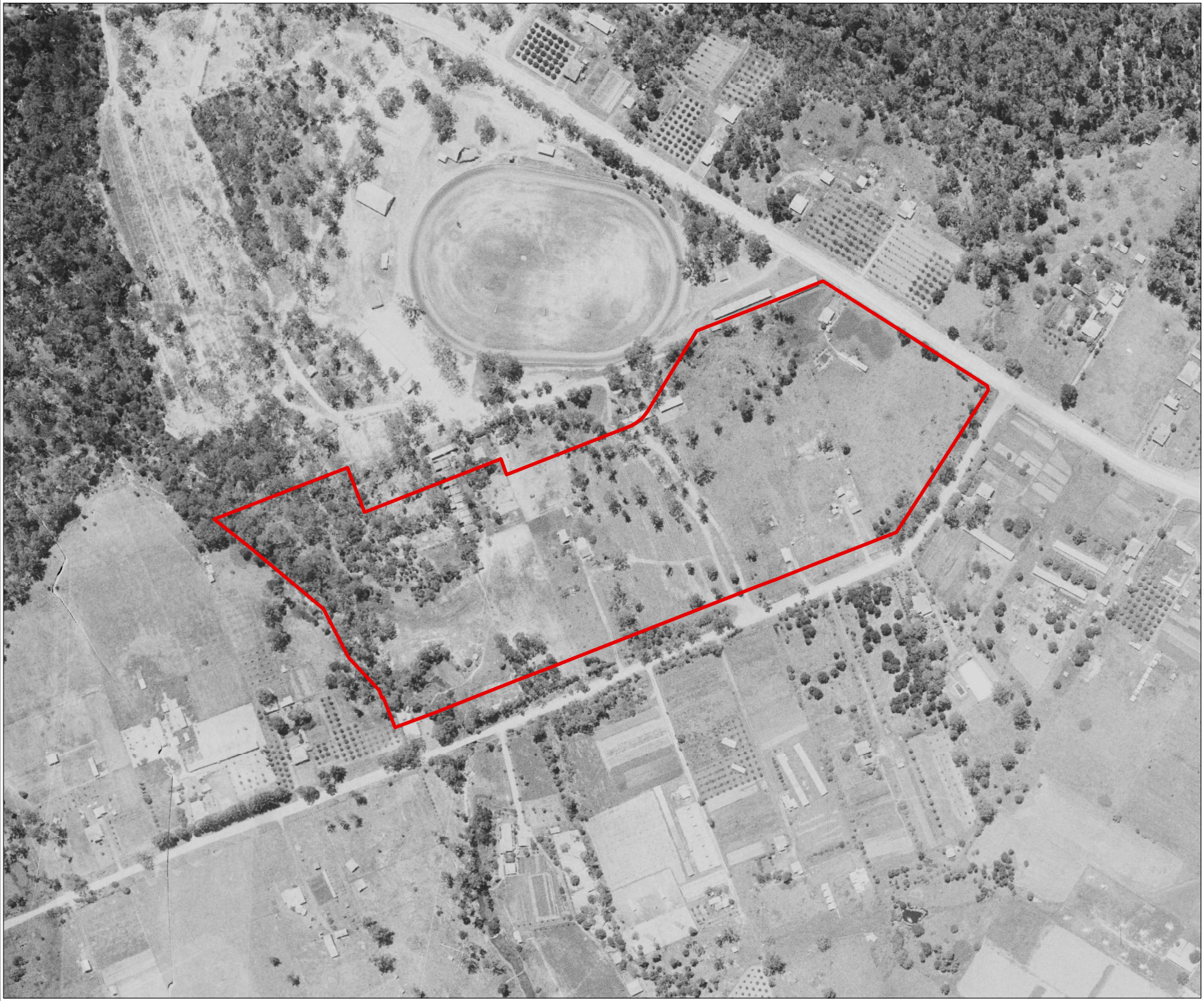
Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 1930

FIGURE: 1930

File Name: 54813
Reference: Spatial Services, NSW



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 1950

FIGURE: 1950

File Name: 54813
Reference: Spatial Services, NSW



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

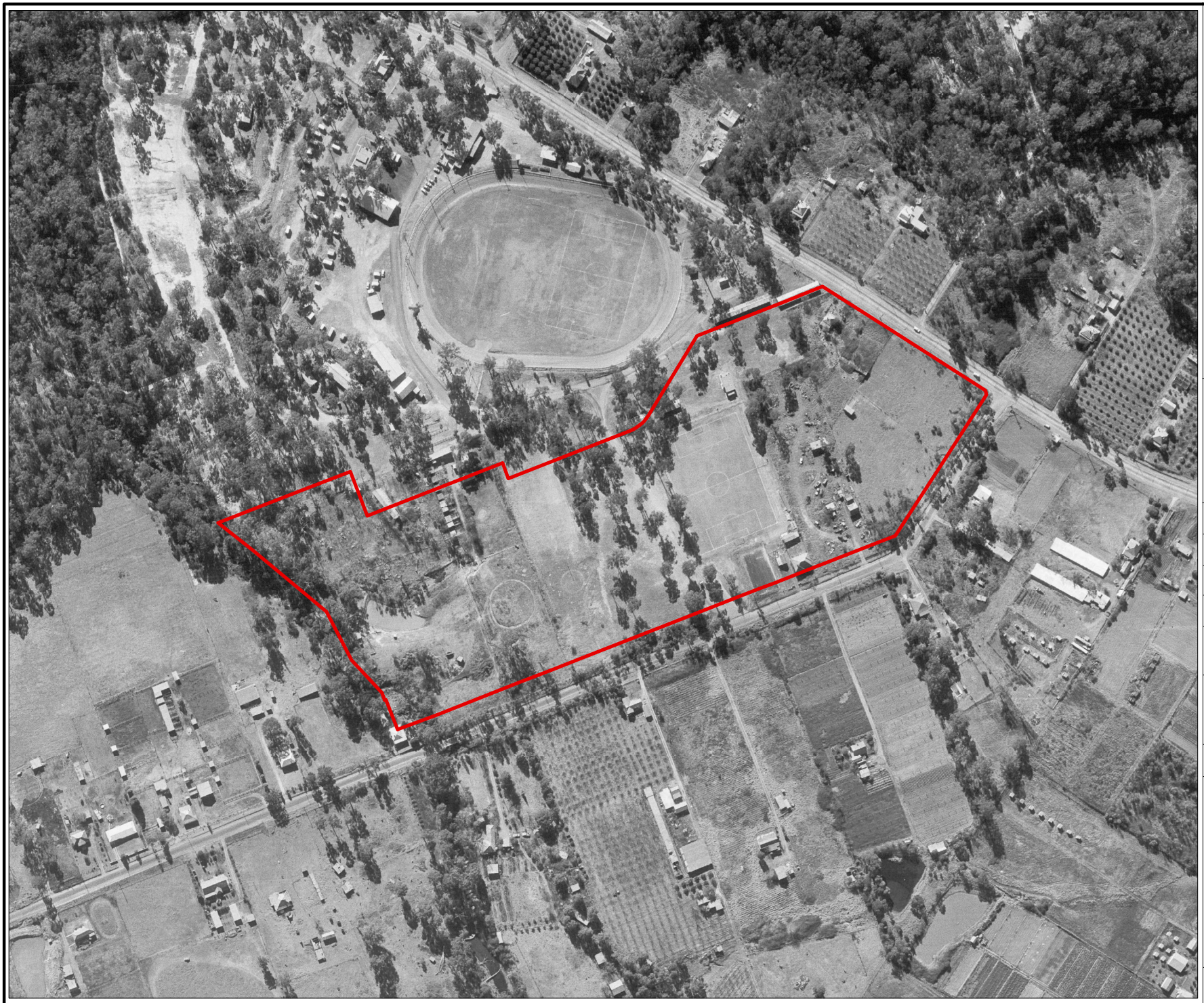
Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 1961

FIGURE: 1961

File Name: 54813
Reference: Spatial Services, NSW



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 1970

FIGURE: 1970

File Name: 54813
Reference: Spatial Services, NSW



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 1986

FIGURE: 1986

File Name: 54813
Reference: Spatial Services, NSW



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 1994

FIGURE: 1994

File Name: 54813
Reference: Spatial Services, NSW



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 2002

FIGURE: 2002

File Name: 54813
Reference: Spatial Services, NSW



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 13/12/2012

FIGURE: 20121213

File Name: 54813
Reference: Google



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 20/10/2009

FIGURE: 20091020

File Name: 54813
Reference: Nearmap



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 24/12/2014

FIGURE: 20141224

File Name: 54813
Reference: Google



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 16/10/2015

FIGURE: 20151016

File Name: 54813
Reference: Google



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 24/03/2016

FIGURE: 20160324

File Name: 54813
Reference: Google



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 05/06/2016

FIGURE: 20160605

File Name: 54813
Reference: Google



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 29/07/2016

FIGURE: 20160729

File Name: 54813
Reference: Google



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 13/11/2016

FIGURE: 20161113

File Name: 54813
Reference: Google



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 27/03/2017

FIGURE: 20170327

File Name: 54813
Reference: Google



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 09/05/2017

FIGURE: 20170509

File Name: 54813
Reference: Google



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 07/12/2017

FIGURE: 20171207

File Name: 54813
Reference: Google



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813	
Client: Mirvac	
Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK
Scale 1:4,000	

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 18/01/2018

FIGURE: 20180118

File Name: 54813
Reference: Nearmap



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 22/06/2018

FIGURE: 20180622

File Name: 54813
Reference: Nearmap



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 19/09/2018

FIGURE: 20180916

File Name: 54813
Reference: Nearmap



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 29/12/2018

FIGURE: 20181229

File Name: 54813
Reference: Nearmap



Legend:

Approximate Site Boundary

JBS&G

Job No: 54813

Client: Mirvac

Version: Aerials	Date: 14-Jun-2019
Drawn By: FH	Checked By: CK

Scale 1:4,000

0 40 80

metres

Coor. Sys. GDA 1994 MGA Zone 56

Sexton Avenue & Carrington Road
Castle Hill, NSW

HISTORICAL AERIAL PHOTOGRAPH- 07/04/2019

FIGURE: 20190407

File Name: 54813
Reference: Nearmap

Appendix G Historic Land Title Records

Table E.1 Summary of Historical Title Search Results

Year	Schedule of Registered Proprietors	Reference to Title at Acquisition and Sale
Yellow Tint (numbered 1, Appendix E)		
02.12.1929 (1929 to 1963)	John Fortune (Poultry Farmer) Violet Fortune (Married Woman)	Vol 4355 Fol 66
25.02.1963 (1963 to 1968)	Violet Fortune (Widow)	Vol 4355 Fol 66
15.03.1968 (1968 to 1970)	Lynda Violet Fortune (Femme Sole) (Section 94 Application not investigated)	Vol 4355 Fol 66
12.02.1970 (1970 to 2013)	Baulkham Hills Shire Council	Vol 4355 Fol 66 Now 1/135696
17.05.2013 (2013 to 2018)	Transport for NSW	1/135696 Now 140/1180973
Yellow Tint (numbered 2, Appendix E)		
26.09.1927 (1927 to 1954)	Alexander Hood (Engineer) Agnes Hood (Married Woman)	Vol 1326 Fol 14
10.09.1954 (1954 to 1956)	Agnes Hood (Widow)	Vol 1326 Fol 14 Now Vol 6890 Fol 149
10.04.1956 (1956 to 1962)	Caesar John Ziliani (Timber Merchant)	Vol 6890 Fol 149 Now Vol 7348 Fol 135
19.04.1962 (1962 to 2013)	Council of the Shire of Baulkham Hills	Vol 7348 Fol 135 Now E/398374
17.05.2013 (2013 to 2018)	Transport for NSW	E/398374 Now 140/1180973
Yellow Tint (numbered 3, Appendix E)		
26.09.1927 (1927 to 1954)	Alexander Hood (Engineer) Agnes Hood (Married Woman)	Vol 1326 Fol 14
10.09.1954 (1954 to 1954)	Agnes Hood (Widow)	Vol 1326 Fol 14
13.08.1954 (1954 to 1956)	John Hood (Fencing Contractor) Elizabeth Hood (Married Woman)	Vol 1326 Fol 14 Now Vol 6890 Fol 188
10.04.1956 (1956 to 1962)	Caesar John Ziliani (Timber Merchant)	Vol 6890 Fol 188 Now Vol 7348 Fol 135
19.04.1962 (1962 to 2013)	Council of the Shire of Baulkham Hills	Vol 7348 Fol 135 Now E/398374
17.05.2013 (2013 to 2018)	Transport for NSW	E/398374 Now 140/1180973
Yellow Tint (numbered 4, Appendix E)		
26.09.1927 (1927 to 1954)	Alexander Hood (Engineer) Agnes Hood (Married Woman)	Vol 1326 Fol 14
10.09.1954 (1954 to 1968)	Agnes Hood (Widow)	Vol 1326 Fol 14 Now Vol 8125 Fol 244
27.02.1968 (1968 to 1971)	Alexander Allen Hood (Section 94 Application not investigated)	Vol 8125 Fol 244
17.12.1971 (1971 to 2013)	Council of the Shire of Baulkham Hills (For providing grounds for Public Recreation)	Vol 8125 Fol 244 Now D/398374
17.05.2013	Transport for NSW	D/398374 Now

Year	Schedule of Registered Proprietors	Reference to Title at Acquisition and Sale
(2013 to 2018)		140/1180973
Yellow Tint (numbered 5, Appendix E)		
26.09.1927 (1927 to 1954)	Alexander Hood (Engineer) Agnes Hood (Married Woman)	Vol 1326 Fol 14
10.09.1954 (1954 to 1954)	Agnes Hood (Widow)	Vol 1326 Fol 14
13.08.1954 (1954 to 1963)	John Hood (Fencing Contractor) Elizabeth Hood (Married Woman)	Vol 1326 Fol 14 Now Vol 7348 Fol 158
21.10.1963 (1963 to 2013)	Council of the Shire of Baulkham Hills	Vol 7348 Fol 158 Now C/398374
17.05.2013 (2013 to 2018)	Transport for NSW	C/398374 Now 140/1180973
Yellow Tint (numbered 6, Appendix E)		
16.11.1901 (1901 to 1949)	Anna (or Hannah) Elizabeth Mary Paul (Married Woman)	Vol 1381 Fol 80
30.06.1949 (1949 to 1962)	Caesar John Ziliani (Timber Merchant)	Vol 1381 Fol 80 Now Vol 7348 Fol 135
19.04.1962 (1962 to 2013)	Council of the Shire of Baulkham Hills	Vol 7348 Fol 135 Now 38/3520
17.05.2013 (2013 to 2018)	Transport for NSW	38/3520 Now 140/1180973
Yellow Tint (numbered 7, Appendix E)		
29.08.1914 (1914 to 1959)	Sarah Jane Taylor (Married Woman, now Widow)	Vol 2507 Fol 130
09.09.1959 (1959 to 1959)	Marion Sarah Pearce (Widow) (Section 94 Application not investigated)	Vol 2507 Fol 130 Now Vol 6491 Fol 37
19.11.1959 (1959 to 2013)	Council of the Shire of Baulkham Hills	Vol 6491 Fol 37 Now B/376559
17.05.2013 (2013 to 2018)	Transport for NSW	B/376559 Now 140/1180973
Yellow Tint (numbered 8, Appendix E)		
29.08.1914 (1914 to 1950)	Sarah Jane Taylor (Married Woman, now Widow)	Vol 2507 Fol 130
29.11.1950 (1950 to 1970)	Herbert Roy Alley (Horse Trainer)	Vol 2507 Fol 130 Now Vol 6491 Fol 37
02.01.1970 (1970 to 2013)	Baulkham Hills Shire Council	Vol 6491 Fol 37 Now A/376559
17.05.2013 (2013 to 2018)	Transport for NSW	A/376559 Now 140/1180973
Yellow Tint (numbered 9, Appendix E)		
24.02.1922 (1922 to 1932)	Charles Frederick Lloyd (Labourer)	Vol 3292 Fol 175
17.08.1932 (1932 to 1947)	George Oswald Lamb (Lime and Cement Merchant) Amelia Maud Miriam Lamb (Married Woman)	Vol 3292 Fol 175
22.12.1947 (1947 to 1950)	David Owen John (Farmer) Mary Jane John (Married Woman)	Vol 3292 Fol 175
10.02.1950 (1950 to 1952)	Myra John (Spinster)	Vol 3292 Fol 175
19.12.1952 (1952 to 1970)	Herbert Roy alley (Horse Trainer)	Vol 3292 Fol 175 Now Vol 11218 Fol 99
02.01.1970 (1970 to 2013)	Baulkham Hills Shire Council	Vol 11218 Fol 99 Now 2/539201
17.05.2013 (2013 to 2018)	Transport for NSW	2/539201 Now 140/1180973
Yellow Tint (numbered 10, Appendix E)		
24.02.1922 (1922 to 1932)	Charles Frederick Lloyd (Labourer)	Vol 3292 Fol 175
17.08.1932 (1932 to 1947)	George Oswald Lamb (Lime and Cement Merchant) Amelia Maud Miriam Lamb (Married Woman)	Vol 3292 Fol 175

Year	Schedule of Registered Proprietors	Reference to Title at Acquisition and Sale
22.12.1947 (1947 to 1950)	David Owen John (Farmer) Mary Jane John (Married Woman)	Vol 3292 Fol 175
10.02.1950 (1950 to 1952)	Myra John (Spinster)	Vol 3292 Fol 175
19.12.1952 (1952 to 1971)	Herbert Roy alley (Horse Trainer)	Vol 3292 Fol 175 Now Vol 11218 Fol 98
12.02.1971 (1971 to 1977)	M.A. Rose Holdings Pty Limited	Vol 11218 Fol 98
14.10.1977 (1977 to 2013)	Baulkham Hills Shire Council	Vol 11218 Fol 98 Now 1/539201
17.05.2013 (2013 to 2018)	Transport for NSW	1/539201 Now 140/1180973
Yellow Tint (numbered 11, Appendix E)		
30.11.1908 (1908 to 1934)	Milford Howard Reid (Orchardist)	Vol 1928 Fol 164
26.03.1934 (1934 to 1937)	Thomas George Williams (Poultry Farmer)	Vol 1928 Fol 164 Now Vol 4623 Fol 213
08.07.1937 (1937 to 1937)	Lindsay George Petherbridge (Printer)	Vol 4623 Fol 213
07.07.1937 (1937 to 1939)	Sarah Hudson Reece (Widow)	Vol 4623 Fol 213
14.09.1939 (1939 to 1950)	Michael Ernest Seymour (Farmer) Gwendoline Arran Seymour (Married Woman)	Vol 4623 Fol 213
16.02.1950 (1950 to 1959)	Ernest Perry (Orchardist) Ida Camelia Perry (Married Woman)	Vol 4623 Fol 213
23.04.1959 (1959 to 1964)	Francis James Dillon (Farmer) Muriel Aveline Dillon (Married Woman)	Vol 4623 Fol 213
20.07.1964 (1964 to 1979)	Harold Stuart Gall (Company Director)	Vol 4623 Fol 213
23.10.1979 (1979 to 1982)	J. & V. Home Improvements Pty Limited	Vol 4623 Fol 213 Now Vol 14029 Fol 19
15.01.1982 (1982 to 1983)	Portville Developments (No. 1) Pty Limited	Vol 14029 Fol 19
07.01.1983	Registration date of Strata Plan 19470	
23.09.1997 (1997 to 2013)	Baulkham Hills Shire Council (purchased from the Owners of Strata Plan 19470)	2/870828
17.05.2013 (2013 to 2018)	Transport for NSW	2/870828 Now 140/1180973

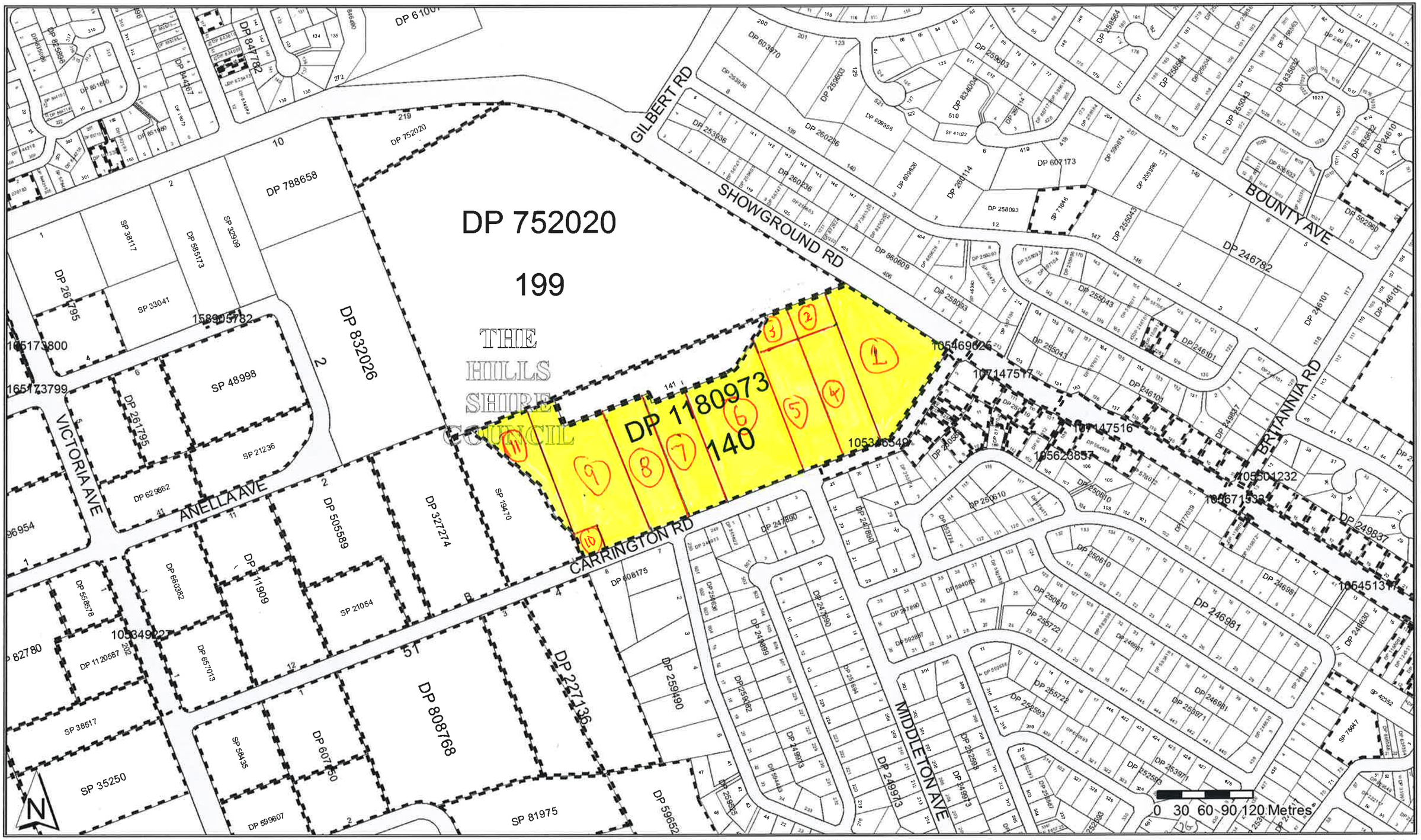
Easements:

- Yellow tint (numbers 4 and 5 **Appendix E**): 02.08.1983 – Easement for Electricity purposes
- Yellow tint (number 6 Appendix E): 23.05.1996 – Easement for Electricity purposes, 1 wide, 2 wide and variable width – now cancelled
- 27.04.2015 (D.P. 1194607) Easement for Underground Cables 1.5 metres wide
- 27.04.2015 (D.P. 1194607) Easement for Padmount Substation 2.75 metres wide

Cadastral Records Enquiry Report : Lot 140 DP 1180973

Ref : castle hill

Locality : CASTLE HILL
Parish : CASTLE HILL
LGA : THE HILLS SHIRE
County : CUMBERLAND



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This information is provided as a searching aid only.Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For ALL ACTIVITY PRIOR TO SEPTEMBER 2002 you must refer to the RGs Charting and Reference Maps

InfoTrack
Your Searching Partner

Req:R627531 /Doc:DP 1180973 P /Rev:19-Sep-2014 /Sts:SC.OK /Pgs:ALL /Prt:09-Jul-2019 12:37 /Seq:1 of 3
Ref:castle hill /Src:M

SURVEYING AND SPATIAL INFORMATION REGULATION 2006 : CLAUSE 61(2) & 35(1)(b)						
MARK	MGA EASTING	MGA NORTHING	CLASS	ORDER	METHOD	ORIGIN
SSM 65438	313 025.612	6 266 691.139	B	2	SCIMS	SCIMS
SSM 32954	313 659.419	6 266 448.474	B	2	SCIMS	SCIMS
SSM 45465	313 796.102	6 266 356.206	C	4	SCIMS	SCIMS
SSM 62673	313 716.011	6 266 241.388	C	4	SCIMS	SCIMS
SSM 62674	313 209.215	6 266 042.345	C	4	SCIMS	SCIMS
SSM 50086	312 929.350	6 266 415.680	D	4	SCIMS	SCIMS
SSM 180257	313 436.733	6 266 144.555	C	4	SCIMS	SCIMS

COMBINED SCALE FACTOR = 1.000015 ZONE 56

SOURCE: M.G.A. CO-ORDINATES AND SCALE FACTOR ADOPTED FROM SCIMS ON THE 17th AUGUST 2012

AZIMUTH 'X' - 'Y'

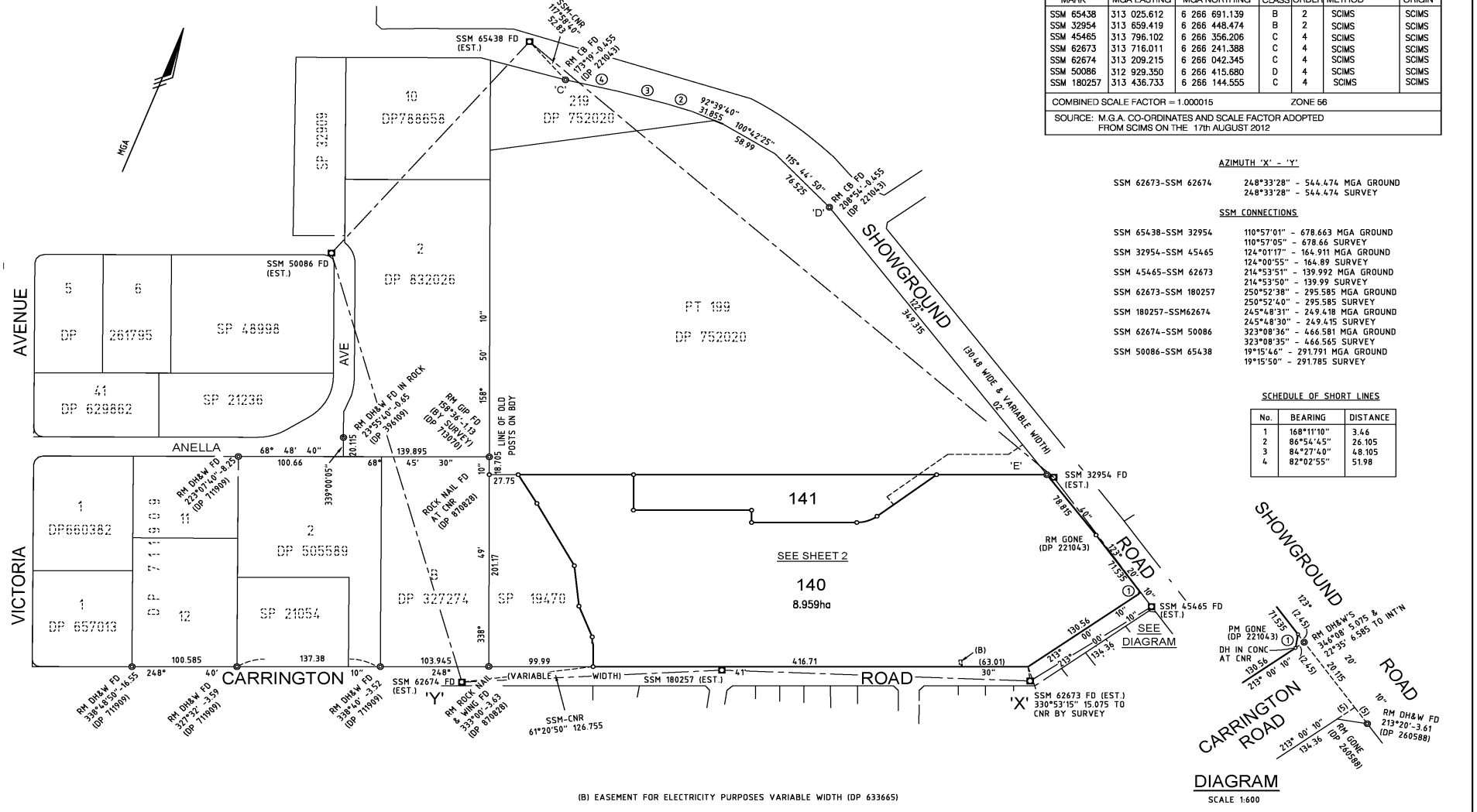
SSM 62673-SSM 62674 248°33'28" - 544.474 MGA GROUND
248°33'28" - 544.474 SURVEY

SSM CONNECTIONS

SSM 65438-SSM 32954 110°57'01" - 678.663 MGA GROUND
110°57'05" - 678.66 SURVEY
SSM 32954-SSM 45465 124°01'17" - 164.911 MGA GROUND
124°00'55" - 164.89 SURVEY
SSM 45465-SSM 62673 214°53'51" - 139.992 MGA GROUND
214°53'50" - 139.99 SURVEY
SSM 62673-SSM 180257 250°52'38" - 295.585 MGA GROUND
250°52'40" - 295.585 SURVEY
SSM 180257-SSM62674 245°48'31" - 249.418 MGA GROUND
245°48'30" - 249.415 SURVEY
SSM 62674-SSM 50086 323°08'36" - 466.581 MGA GROUND
323°08'35" - 466.565 SURVEY
SSM 50086-SSM 65438 19°15'46" - 291.791 MGA GROUND
19°15'50" - 291.785 SURVEY

SCHEDULE OF SHORT LINES

No.	BEARING	DISTANCE
1	168°11'10"	3.46
2	86°54'45"	26.105
3	84°27'40"	48.105
4	82°02'55"	51.98



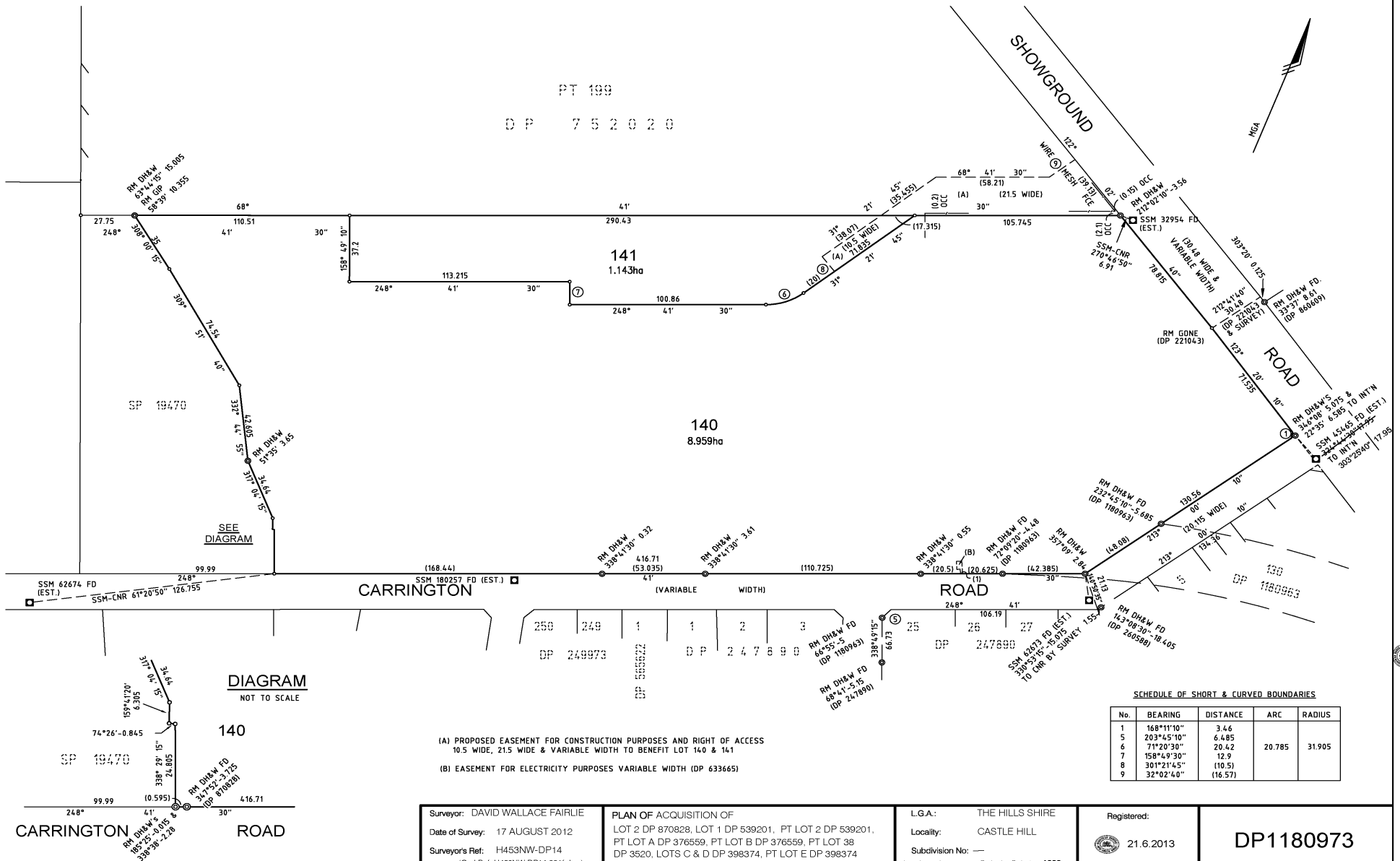
(B) EASEMENT FOR ELECTRICITY PURPOSES VARIABLE WIDTH (DP 633665)

DIAGRAM
SCALE 1:600

IT IS INTENDED TO ACQUIRE LOT 140

Surveyor: DAVID WALLACE FAIRLIE Date of Survey: 17 AUGUST 2012 Surveyor's Ref: H453NW-DP14 (Cad Ref: H453NW-DP14-001f.dwg)	PLAN OF ACQUISITION OF LOT 2 DP 870828, LOT 1 DP 539201, PT LOT 2 DP 539201, PT LOT A DP 376559, PT LOT B DP 376559, PT LOT 38 DP 3520, LOTS C & D DP 398374, PT LOT E DP 398374 AND LOT 1 DP 135696	L.G.A.: THE HILLS SHIRE Locality: CASTLE HILL Subdivision No: — Lengths are in metres. Reduction Ratio 1: 2500	Registered: 21.6.2013	DP1180973 E

10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 Table of mm



SCHEDULE OF SHORT & CURVED BOUNDARIES

No.	BEARING	DISTANCE	ARC	RADIUS
1	168°11'10"	3.46		
5	203°45'10"	6.485		
6	71°20'30"	20.42	20.785	31.905
7	158°49'30"	12.9		
8	301°21'45"	(10.5)		
9	32°02'40"	(16.57)		

Surveyor: DAVID WALLACE FAIRLIE	PLAN OF ACQUISITION OF LOT 2 DP 870828, LOT 1 DP 539201, PT LOT 2 DP 539201, PT LOT A DP 376559, PT LOT B DP 376559, PT LOT 38 DP 3520, LOTS C & D DP 398374, PT LOT E DP 398374 AND LOT 1 DP 135696	L.G.A.: THE HILLS SHIRE Locality: CASTLE HILL Subdivision No: — Lengths are in metres. Reduction Ratio 1: 1000	Registered: 21.6.2013	DP1180973
Date of Survey: 17 AUGUST 2012				
Surveyor's Ref: H453NW-DP14 (Cad Ref: H453NW-DP14-001f.dwg)				

10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 Table of mm

Req:R627531 /Doc:DP 1180973 P /Rev:19-Sep-2014 /Sts:SC.OK /Pgs:ALL /Prt:09-Jul-2019 12:37 /Seq:2 of 3
Ref:castle hill /Src:M

DETAILS OF SSM45465 AMENDED VIDE 2014-1246 16.9.2014

PLAN FORM 6 **WARNING: Creasing or folding will lead to rejection** ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of 1 sheet(s)

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

IT IS INTENDED TO ACQUIRE LOT 140 FOR RAILWAY PURPOSES

R. J

Rodd Staples

If space is insufficient use PLAN FORM 6A annexure sheet

Crown Lands NSW/Western Lands Office Approval

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

Signature: .....

Date: .....

File Number: .....

Office: .....

Subdivision Certificate

I certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to:

the proposed ..... set out herein
(insert 'subdivision' or 'new road')

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

Consent Authority: .....
Date of Endorsement: .....
Accreditation no: .....
Subdivision Certificate no: .....
File no: .....

* Strike through inapplicable parts.

Office Use Only

DP1180973

Office Use Only

Registered: 21.6.2013

Title System: TORRENS

Purpose: ACQUISITION

PLAN OF ACQUISITION OF LOT 2 DP 870828, LOT 1 DP 539201, PT LOT 2 DP 539201, PT LOT A DP 376559, PT LOT B DP 376559, PT LOT 38 DP 3520, LOTS C & D DP 398374, PT LOT E DP 398374 AND LOT 1 DP 135696

LGA: THE HILLS SHIRE

Locality: CASTLE HILL

Parish: CASTLE HILL

County: CUMBERLAND

Survey Certificate

I, DAVID WALLACE FAIRLIE.....

Of WHELANS INSITES, DX 288 SYDNEY.....

a surveyor registered under the Surveying and Spatial Information Act 2002, certify that the survey represented in this plan is accurate, has been made in accordance with the Surveying and Spatial Information Regulation 2006 and was completed on 17.08.2012.....

The survey relates to LOT 140 & 141 AND THE LINES.....

.....~~A-B~~C-D-E.....

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

Signature DFairlie.....Dated: 17.08.2012
Surveyor registered under the Surveying and Spatial Information Act 2002

Datum Line: ..."X"-"Y".....

Type: Urban/~~Rural~~

Plans used in the preparation of survey/~~compilation~~

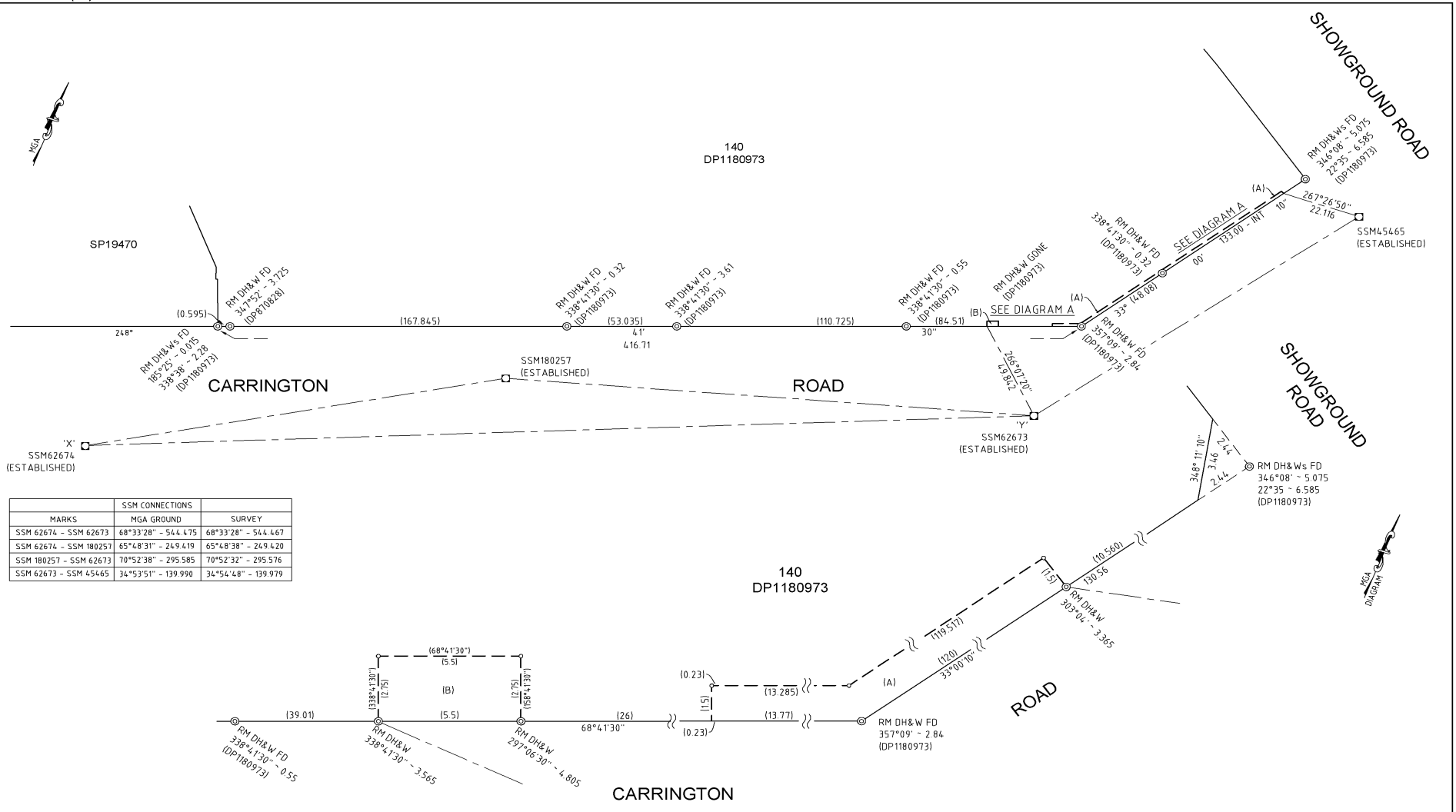
DP 3520, DP 135696, DP 376559, DP 398374, DP 539201, DP 633665, DP752020, DP 870828

If space is insufficient use PLAN FORM 6A annexure sheet

Surveyor's Reference: H453NW-DP14

InfoTrack

Req:R627532 /Doc:DP 1194607 P /Rev:27-Apr-2015 /Sts:SC.OK /Pgs:ALL /Prt:09-Jul-2019 12:37 /Seq:1 of 3
Ref:castle hill /Src:M



	SSM CONNECTIONS	
MARKS	MGA GROUND	SURVEY
SSM 62674 - SSM 62673	68°33'28" - 544.475	68°33'28" - 544.467
SSM 62674 - SSM 180257	65°48'31" - 249.419	65°48'38" - 249.420
SSM 180257 - SSM 62673	70°52'38" - 295.585	70°52'32" - 295.576
SSM 62673 - SSM 45465	34°53'51" - 139.990	34°54'48" - 139.979

DIAGRAM A - EASEMENT

SCALE 1:100

(A) - EASEMENT FOR UNDERGROUND CABLES 1.5m WIDE
(B) - EASEMENT FOR PADMOUNT SUBSTATION 2.75m WIDE

CLAUSE 35 (1) (b) AND CLAUSE 61 (2) OF SURVEYING REGULATION 2006

MARK	MGA EASTING	MGA NORTHING	CLASS	ORDER	HEIGHT	CLASS	METHOD	ORIGIN
SSM 45465	313 796.102	6 266356.206	C	4	-	-	CADASTRAL TRAVERSE	SCIMS
SSM 62673	313 716.011	6 266241.388	C	4	-	-	CADASTRAL TRAVERSE	SCIMS
SSM 62674	313 209.215	6 266042.345	C	4	-	-	CADASTRAL TRAVERSE	SCIMS
SSM 180257	313 436.733	6 266144.555	C	4	-	-	CADASTRAL TRAVERSE	SCIMS

COMBINED SCALE FACTOR 1.000012 ZONE 56

M.G.A CO-ORDINATES ADOPTED FROM S.C.I.M.S AS AT 12 MARCH 2014

0 10 20 30 40 50 Table of mm 90 100 110 120 130 140

Surveyor: SCOTT RAYMOND ALLISON
Date of Survey: 07/11/2013
Surveyor's Ref: 110391DP01

PLAN OF EASEMENTS OVER LOT 140 IN DP1180973

LGA: THE HILLS
Locality: CASTLE HILL
Subdivision No: N/A
Lengths are in metres. Reduction Ratio 1:1000

Registered 27.4.2015

DP1194607

SURVEYORS REFERENCE 110391DP01

ISSUED: 16 Apr, 2015

PLAN FORM 6 (2013) **WARNING: Creasing or folding will lead to rejection** ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of 2 sheet(s)

Office Use Only

Registered: 27.4.2015

Title System: TORRENS

Purpose: EASEMENT

Office Use Only

DP1194607

PLAN OF EASEMENTS OVER LOT 140 in DP1180973

LGA: THE HILLS

Locality: CASTLE HILL

Parish: CASTLE HILL

County: CUMBERLAND

Crown Lands NSW/Western Lands Office Approval

I, ... (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given.

Signature: .....

Date: .....

File Number: .....

Office: .....

Subdivision Certificate

I, ...

*Authorised Person/*General Manager/*Accredited Certifier, certify that the provisions of s.109J of the *Environmental Planning and Assessment Act 1979* have been satisfied in relation to the proposed subdivision, new road or reserve set out herein.

Signature: .....

Accreditation number: .....

Consent Authority: .....

Date of endorsement: .....

Subdivision Certificate number: .....

File number: .....

*Strike through if inapplicable.

Survey Certificate

I, SCOTT RAYMOND ALLISON

of CRUX SURVEYING PTY LTD, PO BOX 391 MIRANDA 1490

a surveyor registered under the *Surveying and Spatial Information Act 2002*, certify that:

*(a).....

The land shown in the plan was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on 07/11/2013

~~*(b)..... The part of the land shown in the plan (*being/*excluding ^ .....) was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on..... the part not surveyed was compiled in accordance with that Regulation.~~

~~*(c) The land shown in this plan was compiled in accordance with the *Surveying and Spatial Information Regulation 2012.*~~

Signature: ..... Dated: 10/01/2014

Surveyor ID: 8501

Datum Line: X - Y

Type: *Urban/*~~Rural~~

The terrain is *Level-Undulating / *~~Steep-Mountainous~~.

Statements of intention to dedicate public roads create public reserves and drainage reserves, acquire/resume land.

Plans used in the preparation of survey/compilation.

DP398374, DP633665, DP870828, DP1180973, UNREGISTERED DP BY JOHN NELSON PETERSON H453NW-DP13 DATED 17/07/2012

If space is insufficient continue on PLAN FORM 6A

Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A

Surveyor's Reference: 110391DP01

PLAN FORM 6A (2012) WARNING: Creasing or folding will lead to rejection ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 2 of 12 sheet(s)

Office Use Only

Registered: 27.4.2015

Office Use Only

DP1194607

~~PLAN OF EASEMENTS OVER LOT 1 IN DP135090 AND LOT D IN DP396374~~

PLAN OF EASEMENTS OVER LOT 140 in DP1180973

Subdivision Certificate number: .....

Date of Endorsement: .....

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2012*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919, AS AMENDED IT IS INTENDED TO CREATE:

1. EASEMENT FOR UNDERGROUND CABLES 1.5m WIDE (a)
2. EASEMET FOR PADMOUNT SUBSTATION 2.75m WIDE (b)

EXECUTED for and on behalf of)
TRANSPORT FOR NSW by)
Rodd Stapler)
its Authorised Officer in the presence of:)

..... Authorised Officer

.....
Witness

Erin Turner 25/02/2014
Name of Witness (please print)

Level 7, 8 – 12 Castlereagh Street
Sydney, NSW, 2000
.....
Address of Witness

If space is insufficient use additional annexure sheet

Surveyor's Reference: 110391DP01

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
8/7/2019 12:10PM

FOLIO: 40/3520

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 4355 FOL 66

Recorded	Number	Type of Instrument	C.T. Issue
18/2/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
9/7/1993		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
9/9/1993	I567684	LEASE	EDITION 1
19/11/1997	DP135696	DEPOSITED PLAN	
16/11/1999	6242425	LEASE	EDITION 2
16/11/1999	6346867	DEPARTMENTAL DEALING	FOLIO CANCELLED

*** END OF SEARCH ***

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Received: 08/07/2019 12:10:24

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
8/7/2019 12:10PM

FOLIO: 1/135696

First Title(s): OLD SYSTEM
Prior Title(s): 40/3520

Recorded	Number	Type of Instrument	C.T. Issue
19/11/1997	DP135696	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
16/11/1999	6346998	DEPARTMENTAL DEALING	FOLIO CREATED EDITION 1
14/7/2000	6655120	REJECTED - SUB-LEASE	
14/7/2000	6655121	REJECTED - SUB-LEASE	
23/10/2000	6929889	REJECTED - SUB-LEASE	
23/10/2000	6916907	LEASE	EDITION 2
30/11/2000	7257132	TRANSFER OF LEASE	EDITION 3
6/9/2002	8933635	LEASE	EDITION 4
23/5/2013	AH749120	DEPARTMENTAL DEALING	
21/6/2013	DP1180973	DEPOSITED PLAN	
4/7/2014	AI413454	REJECTED - REQUEST	
16/3/2015	AJ299262	CHANGE OF NAME	
16/3/2015	AJ242518	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	
16/3/2015	AI917399	REQUEST	FOLIO CANCELLED

*** END OF SEARCH ***

castle hill PRINTED ON 8/7/2019

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Received: 08/07/2019 12:10:24

Form: 11R
Release: 4·1

REQUEST

New South Wales
Real Property Act 1900

AI917399Y

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

(A) **STAMP DUTY** — If applicable. Office of State Revenue use only

(B) **TORRENS TITLE** — See Annexure marked 'A' hereto

(C) **REGISTERED DEALING** — Number | Torrens Title

(D) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODE
883G	Wm Walker Taylor Edwards & Smith 123638J GPO Box 5196 Sydney NSW 2001 Reference: NWRL 200-R11	R

(E) **APPLICANT** — Transport for NSW

(F) **NATURE OF REQUEST** — The applt's interest created by the resumption in Govt Gazette 17/05/2013 be noted pursuant to S31A(3)Real Property Act 1900

(G) **TEXT OF REQUEST**

The applicant in consequence of the resumption notified in Government Gazette dated 17 May 2013 folios 2203 and 2204 a copy of which is attached as Annexure B requests the Registrar General to make a recording in the Register in the second schedule of each title pursuant to S31A(3)Real Property Act 1900 and issue a title for each of the lots resumed and shown in column 2 of Annexure "A".

DATE 5.9.2014

(H)

RELODGED
24 DEC 2014
TIME: 3·45

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

Signature:

Signatory's name: MARGARET COLLEEN HOLE
Signatory's capacity: solicitor

(I) *This section is to be completed where a notice of sale is required and the relevant data has been forwarded through eNOS.*

The applicant certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. [ ] Full name: _____ Signature: _____

* *s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.*

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

1303

SCT SIGNED
CANC. & RET.
R 16 MAR 2015

Annexure 'A' to Request dated

	Torrens Title	Acquisition Description	Government Gazette Notice
1	1/539201	140/DP1180973	No 60 of 17 May 2013 Folio 2204
2	2/870828	140/DP1180973	No 60 of 17 May 2013 Folio 2204
3	D/398374	140/DP1180973	No 60 of 17 May 2013 Folio 2204
4	1/135696	140/DP1180973	No 60 of 17 May 2013 Folio 2204
5	Part AC Vol 7348 Fol 135 (38/3520 and E/398374)	140/DP1180973	No 60 of 17 May 2013 Folio 2204
6	2/539201	140/DP1180973	No 60 of 17 May 2013 Folio 2204
7	Part A/376559	140/DP1180973	No 60 of 17 May 2013 Folio 2204
8	Part B/376559	140/DP1180973	No 60 of 17 May 2013 Folio 2204
9	C/398374	140/DP1180973	No 60 of 17 May 2013 Folio 2204

MARGARET COLLEEN HOLE 24.12.2014

Req:R620219 /Doc:DL AI917399 /Rev:19-Mar-2015 /Sts:NO.OK /Pgs:ALL /Prt:08-Jul-2019 12:12 /Seq:3 of 6
Ref:castle hill /Src:M

NATIONAL PARKS AND WILDLIFE ACT 1974

Land Acquisition (Just Terms Compensation) Act 1991

Notice of Compulsory Acquisition

THE Minister for the Environment, with the approval of Her Excellency the Governor, declares that the land described in the Schedule below is acquired by compulsory process under the provisions of the Land Acquisition (Just Terms Compensation) Act 1991, for the purposes of the National Parks and Wildlife Act 1974.

The land is, on publication of this notice, vested in the Minister administering the National Parks and Wildlife Act 1974.

ROBYN PARKER, M.P.,
Minister for the Environment

SCHEDULE

Land District – Penrith; L.G.A. – Blue Mountains

County Cook, Parish Strathdon, 4308 square metres, being Lot 1 in DP 1179588.

File No.: OEH/09/5136.

POISONS AND THERAPEUTIC GOODS ACT 1966

Order under Clause 175(1)
Poisons and Therapeutic Goods Regulation 2008

Restoration of Drug Authority

IN accordance with the provisions of Clause 175 (1) of the Poisons and Therapeutic Goods Regulation 2008, a direction has been issued that the Order that took effect on and from 12 January 2012, for the withdrawal of authority of Dammen Alan AKHURST, NMW0001372923, of 16 Panonia Road, Wyong NSW 2259, to be in possession of or supply drugs of addiction as authorised by Clauses 101 and 103 of the Regulation shall cease to operate from 17 May 2013.

MARY FOLEY,
Director-General

Ministry of Health, New South Wales,
8 May 2013.

PUBLIC HEALTH ACT 2010

Section 97

Order establishing Public Health or Disease Registers

I, KERRY CHANT, Chief Health Officer and delegate of the Minister for Health, in accordance with section 97 of the Public Health Act 2010, do hereby order that the following classes of public health or disease registers may be established and maintained by the Director-General of the Ministry of Health under section 98 of the Public Health Act 2010:

(a) public health or disease registers to facilitate the care, treatment and the follow up of persons who have diseases or have been exposed to diseases,

(b) public health or disease registers to facilitate the identification of sources of infection and the control of outbreaks of diseases,

(c) public health or disease registers to facilitate the identification and monitoring of risk factors for diseases or conditions that have a substantial adverse impact on the population,

(d) public health or disease registers to facilitate the measurement and monitoring of outcomes of specified population health interventions,

(e) public health or disease registers to facilitate the identification and monitoring of exposure to chemicals or other environmental factors that impact, or may impact, adversely on the health of individuals.

Signed this 10th day of May 2013.

KERRY CHANT,
Chief Health Officer,
Delegate of the Minister of Health

THREATENED SPECIES CONSERVATION ACT 1995

Notice of Preliminary Determination

THE Scientific Committee has made a Preliminary Determination proposing that the following be listed in the relevant Schedule of the Threatened Species Conservation Act 1995.

Endangered Ecological Community (Part 3 of Schedule 1) Mount Kaputar high elevation and vine thicket land snail and slug community in the Nandewar and Brigalow Belt South Bioregions.

Any person may make a written submission regarding this Preliminary Determination. Send submissions to Suzanne Chate, NSW Scientific Committee Unit, PO Box 1967, Hurstville BC 1481. Submissions close 12th July 2013.

A copy of the Determination, which contains the reasons for the determination, may be obtained free of charge on the Internet www.environment.nsw.gov.au, by contacting the Scientific Committee Unit, PO Box 1967, Hurstville BC 1481. Tel.: (02) 9585 6940 or Fax (02) 9585 6606, or in person at the Office of Environment and Heritage Information Centre, Level 14, 59-61 Goulburn Street, Sydney. Copies of the determination may also be obtained from National Parks and Wildlife Service Area Offices and Visitor Centres, subject to availability.

Associate Professor MICHELLE LEISHMAN,
Chairperson,
Scientific Committee

TRANSPORT ADMINISTRATION ACT 1988

LAND ACQUISITION (JUST TERMS COMPENSATION) ACT 1991

Notice of Compulsory Acquisition of Land in the Local Government Area of The Hills Shire

TRANSPORT for NSW declares, with the approval of His Excellency the Lieutenant-Governor that the land described in Schedule 1 below, excepting the interests in land described in Schedule 2 below, is acquired by compulsory process under the provisions of the Land Acquisition (Just Terms Compensation) Act 1991, as authorised by and for the purposes of the Transport Administration Act 1988.

Dated at Sydney, this 3rd day of April 2013.

RODD STAPLES,
Project Director,
North West Rail Link,
Transport for NSW

PAGE 4 of 6
3

Req:R620219 /Doc:DL AI917399 /Rev:19-Mar-2015 /Sts:NO.OK /Pgs:ALL /Prt:08-Jul-2019 12:12 /Seq:4 of 6
Ref:castle hill /Src:M

SCHEDULE 1

ALL those pieces of land situated in the Local Government Area of the Hills Shire, Parish of Castle Hill, County of Cumberland comprising:

Lot 1, DP 539201, Folio Identifier 1/539201. Property Caretakers Cottage, 5 Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council.

Lot 2, DP 870828, Folio Identifier 2/870828. Property Council-Works Depot, 3 Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council.

Lot D, DP 398374, Folio Identifier D/398374. Property Hills Centre, 1 Carrington Road, Castle Hill NSW, 2154, said to be in the ownership of Baulkham Hills Shire Council.

Lot 1, DP 135696, Folio Identifier 1/135696. Property 129 Showground Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council.

Part Lot E, DP 398374, Folio Identifier E/398374. Property Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council as affected by the plan of acquisition Lot 140 in DP 1180973.

Part Lot 2, DP 539201, Folio Identifier 2/539201. Property 3 Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council as affected by the plan of acquisition Lot 140 in DP 1180973.

Part Lot A, DP 376559, Folio Identifier A/376559. Property 3 Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council as affected by the plan of acquisition Lot 140 in DP 1180973.

Part Lot B, DP 376559, Folio Identifier B/376559. Property Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council as affected by the plan of acquisition Lot 140 in DP 1180973.

Part Lot 38, DP 3520, Folio Identifier 38/3520. Property Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council as affected by the plan of acquisition Lot 140 in DP 1180973.

Lot C, DP 398374, Folio Identifier C/398374. Property Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council.

SCHEDULE 2

In so far as it burdens Lots C and D, DP 398374, Folio Identifiers C/398374 and D/398374:

DP 633665, easement for electricity purposes.

Req:R620219 /Doc:DL AI917399 /Rev:19-Mar-2015 /Sts:NO.OK /Pgs:ALL /Prt:08-Jul-2019 12:12 /Seq:5 of 6
Ref:castle hill /Src:M

Wm. WALKER TAYLOR EDWARDS & SMITH
SOLICITORS
Est. 1852

PRINCIPAL

MARGARET C. HOLE, AM

ALL CORRESPONDENCE TO
GPO Box 5196
Sydney NSW 2001
TELEPHONE: 9262 5166
FACSIMILE: 9262 2916
E-mail: wtes@bigpond.com
ABN 68 204 434 847
Level 7, 9 Barrack Street
Sydney

Your ref:
Our ref: MH:ad:214034

3 February 2015

The Director
Land and Property Information Division BY HAND
GPO Box 15
Sydney NSW 2001

Dear Madam/Sir

Re: Application for Replacement Certificate of Title

We refer to the above and note that this application is made as a result of a requisition on Request AI917399. Following registration of that Request a consolidated Certificate of Title will issue for all of the land remaining in the two titles to which this application refers on DP 1180973.

Yours faithfully

Margaret Hole

Wm. Walker Taylor Edwards & Smith

Liability limited by the Solicitors Scheme, approved under the Professional Standards Act 1994 (NSW)

Req:R620219 /Doc:DL AI917399 /Rev:19-Mar-2015 /Sts:NO.OK /Pgs:ALL /Prt:08-Jul-2019 12:12 /Seq:6 of 6
Ref:castle hill /Src:M

THE HILLS SHIRE COUNCIL
3 Columbia Court, Baulkham Hills NSW 2153
PO Box 7064, Baulkham Hills BC NSW 2153

Telephone +61 2 9843 0555
Facsimilie +61 2 9843 0409
Email council@thehills.nsw.gov.au
www.thehills.nsw.gov.au
DX 9966 Norwest
ABN No. 25 034 494 656

13 February 2015

Land & Property Information
DX 17
Sydney

To Whom it may concern

Re: Lots 140 & 141 DP 1180973, 129 Showground Road, Castle Hill – Your Ref AI917399:3

Reference is made to your requisition of 7.2.2015.

No objections are raised to the consolidation of the certificates of title comprising the former Council Administration Centre at 129 Showground Road, Castle Hill as per notification of the compulsory acquisitions in the NSW Government Gazette of Friday 17 May 2013.

Council has received compensation for the land and please issue the relevant certificate of titles being Lot 140 DP 1180973 to Transport for NSW and Lot 141 DP 1180973 to The Hills Shire Council.

Should you have any enquires you are welcome to contact me on 9843 0395.

Yours faithfully

Rodney MacFarlane
PROPERTY MANAGER

Form: 11R
Release: 4·1

REQUEST

New South Wales
Real Property Act 1900

AI917399Y

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

(A) **STAMP DUTY** — If applicable. Office of State Revenue use only

(B) **TORRENS TITLE** — See Annexure marked 'A' hereto

(C) **REGISTERED DEALING** — Number | Torrens Title

(D) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODE
883G	Wm Walker Taylor Edwards & Smith 123638J GPO Box 5196 Sydney NSW 2001 Reference: NWRL 200-R11	R

(E) **APPLICANT** — Transport for NSW

(F) **NATURE OF REQUEST** — The applt's interest created by the resumption in Govt Gazette 17/05/2013 be noted pursuant to S31A(3)Real Property Act 1900

(G) **TEXT OF REQUEST**

The applicant in consequence of the resumption notified in Government Gazette dated 17 May 2013 folios 2203 and 2204 a copy of which is attached as Annexure B requests the Registrar General to make a recording in the Register in the second schedule of each title pursuant to S31A(3)Real Property Act 1900 and issue a title for each of the lots resumed and shown in column 2 of Annexure "A".

DATE 5.9.2014

(H)

RELODGED
24 DEC 2014
TIME: 3·45

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

Signature:

Signatory's name: MARGARET COLLEEN HOLE
Signatory's capacity: solicitor

(I) *This section is to be completed where a notice of sale is required and the relevant data has been forwarded through eNOS.*

The applicant certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. [ ] Full name: _____ Signature: _____

* *s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.*

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

1303

SCT SIGNED
CANC. & RET.
R 16 MAR 2015

Annexure 'A' to Request dated

	Torrens Title	Acquisition Description	Government Gazette Notice
1	1/539201	140/DP1180973	No 60 of 17 May 2013 Folio 2204
2	2/870828	140/DP1180973	No 60 of 17 May 2013 Folio 2204
3	D/398374	140/DP1180973	No 60 of 17 May 2013 Folio 2204
4	1/135696	140/DP1180973	No 60 of 17 May 2013 Folio 2204
5	Part AC Vol 7348 Fol 135 (38/3520 and E/398374)	140/DP1180973	No 60 of 17 May 2013 Folio 2204
6	2/539201	140/DP1180973	No 60 of 17 May 2013 Folio 2204
7	Part A/376559	140/DP1180973	No 60 of 17 May 2013 Folio 2204
8	Part B/376559	140/DP1180973	No 60 of 17 May 2013 Folio 2204
9	C/398374	140/DP1180973	No 60 of 17 May 2013 Folio 2204

MARGARET COLLEEN HOLE 24.12.2014

Req:R620219 /Doc:DL AI917399 /Rev:19-Mar-2015 /Sts:NO.OK /Pgs:ALL /Prt:08-Jul-2019 12:12 /Seq:3 of 6
Ref:castle hill /Src:M

NATIONAL PARKS AND WILDLIFE ACT 1974

Land Acquisition (Just Terms Compensation) Act 1991

Notice of Compulsory Acquisition

THE Minister for the Environment, with the approval of Her Excellency the Governor, declares that the land described in the Schedule below is acquired by compulsory process under the provisions of the Land Acquisition (Just Terms Compensation) Act 1991, for the purposes of the National Parks and Wildlife Act 1974.

The land is, on publication of this notice, vested in the Minister administering the National Parks and Wildlife Act 1974.

ROBYN PARKER, M.P.,
Minister for the Environment

SCHEDULE

Land District – Penrith; L.G.A. – Blue Mountains

County Cook, Parish Strathdon, 4308 square metres, being Lot 1 in DP 1179588.

File No.: OEH/09/5136.

POISONS AND THERAPEUTIC GOODS ACT 1966

Order under Clause 175(1)
Poisons and Therapeutic Goods Regulation 2008

Restoration of Drug Authority

IN accordance with the provisions of Clause 175 (1) of the Poisons and Therapeutic Goods Regulation 2008, a direction has been issued that the Order that took effect on and from 12 January 2012, for the withdrawal of authority of Dammen Alan AKHURST, NMW0001372923, of 16 Panonia Road, Wyong NSW 2259, to be in possession of or supply drugs of addiction as authorised by Clauses 101 and 103 of the Regulation shall cease to operate from 17 May 2013.

MARY FOLEY,
Director-General

Ministry of Health, New South Wales,
8 May 2013.

PUBLIC HEALTH ACT 2010

Section 97

Order establishing Public Health or Disease Registers

I, KERRY CHANT, Chief Health Officer and delegate of the Minister for Health, in accordance with section 97 of the Public Health Act 2010, do hereby order that the following classes of public health or disease registers may be established and maintained by the Director-General of the Ministry of Health under section 98 of the Public Health Act 2010:

(a) public health or disease registers to facilitate the care, treatment and the follow up of persons who have diseases or have been exposed to diseases,

(b) public health or disease registers to facilitate the identification of sources of infection and the control of outbreaks of diseases,

(c) public health or disease registers to facilitate the identification and monitoring of risk factors for diseases or conditions that have a substantial adverse impact on the population,

(d) public health or disease registers to facilitate the measurement and monitoring of outcomes of specified population health interventions,

(e) public health or disease registers to facilitate the identification and monitoring of exposure to chemicals or other environmental factors that impact, or may impact, adversely on the health of individuals.

Signed this 10th day of May 2013.

KERRY CHANT,
Chief Health Officer,
Delegate of the Minister of Health

THREATENED SPECIES CONSERVATION ACT 1995

Notice of Preliminary Determination

THE Scientific Committee has made a Preliminary Determination proposing that the following be listed in the relevant Schedule of the Threatened Species Conservation Act 1995.

Endangered Ecological Community (Part 3 of Schedule 1) Mount Kaputar high elevation and vine thicket land snail and slug community in the Nandewar and Brigalow Belt South Bioregions.

Any person may make a written submission regarding this Preliminary Determination. Send submissions to Suzanne Chate, NSW Scientific Committee Unit, PO Box 1967, Hurstville BC 1481. Submissions close 12th July 2013.

A copy of the Determination, which contains the reasons for the determination, may be obtained free of charge on the Internet www.environment.nsw.gov.au, by contacting the Scientific Committee Unit, PO Box 1967, Hurstville BC 1481. Tel.: (02) 9585 6940 or Fax (02) 9585 6606, or in person at the Office of Environment and Heritage Information Centre, Level 14, 59-61 Goulburn Street, Sydney. Copies of the determination may also be obtained from National Parks and Wildlife Service Area Offices and Visitor Centres, subject to availability.

Associate Professor MICHELLE LEISHMAN,
Chairperson,
Scientific Committee

TRANSPORT ADMINISTRATION ACT 1988

LAND ACQUISITION (JUST TERMS COMPENSATION) ACT 1991

Notice of Compulsory Acquisition of Land in the Local Government Area of The Hills Shire

TRANSPORT for NSW declares, with the approval of His Excellency the Lieutenant-Governor that the land described in Schedule 1 below, excepting the interests in land described in Schedule 2 below, is acquired by compulsory process under the provisions of the Land Acquisition (Just Terms Compensation) Act 1991, as authorised by and for the purposes of the Transport Administration Act 1988.

Dated at Sydney, this 3rd day of April 2013.

RODD STAPLES,
Project Director,
North West Rail Link,
Transport for NSW

PAGE 4 of 6
3

Req:R620219 /Doc:DL AI917399 /Rev:19-Mar-2015 /Sts:NO.OK /Pgs:ALL /Prt:08-Jul-2019 12:12 /Seq:4 of 6
Ref:castle hill /Src:M

SCHEDULE 1

ALL those pieces of land situated in the Local Government Area of the Hills Shire, Parish of Castle Hill, County of Cumberland comprising:

Lot 1, DP 539201, Folio Identifier 1/539201. Property Caretakers Cottage, 5 Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council.

Lot 2, DP 870828, Folio Identifier 2/870828. Property Council-Works Depot, 3 Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council.

Lot D, DP 398374, Folio Identifier D/398374. Property Hills Centre, 1 Carrington Road, Castle Hill NSW, 2154, said to be in the ownership of Baulkham Hills Shire Council.

Lot 1, DP 135696, Folio Identifier 1/135696. Property 129 Showground Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council.

Part Lot E, DP 398374, Folio Identifier E/398374. Property Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council as affected by the plan of acquisition Lot 140 in DP 1180973.

Part Lot 2, DP 539201, Folio Identifier 2/539201. Property 3 Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council as affected by the plan of acquisition Lot 140 in DP 1180973.

Part Lot A, DP 376559, Folio Identifier A/376559. Property 3 Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council as affected by the plan of acquisition Lot 140 in DP 1180973.

Part Lot B, DP 376559, Folio Identifier B/376559. Property Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council as affected by the plan of acquisition Lot 140 in DP 1180973.

Part Lot 38, DP 3520, Folio Identifier 38/3520. Property Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council as affected by the plan of acquisition Lot 140 in DP 1180973.

Lot C, DP 398374, Folio Identifier C/398374. Property Carrington Road, Castle Hill NSW 2154, said to be in the ownership of Baulkham Hills Shire Council.

SCHEDULE 2

In so far as it burdens Lots C and D, DP 398374, Folio Identifiers C/398374 and D/398374:

DP 633665, easement for electricity purposes.

Req:R620219 /Doc:DL AI917399 /Rev:19-Mar-2015 /Sts:NO.OK /Pgs:ALL /Prt:08-Jul-2019 12:12 /Seq:5 of 6
Ref:castle hill /Src:M

Wm. WALKER TAYLOR EDWARDS & SMITH
SOLICITORS
Est. 1852

PRINCIPAL

MARGARET C. HOLE, AM

ALL CORRESPONDENCE TO
GPO Box 5196
Sydney NSW 2001
TELEPHONE: 9262 5166
FACSIMILE: 9262 2916
E-mail: wtes@bigpond.com
ABN 68 204 434 847
Level 7, 9 Barrack Street
Sydney

Your ref:
Our ref: MH:ad:214034

3 February 2015

The Director
Land and Property Information Division BY HAND
GPO Box 15
Sydney NSW 2001

Dear Madam/Sir

Re: Application for Replacement Certificate of Title

We refer to the above and note that this application is made as a result of a requisition on Request AI917399. Following registration of that Request a consolidated Certificate of Title will issue for all of the land remaining in the two titles to which this application refers on DP 1180973.

Yours faithfully

Margaret Hole

Wm. Walker Taylor Edwards & Smith

Liability limited by the Solicitors Scheme, approved under the Professional Standards Act 1994 (NSW)

Req:R620219 /Doc:DL AI917399 /Rev:19-Mar-2015 /Sts:NO.OK /Pgs:ALL /Prt:08-Jul-2019 12:12 /Seq:6 of 6
Ref:castle hill /Src:M

THE HILLS SHIRE COUNCIL
3 Columbia Court, Baulkham Hills NSW 2153
PO Box 7064, Baulkham Hills BC NSW 2153

Telephone +61 2 9843 0555
Facsimilie +61 2 9843 0409
Email council@thehills.nsw.gov.au
www.thehills.nsw.gov.au
DX 9966 Norwest
ABN No. 25 034 494 656

13 February 2015

Land & Property Information
DX 17
Sydney

To Whom it may concern

Re: Lots 140 & 141 DP 1180973, 129 Showground Road, Castle Hill – Your Ref AI917399:3

Reference is made to your requisition of 7.2.2015.

No objections are raised to the consolidation of the certificates of title comprising the former Council Administration Centre at 129 Showground Road, Castle Hill as per notification of the compulsory acquisitions in the NSW Government Gazette of Friday 17 May 2013.

Council has received compensation for the land and please issue the relevant certificate of titles being Lot 140 DP 1180973 to Transport for NSW and Lot 141 DP 1180973 to The Hills Shire Council.

Should you have any enquires you are welcome to contact me on 9843 0395.

Yours faithfully

Rodney MacFarlane
PROPERTY MANAGER

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
8/7/2019 12:24PM

FOLIO: AUTO CONSOL 7348-135

Recorded	Number	Type of Instrument	C.T. Issue
24/9/1992		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 7348-135	
		PARCELS IN CONSOL ARE: 38/3520, E/398374.	
2/7/1993	I456236	DEPARTMENTAL DEALING	
23/5/1996	2169283	TRANSFER GRANTING EASEMENT	EDITION 1
6/10/2010	AF798677	CAVEAT	
16/12/2011	AG571880	APPLICATION FOR PREPARATION OF LAPSING NOTICE	
23/5/2013	AH749120	DEPARTMENTAL DEALING	
23/5/2013	AH453443	REJECTED - LEASE	
3/6/2013	AH774333	DEPARTMENTAL DEALING	
21/6/2013	DP1180973	DEPOSITED PLAN	
30/7/2013	AH912603	DEPARTMENTAL DEALING	
4/7/2014	AI413454	REJECTED - REQUEST	
16/3/2015	AJ334023	PARCELS EXCISED. CONSOL BROKEN UP	

*** END OF SEARCH ***

castle hill PRINTED ON 8/7/2019

InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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Received: 08/07/2019 12:24:46

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
8/7/2019 12:24PM

FOLIO: E/398374

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 7348 FOL 135

Recorded	Number	Type of Instrument	C.T. Issue
7/9/1992	DP398374	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
24/9/1992		CONVERTED TO AUTO CONSOL 7348-135	CONSOL CREATED CT NOT ISSUED
16/3/2015	AJ334023	EXCISED FROM AUTO CONSOL 7348-135	
16/3/2015	AJ162223	WITHDRAWAL OF CAVEAT	
16/3/2015	AI917399	REQUEST	FOLIO CANCELLED
16/3/2015	AJ334263	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

castle hill PRINTED ON 8/7/2019

InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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Received: 08/07/2019 12:24:15

Reg:R620535 /Doc:DL M616914 /Rev:14-Nov-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Jul-2019 12:40 /Seq:1 of 3
Ref:castle hill /Src:M

A20

M616914 '72 FEB 16 PM 1:27

B - - $12-00

NOTICE OF RESUMPTION OF LAND SUBJECT TO THE PROVISIONS OF THE REAL PROPERTY ACT, 1900

N/R

THE COUNCIL OF THE SHIRE OF BAULKHAM HILLS (hereinafter called "the Council") doth hereby certify that the copy Gazette Notification hereunto annexed and marked with the letter "A" is a true copy of the Gazette Notification contained in the Government Gazette of the Seventeenth day of December one thousand nine hundred and seventy-one declaring that the land therein described being the land mentioned in the Schedule hereunder written has been resumed and the Council requests that you will deal with and give effect to the said Notification as if the same were a Memorandum of Transfer of land therein described duly executed under the Real Property Act, 1900 and the Council hereby certifies that this instrument is correct for the purpose of the Real Property Act, 1900.

SCHEDULE

COUNTY	PARISH	Reference to Title WHOLE or PART	VOLUME	FOLIO	DESCRIPTION OF LAND (if part only)
Cumberland	Castle Hill	Whole	8125	244	

DATED at Castle Hill this seventh day of February 1972.

THE COMMON SEAL of THE COUNCIL OF THE SHIRE OF BAULKHAM HILLS was hereunto affixed on the 16th day of February 1972 in pursuance of a Resolution passed on the 14th day of February 1972.

Bernard Fuller
President

Shire Clerk

Reg:R620535 /Doc:DL M616914 /Rev:14-Nov-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Jul-2019 12:40 /Seq
Ref:castle hill /Src:M

NOTICE OF RESUMPTION OF LAND

by

BAULKHAM HILLS SHIRE COUNCIL

Form 3.
(Ordinance No. 77.)
LOCAL GOVERNMENT ACT, 1919.

WHEREAS on the Seventeenth day of June one thousand nine hundred and Sixty-nine, the Baulkham Hills Shire Council (hereinafter called "the Council") resolved, in pursuance of the Local Government Act, 1919, to resume the land described in the Schedule hereto for the purpose of providing grounds for public recreation AND WHEREAS the Council further resolved to make an application for the approval of the Governor to cause a notice of the resumption of such land, together with a description of such land, to be published in the Gazette and in a newspaper circulating in the area in which such land is located: AND WHEREAS on the Third day of November one thousand nine hundred and Seventy-one, upon the application of the Council His Excellency the Governor with the advice of the Executive Council approved of a notice of resumption of the land described in the said Schedule together with a description of such land, to be published in the Gazette and a newspaper circulating in the area in which the land is located: NOW THEREFORE the Council with the approval of His Excellency the Governor with the advice of the Executive Council as aforesaid DOTH HEREBY give notice that the land described in the Schedule hereto is hereby resumed by the Council under the provisions of the Local Government Act, 1919, aforesaid AND the Council DOTH HEREBY also give notice that a plan of such land has been filed in the office of the Baulkham Hills Shire Council, at the Council Chambers, Castle Hill and with the Surveyor-General at the Department of Lands, Sydney, which plans are open for public inspection AND the Council DOTH HEREBY also give notice that upon the publication of this notice and the description in the Schedule hereto the land become(s) for the purposes and subject to the provisions of the said Act vested in the Council for an estate in fee simple in possession freed and discharged from all trusts, obligations, estates, interests, contracts, charges, rates, rights of way, or easements whatsoever.

The Common Seal of the Council of the Shire of Baulkham Hills was hereunto affixed this Ninth day of December, 1971 in pursuance of a resolution of the Council passed on the Seventh day of December, 1971

.Bernard.A..Mullane.....
President

.David.J..B..Mercer.....
Shire Clerk

(L.S.)

SCHEDULE.

All that piece or parcel of land situate in the Shire of Baulkham Hills, Parish of Castle Hill and County of Cumberland, being Lot D. Filed Plan 398374, having an area of 2 acres or thereabouts and said to be in the possession of Alexander Allen Hood.

This is the annexure marked "A" referred to in the Notice of Resumption dated this Seventh day of February 1972.

THE COMMON SEAL of THE COUNCIL OF THE SHIRE OF BAULKHAM HILLS was hereunto affixed this 1st day of February 1972 in pursuance of a Resolution of the Council passed on the 1st day of February 1972.

.....
President

.....
Shire Clerk

M616914

Notice of Resumption

Particulars entered in Register Book

on 10-4-1972.

REGISTRAR GENERAL

GORDON ROBILLIARD
181 Church St.,
PARRAMATTA
635-8133
SOLICITOR

No recording of this resumption has been made on Certificate of Title Vol. 8125 Fol. 244

Registrar General

CTV① 2/7/79.

E2

M.P.D.

D

PROGRESS RECORD

	INITIALS	DATE
DRAFT WRITTEN		7-5-79
DRAFT EXAMINED		
DIAGRAM PREPARED	E.C.	8-5-79
DIAGRAM EXAMINED		8-5-79
ENGROSSER		
XEROX SECTION		
ENGROSSER		
CANCELLATION CLERK		2/7/79

VOL. 13874 FOL. 191

M.P.D.

Req:R620535 /Doc:DL M616914 /Rev:14-Nov-2011 /Sts:OK.SC /Pgs:ALL /Prt:08-Jul-2019 12:40 /Seq:1 /Ref:castle hill /Src:M

Req:R620533 /Doc:CT 13874-191 CT /Rev:21-Dec-2010 /Sts:OK.SC /Pgs:ALL /Prt:08-Jul-2019 12:40
Ref:castle hill /Src:M

[redacted]FICATE OF TITLE

13874/191

NEW SOUTH WALES

[redacted]EAL PROPERTY ACT, 1900

Appln. No.10680

Vol. 13874 Fol. 191

Prior Title Vol.8125 Fol.244

EDITION ISSUED
2 7 1979

(Page 1) Vol. 13874 Fol. 191

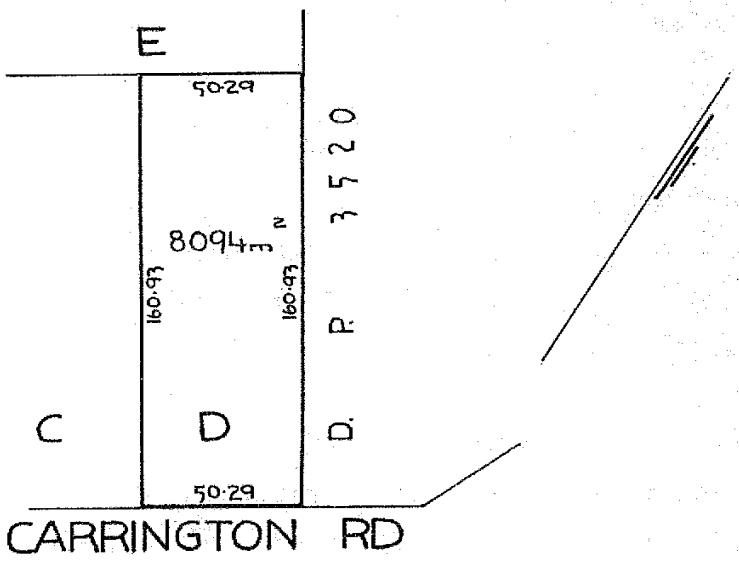
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

CANCELLED

Registrar General.

PLAN SHOWING LOCATION OF LAND SEE AUTO FOLIO

LENGTHS ARE IN METRES



M 616914 E.G. Jr

S

REDUCTION RATIO 1:2000

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot D in Deposited Plan 398374 at Castle Hill in the Shire of Baulkham Hills Parish of Castle Hill and County of Cumberland being part of Portion 126 granted to Michael Hancey on 13-9-1819.

FIRST SCHEDULE

THE COUNCIL OF THE SHIRE OF BAULKHAM HILLS.

GRN

SECOND SCHEDULE

NIL

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

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE REGISTRAR GENERAL'S OFFICE

RG 2/62 NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

Vol. 13874 Fol. 191

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	REGISTERED	Signature of Registrar General
CANCELLED				
SEE AUTO FOLIO				

DP633665 CN1 Regtd

V682984 part from 9Bc

W234123 — 2L

W334786

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	
ER DP633665 P		Easement for electricity purposes affecting the part of the land within described shown so burdened in DP. 633665.	2-8-1983			
~~V682984~~		~~Lease to Command Performance Educational Enterprise Australia Limited of premises being Unit B on Level 1 of the east wing of the building known as the Baulkham Hills Shire Council's Administrative Building and Council Chambers together with and reserving rights. Expires 2-9-1989. Option of renewal 5 years. Registered 3-6-1985.~~				
L W234123 P		Lease to Australian Mutual Provident Society of Unit A ~~at the~~ Baulkham Hills Shire Council's Administrative Building and Council Chambers with an Option of Renewal for 3 years together with and Reserving Rights. Expires: 31.10.1987. Registered 19.3.1986.			Cancelled	W334786

(Page 2 of 2 pages)

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

Req:R620533 /Doc:CT 13874-191 CT /Rev:21-Dec-2010 /Sts:OK.SC /Pgs:ALL /Prt:08-Jul-2019 12:40
Ref:castle hill /Src:M

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
8/7/2019 12:40PM

FOLIO: D/398374

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 13874 FOL 191

Recorded	Number	Type of Instrument	C.T. Issue
29/7/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
19/9/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
1/3/1990	Y772687	LEASE	EDITION 1
26/9/1991	Z864781	LEASE	EDITION 2
9/9/1993	I567684	LEASE	EDITION 3
16/11/1999	6242425	LEASE	EDITION 4
23/10/2000	6916907	LEASE	EDITION 5
30/11/2000	7257132	TRANSFER OF LEASE	EDITION 6
6/9/2002	8933635	LEASE	EDITION 7
23/5/2013	AH749120	DEPARTMENTAL DEALING	
21/6/2013	DP1180973	DEPOSITED PLAN	
4/7/2014	AI413454	REJECTED - REQUEST	
16/3/2015	AJ299262	CHANGE OF NAME	
16/3/2015	AJ242518	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	
16/3/2015	AI917399	REQUEST	FOLIO CANCELLED

*** END OF SEARCH ***

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Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
8/7/2019 12:40PM

FOLIO: C/398374

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 7348 FOL 158

Recorded	Number	Type of Instrument	C.T. Issue
2/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
6/2/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
6/10/2010	AF798677	CAVEAT	
23/5/2013	AH749120	DEPARTMENTAL DEALING	
23/5/2013	AH453443	REJECTED - LEASE	
21/6/2013	DP1180973	DEPOSITED PLAN	
4/7/2014	AI413454	REJECTED - REQUEST	
16/3/2015	AJ162223	WITHDRAWAL OF CAVEAT	
16/3/2015	AI917399	REQUEST	FOLIO CANCELLED

*** END OF SEARCH ***

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NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
9/7/2019 9:06AM

FOLIO: 38/3520

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 7348 FOL 135

Recorded	Number	Type of Instrument	C.T. Issue
26/11/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
24/9/1992		CONVERTED TO AUTO CONSOL 7348-135	CONSOL CREATED CT NOT ISSUED
16/3/2015	AJ334023	EXCISED FROM AUTO CONSOL 7348-135	
16/3/2015	AJ162223	WITHDRAWAL OF CAVEAT	
16/3/2015	AI917399	REQUEST	FOLIO CANCELLED
16/3/2015	AJ334263	DEPARTMENTAL DEALING	

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NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
9/7/2019 9:42AM

FOLIO: B/376559

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 6491 FOL 36

Recorded	Number	Type of Instrument	C.T. Issue
2/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
21/11/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
23/5/2013	AH749120	DEPARTMENTAL DEALING	
21/6/2013	DP1180973	DEPOSITED PLAN	
4/7/2014	AI413454	REJECTED - REQUEST	
16/3/2015	AI917399	REQUEST	FOLIO CANCELLED
16/3/2015	AJ334263	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

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Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
9/7/2019 9:44AM

FOLIO: A/376559

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 6491 FOL 37

Recorded	Number	Type of Instrument	C.T. Issue
2/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
21/11/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
23/5/2013	AH749120	DEPARTMENTAL DEALING	
21/6/2013	DP1180973	DEPOSITED PLAN	
4/7/2014	AI413454	REJECTED - REQUEST	
16/3/2015	AI917399	REQUEST	FOLIO CANCELLED
16/3/2015	AJ334263	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

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Req:R625259 /Doc:CT 11218-099 CT /Rev:07-Aug-2008 /Sts:NO.OK /Pgs:ALL /Prt:09-Jul-2019 09:53 /Seq:1 of 2
Ref:castle hill /Src:M

NEW SOUTH WALES

[redacted]ICATE OF TITLE

[redacted]PERTY ACT, 1900, as amended.

Application No. 10680

Prior Title Volume 3292 Folio 175

Vol. 11218 Fol. 99

Edition issued 29-12-1969

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.

CANCELLED

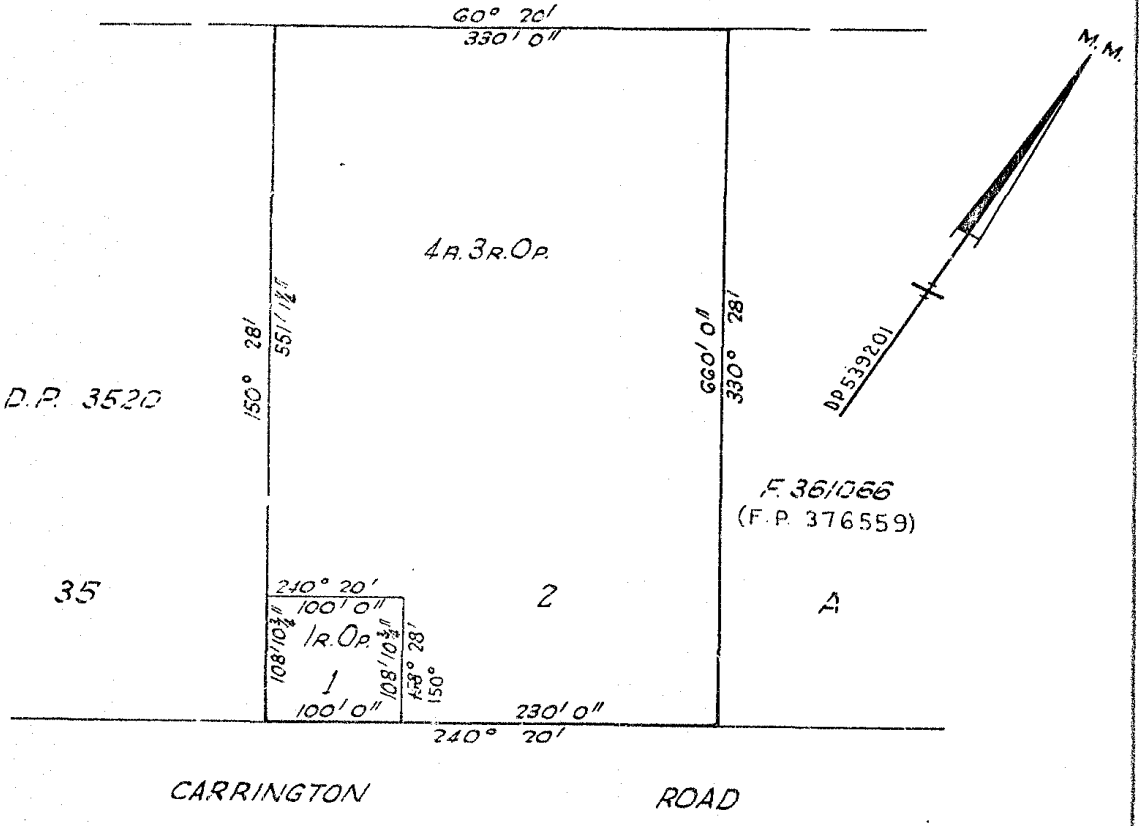
Witness L. Hucketepp.

Registrar General.

SEE AUTO FOLIO

(Page 1) Vol. 11218 Fol. 99

PLAN SHOWING LOCATION OF LAND



S

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 2 in Deposited Plan 539201 at Castle Hill in the Shire of Baulkham Hills Parish of Castle Hill and County of Cumberland being part of Portion 126 granted to Michael Hancey on 13-9-1819.

FIRST SCHEDULE

~~HERBERT ROY ALLEY, of Castle Hill, Horse Trainer.~~

SECOND SCHEDULE

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

2. ~~Mortgage No.L205327 to Boris Investments Pty. Limited and Hermine Kevin, of Elizabeth Bay, Widow. Entered 19-[illegible]-1968.~~ Discharged L723393

Registrar General.

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

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

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

Req:R625259 /Doc:CT 11218-099 CT /Rev:07-Aug-2008 /Sts:NO.OK /Pgs:ALL /Prt:09-Jul-2019 09:53 /Seq:2 of 2
Ref:castle hill /Src:M ages)

Vol. 11218 Fol 99

L 723393

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
Baulkham Hills Shire Council	Transfer	L723394	2-1-1970	6-2-1970	

CANCELLED

SEE AUTO FOLIO

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION
Covenant	L723394		created by Transfer L723394	6-2-1970		

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

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
9/7/2019 10:12AM

FOLIO: 2/539201

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 11218 FOL 99

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
11/7/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
23/5/2013	AH749120	DEPARTMENTAL DEALING	
21/6/2013	DP1180973	DEPOSITED PLAN	
4/7/2014	AI413454	REJECTED - REQUEST	
16/3/2015	AI917399	REQUEST	FOLIO CANCELLED
16/3/2015	AJ334263	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

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Req:R625260 /Doc:CT 11218-098 CT /Rev:04-Feb-2011 /Sts:OK.SC /Pgs:ALL /Prt:09-Jul-2019 09:53 /
Ref:castle hill /Src:M

[redacted]

ICATE OF TITLE

NEW SOUTH WALES

PERTY ACT, 1900, as amended.

11218098

Application No. 10680

Prior Title Volume 3292 Folio 175

Vol. 11218 Fol. 98

Edition issued 29-12-1969

(Page 1) Vol. 11218 Fol. 98

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.

CANCELLED

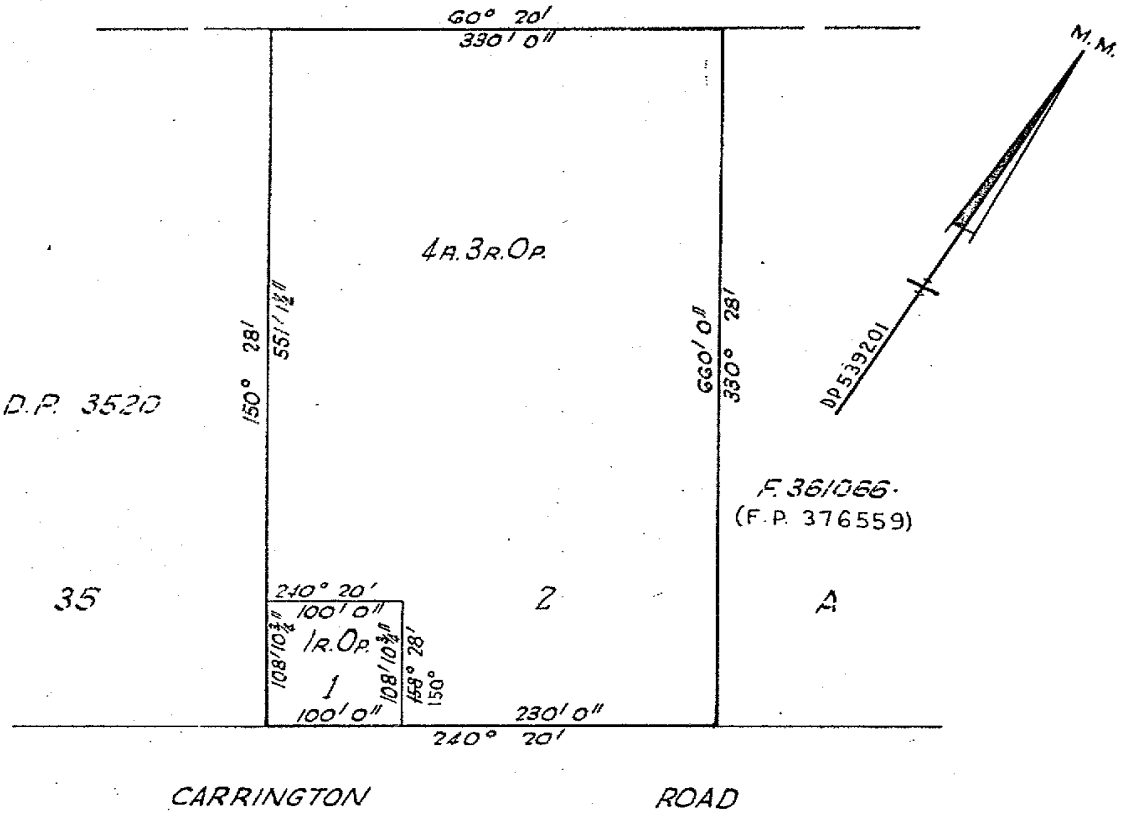
Witness L. Huckstepp.

Registrar General.

SEE AUTO FOLIO

REGISTRAR GENERAL NEW SOUTH WALES

PLAN SHOWING LOCATION OF LAND



S

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 539201 at Castle Hill in the Shire of Baulkham Hills Parish of Castle Hill and County of Cumberland being part of Portion 126 granted to Michael Hancey on 13-9-1819.

FIRST SCHEDULE

~~HERBERT ROY ALLEY, of Castle Hill, Horse Trainer.~~

SECOND SCHEDULE

GRY

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. ~~Mortgage No.L205327 to Boris Investments Pty. Limited and Hermine Kevin, of Elizabeth Bay, Widow. Entered 10-11-1968.~~ Discharged L723393

Registrar General.

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

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

RG 26?

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

Req:R625260 /Doc:CT 11218-098 CT /Rev:04-Feb-2011 /Sts:OK.SC /Pgs:ALL /Prt:09-Jul-2019 09:53 /
Ref:castle hill /Src:MK

Vol. 11218 Fol 98

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
M.A Rosa Holdings Pty Limited	Transfer	M221475	12-2-1971	13-4-1971	
Baulkham Hills Shire Council	Transfer	Q408787	-----	14-10-1977	

CANCELLED

SEE AUTO FOLIO

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
Q Mortgage	1995120	~~20 5 1970~~ 30 5 1970	To The Commercial Banking Company of Sydney Limited.	1st-9-1970		Discharged	M221474	
Mortgage	M221476	8-3-1971	To Parkbea Dairy Pty. Limited	13-4-1971.		Discharged	Q408786	

(Page 2 of 2 pages)

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

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
9/7/2019 10:35AM

FOLIO: 1/539201

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 11218 FOL 98

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
11/7/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
23/5/2013	AH749120	DEPARTMENTAL DEALING	
21/6/2013	DP1180973	DEPOSITED PLAN	
4/7/2014	AI413454	REJECTED - REQUEST	
16/3/2015	AI917399	REQUEST	FOLIO CANCELLED

*** END OF SEARCH ***

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Req:R626241 /Doc:CT 14029-019 CT /Rev:10-Jan-2011 /Sts:OK.SC /Pgs:ALL /Prt:09-Jul-2019 11:06
Ref:castle hill /Src:M

CERTIFICATE OF TITLE

NEW SOUTH WALES

PROPERTY ACT, 1900

14029019

Vol. [redacted] Fol. 19

Appln No 10680

Prior Title Vol. 4623 Fol. 213

[redacted] EDITION ISSUED

21 1 1980

14029 Fol. 19

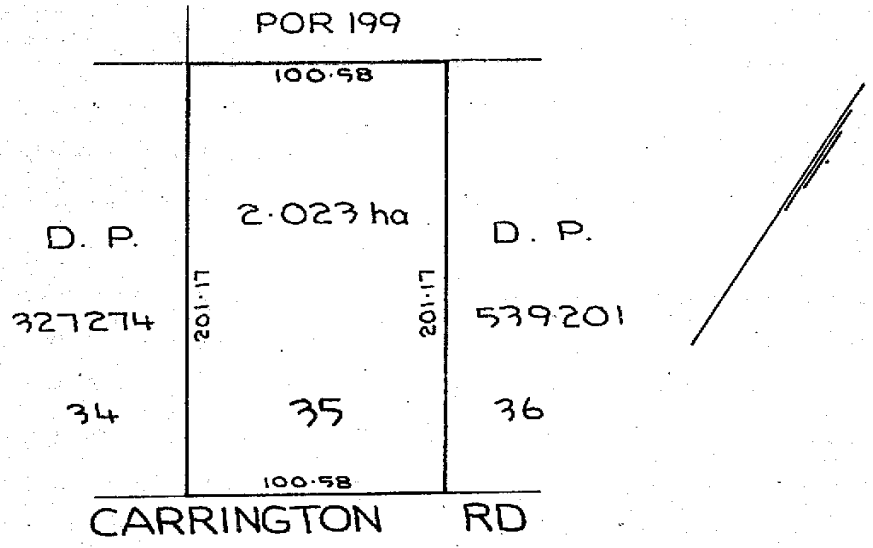
(Page 1) Vol.

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.

Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



R512636 R.A

REDUCTION RATIO 1:2500

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 35 in Deposited Plan 3520 at Castle Hill in the Shire of Baulkham Hills Parish of Castle Hill County of Cumberland being part of Portion 126 granted to Michael Hancey on 13-9-1819.

FIRST SCHEDULE

~~[redacted]~~

~~J. & V. HOME INVESTMENTS PTY. LIMITED.~~

ACC.CONF. 16-6-1980.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown grant above referred to.
2. ~~R489439 Mortgage to Harold Stuart Cahill of Middle Cove, Company Director.~~ Discharged S314465
3. ~~R512636 Mortgage to Brock Holdings (No. 1) Pty. Limited.~~ Discharged S864462

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

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE REGISTRAR GENERAL'S OFFICE

RG 2/64

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

Vol. 14029 Fol. 19

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	REGISTERED	Signature of Registrar General
Portville Developments (No.1) Pty. Limited by Transfer S864463. Registered 15-1-1982				

R731575 Plan R
S973732M
Rejected 9/1/83
S314464 w/d — 5 D/M,
S864462 dm 3 Tx 4 m R
S973732 plan
Mews S.P.
ea 30-7-82
~~T219864~~
T219864 M R
T239465 Plan
SP19470
T323149 w/d — 150 w/p

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	
Caveat	R731575	~~by Ampol Petroleum Finance Limited.~~	16-4-1980		Withdrawn	S314464
S864464		Mortgage to A.G.C. (Finance) Limited. Registered 15-1-1982				
S973732		Caveat by Chateau Constructions (Aust) Limited. Registered 31-3-1982.			Withdrawn	T323149
T239465		~~Caveat by Shirley Emmeline Wright, Norman Thomas Smith, Marilyn Ruth Smith, Leslie Alan Banks, Josephine Rapa, Josiah Arthur Swan, Gladys Irene Swan, Lucy Ruby Sani, Mario Anthony Campo, Salvatore Campo, Josephine Campo, Orazia Cristaldi, Santo Cristaldi, Josephine Campo. Registered 9-12-1982~~			Withdrawn	T323150
T219864		Mortgage to J. & V. Home Improvements Pty. Limited. Registered 9-12-1982				

This deed is cancelled as to Whole
New Certificates of Title have issued on 7-1-83
for lots in Strata Plan No. 19470 as follows:-
1-10 in Vol. 14973 and 2-11 respectively.
CP Vol. 14973 Fol. 1

REGISTRAR GENERAL

(Page 2 of 2 pages)

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

Req:R626241 /Doc:CT 14029-019 CT /Rev:10-Jan-2011 /Sts:OK.SC /Pgs:ALL /Prt:09-Jul-2019 11:06
Ref:castle hill /Src:M/

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
9/7/2019 12:27PM

FOLIO: 2/870828

First Title(s): OLD SYSTEM
Prior Title(s): CP/SP19470

Recorded	Number	Type of Instrument	C.T. Issue
3/9/1997	DP870828	DEPOSITED PLAN	FOLIO CREATED EDITION 1
23/9/1997	3435710	TRANSFER	EDITION 2
23/5/2013	AH749120	DEPARTMENTAL DEALING	
21/6/2013	DP1180973	DEPOSITED PLAN	
4/7/2014	AI413454	REJECTED - REQUEST	
16/3/2015	AI917399	REQUEST	FOLIO CANCELLED

*** END OF SEARCH ***

castle hill PRINTED ON 9/7/2019

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Received: 09/07/2019 12:26:58

Req:R627418 /Doc:DL 3435710 /Rev:27-Sep-1997 /Sts:NO.OK /Pgs:ALL /Prt:09-Jul-2019 12:27 /Seq:1 of 1
Ref:castle hill /Src:M

Form: 07-011
Licence: AUS/0634/96

TRANSFER

New South Wales
Real Property Act 1900

3435710 N

Instructions for filling out this form are available from the Land Titles Office

Office of State Revenue use only

OFFICE OF STATE REVENUE (N.S.W. TREASURY) AE 19
1996/97 P22
NO STAMP DUTY IS PAYABLE ON THIS INSTRUMENT

(A) **LAND TRANSFERRED**
If appropriate, specify the share or part transferred.

2/870828

(B) **LODGED BY**

LTO Box	Name, Address or DX and Telephone
	COLEMAN & GREIG SOLICITORS 189 Y Reference (15 character maximum): BHSC-SP 19470

(C) **TRANSFEROR** The Owners - Strata Plan No. 19470

(D) acknowledges receipt of the consideration of $120,000.00

and as regards the land specified above transfers to the transferee an estate in fee simple.

(E) Encumbrances (if applicable): 1. ..... 2. ..... 3. .....

(F) **TRANSFEREE**

T TS (s713 LGA) TW (Sheriff)	BAULKHAM HILLS SHIRE COUNCIL

(G) **TENANCY:**

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. **DATE** 17.9.97

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

THE COMMON SEAL OF THE OWNERS - STRATA PLAN NO. 19470 was hereunto affixed on ..... in the presence of TONY WOLOSZ
Signature of Witness
being the person(s) authorised by section 238 of the Strata Schemes Management Act 1996 to attest the affixing of the Seal.

THE PROPRIETORS OF STRATA PLAN No. 19470 Common Seal

Name of Witness (BLOCK LETTERS)

Address of Witness

Signature of Transferor

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

C. O. EINBERG Signature of Transferee's Solicitor

If signed on the transferee's behalf by a solicitor or licensed conveyancer, show the signatory's full name in block letters.

Checked by (LTO use) .....

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
8/7/2019 12:12PM

FOLIO: 140/1180973

First Title(s): OLD SYSTEM
Prior Title(s): 38/3520 1/135696 A-B/376559 C-E/398374 1-2/539201 2/870828

Recorded	Number	Type of Instrument	C.T. Issue
21/6/2013	DP1180973	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
16/3/2015	AI917399	REQUEST	FOLIO CREATED CT NOT ISSUED
16/3/2015	AJ334467	DEPARTMENTAL DEALING	
27/4/2015	DP1194607	DEPOSITED PLAN	EDITION 1
8/8/2017	DP1214887	REJECTED - DEPOSITED PLAN	
9/11/2018	AN784557	REQUEST	EDITION 2

*** END OF SEARCH ***

castle hill PRINTED ON 8/7/2019

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Received: 08/07/2019 12:12:03

Form: 11R
Licence: 03-11-071
Licensee: Ashurst Australia

REQUEST

New South Wales
Real Property Act 1900

AN784557T

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

(A) **STAMP DUTY** — If applicable. Office of State Revenue use only

(B) **TORRENS TITLE** — SEE ANNEXURE "A" TO REQUEST

(C) **REGISTERED DEALING**

Number	Torrens Title

(D) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODE
238N	Customer Account Number: 123155F Ashurst Australia DX 388 Sydney Tel: 02 9258 6000 Reference (optional): MCARA 1000 026 462	**R**

(E) **APPLICANT** — Sydney Metro (ABN 12 354 063 515)

(F) **NATURE OF REQUEST** — Notification of vesting of real property under s94 Transport Administration Act 1988 (NSW)

(G) **TEXT OF REQUEST** — The land described in Annexure A was vested from Transport for NSW (ABN 18 804 239 602) to Sydney Metro (ABN 12 354 063 515) pursuant to a vesting order under s94 Transport Administration Act 1988 (NSW) dated 20 June 2018. An extract of the vesting order is attached. The applicant requests that an updated edition of the Certificate of Title issue for each of the Folio Identifiers set out in Annexure A.

DATE 10 / 10 / 2018
dd mm yyyy

(H)

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

Signature:

Signatory's name: MARIA CARAMANLIS
Signatory's capacity: APPLICANT'S SOLICITOR

(I) *This section is to be completed where a notice of sale is required and the relevant data has been forwarded through eNOS.*
The applicant's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 1683039 ✓ Full name: Maria Caramanlis Signature: .....

OFF PAID $424 (8/2 72+0)

** s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.*

3 extra folio raised (77CTs) $424.80

Annexure "A" to Request dated 10 October 2018

No.	Street Address	Folio Identifier
1.	240-244 Beecroft Road & 4 Ray Road, Epping	22/1180959
2.	129 Showground Road, Castle Hill	140/1180973
3.	Strip of Land adjacent to Showground Road (in front of 45 Showground Road)	1/1188091
4.	Strip of Land adjacent to Showground Road (in front of 69 Showground Road)	2/1188091
5.	Strip of Land adjacent to Showground Road (in front of 71 Showground Road)	3/1188091
6.	Strip of Land adjacent to Showground Road (in front of 73 Showground Road)	4/1188091
7.	Strip of Land adjacent to Showground Road (in front of 77 Showground Road)	5/1188091
8.	Strip of Land adjacent to Showground Road (in front of 81 Showground Road)	6/1188091
9.	Strip of Land adjacent to Showground Road (in front of 99 Showground Road)	7/1188091
10.	Strip of Land adjacent to Showground Road (in front of 35-37 Showground Road)	15/1188091
11.	Castle Hill Station Site	112/1180955
12.	Norwest Station Site	101/1181138
13.	Adjacent to Norwest Boulevard	1/1213270 - CT not issued
14.	Partial 34, 36, 38, 40, 46 Brookhollow Ave, Baulkham Hills	1/1213271
15.	Cr of Norwest Boulevard & Brookhollow Ave	187/1180966
16.	25 Balmoral Road, Kellyville	9/241547
17.	23 Balmoral Road, Kellyville	10/241547
18.	Partial – Balmoral Road, Kellyville	1/1203920 - CT not issued
19.	Partial – Balmoral Road, Kellyville	3/1203920 - CT not issued
20.	3 Taggert Way, Kellyville	32/1071715
21.	Partial – Corner of Miami St & Old Windsor Road (opp Balmoral Road)	110/1204116
22.	5 Taggert Way, Kellyville	31/1071715

22

JA

No.	Street Address	Folio Identifier
23.	42 Memorial Ave, Kellyville	30/1071715
24.	45 Memorial Ave, Kellyville	140/1121172
25.	25 Old Windsor Road, Kellyville	1/1066762
26.	Partial – Balmoral Road, Kellyville	2/1203920 - CT not sought
27.	Old Windsor Road, Kellyville	11/1063682
28.	Old Windsor Road, Kellyville	13/1184376
29.	Old Windsor Road, Kellyville	7/1184376
30.	Old Windsor Road, Kellyville	12/1184376
31.	Old Windsor Road, Kellyville	6/1184376
32.	Old Windsor Road, Kellyville	3/1201591
33.	Old Windsor Road, Kellyville	5/1184376
34.	Old Windsor Road, Kellyville	4/1184376
35.	Old Windsor Road, Kellyville	3/1184376
36.	Old Windsor Road, Kellyville	2/1184376 -> U'12 434-08
37.	Samantha Riley Drive, Kellyville	1/1184376
38.	Samantha Riley Drive, Kellyville	102/1122070
39.	Old Windsor Road, Kellyville	104/1122070
40.	Windsor Road, Beaumont Hills	Auto Consol 12058-186 - (Lot 27 in DP13822, Lot 28 in DP 13822 and Lot 29 in DP 13822)
41.	113-114 Windsor Road, Beaumont Hills	12/1031575
42.	114 Windsor Road, Beaumont Hills	1/1067179
43.	792 Windsor Road, Rouse Hill	1/651335
44.	782 Windsor Road, Rouse Hill	1/882329
45.	768 Windsor Road, Rouse Hill	1/1185657
46.	105 Schofields Road, Rouse Hill	33/1167828
47.	Partial Lot – Behind 103 Schofields Road, Rouse Hill	4/1190434
48.	Partial Lot – Behind 101 Schofields Road, Rouse Hill	3/1190434

(26)

SA

No.	Street Address	Folio Identifier
49.	Partial Lot – Behind 99 Schofields Road, Rouse Hill	2/1190434
50.	97 Schofields Road, Rouse Hill	8/27220
51.	Partial Lot – Behind 95 Schofields Road, Rouse Hill	1/1190434
52.	93 Schofields Road, Rouse Hill	10/27220
53.	34 Cudgegong Road, Rouse Hill	120/208203
54.	53 Terry Road, Rouse Hill	133/208203
55.	79 Schofields Road, Rouse Hill	15/1168129
56.	35 Cudgegong Road, Rouse Hill	71/208203
57.	81 Schofields Road, Rouse Hill	10/1185116
58.	75 Schofields Road, Rouse Hill	13/1168129
59.	73 Schofields Road, Rouse Hill	12/1168129
60.	71 Schofields Road, Rouse Hill	11/1168129
61.	69 Schofields Road, Rouse Hill	10/1168129
62.	47 Tallawong Road, Rouse Hill	27/30186
63.	31 Tallawong Road, Rouse Hill	26/30186
64.	67 Schofields Road, Schofields	10/1185113
65.	65 Schofields Road, Schofields	14/1189148
66.	63 Schofields Road, Schofields	13/1189148
67.	61 Schofields Road, Schofields	12/1189148
68.	59 Schofields Road, Schofields	11/1189148
69.	57 Schofields Road, Schofields	10/1189148
70.	55 Schofields Road, Schofields	9/1189148
71.	53 Schofields Road, Schofields	8/1189148
72.	51 Schofields Road, Schofields	7/1189148
73.	68 Gordon Road, Schofields	27/39341
74.	51 Tallawong Road, Rouse Hill	28/30186
75.	57 Tallawong Road, Rouse Hill	29/30186

27

No.	Street Address	Folio Identifier
76.	5 Oak St, Schofields Road	28/39341
77.	2 Oak St, Schofields Road	29/39341

ORDER No. 2018/

Transfer of assets, rights and liabilities from Transport for NSW

to Sydney Metro

TRANSPORT ADMINISTRATION ACT 1988 SECTION 94 ORDER NO. 2018/

I, Andrew Constance, M.P., Minister for Transport and Infrastructure, pursuant to section 94 of the *Transport Administration Act 1988 (NSW)*, make the following Order.

Dated this day of 20th June 2018.

ANDREW CONSTANCE, M.P.

Minister for Transport and Infrastructure

Explanatory Note

The object of this Order is to transfer to Sydney Metro the assets, rights, and liabilities of Transport for NSW the subject of, or arising under or in connection with the Project.

This Order is made under section 94(1) of the *Transport Administration Act 1988 (NSW)*.

Transport Administration Act 1988 Section 94 Order No. 2018/

1. **Commencement**

This Order takes effect from 12:01AM on 1 July 2018 (the **Effective Time**).

2. **Interpretation**

In this Order (including the Schedules to it):

(a) the word "includes" in any form is not a word of limitation;

(b) the terms "assets", "rights" and "liabilities" have the meanings assigned to those terms in clause 1 of Schedule 4 of the *Transport Administration Act 1988 (NSW)*;

(c) contract or agreement means any contract or agreement, whether in writing or otherwise;

(d) any references to this Order include any Schedules to it;

(e) a reference to a document is a reference to that document as varied, novated, ratified or replaced from time to time and includes a document executed by a party in its name at the time of execution whether or not the name of the party has changed since the date of execution; and

(f) for the avoidance of doubt, the provisions of clause 3 of Schedule 4 of the *Transport Administration Act 1988 (NSW)* have effect in the operation of this Order,

and:

Metro means a mass transit infrastructure system, and associated facilities, that:

(a) provides high-frequency, high-capacity passenger services; and

(b) is operated using automated or partly-automated systems from one or more central control points.

Metro Assets means assets (including "transport infrastructure", "transport vehicles" and "rolling stock" as those terms are defined in the *Transport Administration Act 1988 (NSW)* used for or in connection with or to facilitate the movement of persons by means of a Metro.

Project means:

(a) all parts of the Metro planned, under construction and/or constructed in Sydney, New South Wales including Sydney Metro Northwest, Sydney Metro City & Southwest and Sydney Metro West, and including all real and personal property, all the stations, tunnels, viaducts, stabling yards, maintenance depots, bridges, earthworks, landscaping, equipment, systems (including all information and communication systems), trackwork and support structures, buildings, plant, tangible and intangible property, rolling stock and ancillary infrastructure of each of these railway lines; and

(b) the exercise by Transport for NSW, including through the Sydney Metro Delivery Office which is a division of Transport for NSW, of any functions conferred or imposed on it by or under the *Transport Administration Act 1988 (NSW)* (including any powers and functions set out in Schedule 1 of the *Transport Administration Act 1988 (NSW))* or any other Act in relation to the Metro and any Metro Assets and all activities in connection with those functions or the Metro or any Metro Assets

including the carrying out, finance, management or participation by Transport for NSW in development for residential, retail, commercial, industrial, mixed use, community, public open space or recreational purposes on land in the locality of a metro station, depot or stabling yard or a proposed metro station, depot or stabling yard.

Sydney Metro means Sydney Metro, a NSW Government agency constituted by Part 3D of the *Transport Administration Act 1988 (NSW)*.

Sydney Metro Northwest means the railway line from Chatswood to Cudgegong Road, including the stabling yard and maintenance depot at Tallawong Road.

Sydney Metro City & Southwest means the railway line from Bankstown to Chatswood including the upgrade and conversion of the existing Bankstown line to metro standard, the stabling yard and maintenance depot at Marrickville.

Sydney Metro West means the planned railway line from Parramatta to the Sydney central business district, including any planned stabling yard, maintenance depot and ancillary infrastructure.

Transport for NSW means Transport for NSW ABN 18 804 239 602, a NSW Government agency constituted by Part 1A of the *Transport Administration Act 1988 (NSW)*.

Vested Arrangements means any contract, agreement, deed, or other document specified in this Order which is to be transferred by this Order.

3. **Transfer of Assets, Rights and Liabilities**

The assets, rights and liabilities specified or referred to in this Order are transferred from Transport for NSW to Sydney Metro with effect from the Effective Time.

Dated this day of 20th June 2018.

ANDREW CONSTANCE, M.P.

Minister for Transport and Infrastructure

Schedule 5 - Real Property Assets: Sydney Metro Northwest - Freehold Title

1. The land specified in the tables below and all assets, rights and liabilities of Transport for NSW the subject of, or arising under or in connection with that land.

Surface

No.	Street Address	Folio Identifier
1.	240-244 Beecroft Road & 4 Ray Road, Epping	22/1180959
2.	Cherrybrook Station Site	80/1180972
3.	129 Showground Road, Castle Hill	140/1180973
4.	Strip of Land adjacent to Showground Road (in front of 45 Showground Road)	1/1188091
5.	Strip of Land adjacent to Showground Road (in front of 69 Showground Road)	2/1188091
6.	Strip of Land adjacent to Showground Road (in front of 71 Showground Road)	3/1188091
7.	Strip of Land adjacent to Showground Road (in front of 73 Showground Road)	4/1188091
8.	Strip of Land adjacent to Showground Road (in front of 77 Showground Road)	5/1188091
9.	Strip of Land adjacent to Showground Road (in front of 81 Showground Road)	6/1188091
10.	Strip of Land adjacent to Showground Road (in front of 99 Showground Road)	7/1188091
11.	Strip of Land adjacent to Showground Road (in front of 35-37 Showground Road)	15/1188091
12.	Castle Hill Station Site	112/1180955
13.	Norwest Station Site	101/1181138
14.	Adjacent to Norwest Boulevard	1/1213270
15.	Partial_34, 36, 38, 40, 46 Brookhollow Ave, Baulkham Hills	1/1213271
16.	Cr of Norwest Boulevard& Brookhollow Ave	187/1180966
17.	Bella Vista Station Site	101/1188643
18.	Bella Vista Station Site	1/270243
19.	Bella Vista Station Site	103/1188643
20.	Bella Vista Station Site	102/1188643
21.	Bella Vista Station Site	105/1188643
22.	Bella Vista Station Site	13/270243
23.	Bella Vista Station Site	6/270243

No.	Street Address	Folio Identifier
24.	Bella Vista Station Site	12/270243
25.	Bella Vista Station Site	104/1188643
26.	Bella Vista Station Site	12/1184373
27.	Cumberlege Lane, Kellyville	11/1184373
28.	Cumberlege Lane, Kellyville	10/1184373
29.	18 Cumberlege Lane, Kellyville	101/1084481
30.	Cumberlege Lane, Kellyville	9/1184373
31.	Cumberlege Lane, Kellyville	21/1184373
32.	Cumberlege Lane, Kellyville	8/1184373
33.	Cumberlege Lane, Kellyville	20/1184373
34.	Cumberlege Lane, Kellyville	7/1184373
35.	Cumberlege Lane, Kellyville	19/1184373
36.	Cumberlege Lane, Kellyville	6/1184373
37.	Cumberlege Lane, Kellyville	18/1184373
38.	Cumberlege Lane, Kellyville	18/1184373
39.	Cumberlege Lane, Kellyville	4/1184373
40.	Cumberlege Lane, Kellyville	16/1184373
41.	Cumberlege Lane, Kellyville	5/1184373
42.	Cumberlege Lane, Kellyville	17/1184373
43.	Cumberlege Lane, Kellyville	3/1184373
44.	Cumberlege Lane, Kellyville	15/1184373
45.	Cumberlege Lane, Kellyville	2/1184373
46.	Cumberlege Lane, Kellyville	14/1184373
47.	Cumberlege Lane, Kellyville	1/1184373
48.	Cumberlege Lane, Kellyville	13/1184373
49.	25 Balmoral Road, Kellyville	9/241547
50.	23 Balmoral Road, Kellyville	10/241547
51.	Partial - Balmoral Road, Kellyville	1/1203920

No.	Street Address	Folio Identifier
52.	Partial - Balmoral Road, Kellyville	3/1203920
53.	3 Taggert Way, Kellyville	32/1071715
54.	Partial - Corner of Miami St & Old Windsor Road (opp Balmoral Road)	110/1204116
55.	5 Taggert Way, Kellyville	31/1071715
56.	42 Memorial Ave, Kellyville	30/1071715
57.	45 Memorial Ave, Kellyville	140/1121172
58.	25 Old Windsor Road, Kellyville	1/1066762
59.	Partial - Balmoral Road, Kellyville	2/1203920
60.	Old Windsor Road, Kellyville	11/1063682
61.	Old Windsor Road, Kellyville, NSW 2155	13/1184376
62.	Old Windsor Road, Kellyville	7/1184376
63.	Old Windsor Road, Kellyville	12/1184376
64.	Old Windsor Road, Kellyville	6/1184376
65.	Old Windsor Road, Kellyville	3/1201591
66.	Old Windsor Road, Kellyville	5/1184376
67.	Old Windsor Road, Kellyville	2/1201591
68.	Old Windsor Road, Kellyville	4/1184376
69.	4 Lewis Jones Drive, Kellyville	4/1201591
70.	Old Windsor Road, Kellyville	11/1201592
71.	Old Windsor Road, Kellyville	3/1184376
72.	Old Windsor Road, Kellyville	2/1184376
73.	Samantha Riley Drive, Kellyville	8/1184376
74.	Samantha Riley Drive, Kellyville	1/1184376
75.	Samantha Riley Drive, Kellyville	102/1122070
76.	Old Windsor Road, Kellyville	104/1122070
77.	Windsor Road, Beaumont Hills (A\C 12058-186)	29/13822
78.	113-114 Windsor Road, Beaumont Hills	12/1031575
79.	Old Windsor Road, Kellyville	2/1067179

No.	Street Address	Folio Identifier
80.	114 Windsor Road, Beaumont Hills	1/1067179
81.	Windsor Road, Beaumont Hills A|C 12058 - 186	27/13822
82.	Windsor Road, Beaumont Hills A|C 12058 - 186	28/13822
83.	792 Windsor Road, Rouse Hill	1/651335
84.	782 Windsor Road, Rouse Hill	1/882329
85.	768 Windsor Road, Rouse Hill	1/1185657
86.	105 Schofields Road, Rouse Hill	33/1167828
87.	Partial Lot - Behind 103 Schofields Road, Rouse Hill	4/1190434
88.	Partial Lot - Behind 101 Schofields Road, Rouse Hill	3/1190434
89.	Partial Lot - Behind 99 Schofields Road, Rouse Hill	2/1190434
90.	97 Schofields Road, Rouse Hill	8/27220
91.	Partial Lot - Behind 95 Schofields Road, Rouse Hill,	1/1190434
92.	93 Schofields Road, Rouse Hill NSW 2155	10/27220
93.	34 Cudgegong Road, Rouse Hill	120/208203
94.	53 Terry Road , Rouse Hill	133/208203
95.	79 Schofields Road	15/1168129
96.	35 Cudgegong Road, Rouse Hill	71/208203
97.	81 Schofields Road, Rouse Hill	10/1185116
98.	77 Schofields Road, Rouse Hill	14/1168129
99.	75 Schofields Road, Rouse Hill	13/1168129
100.	73 Schofields Road, Rouse Hill	12/1168129
101.	71 Schofields Road, Rouse Hill	11/1168129
102.	69 Schofields Road, Rouse Hill	10/1168129
103.	28 Tallawong Road, Rouse Hill	70/30186
104.	47 Tallawong Road, Rouse Hill	27/30186
105.	31 Tallawong Road, Rouse Hill	26/30186
106.	67 Schofields Road, Schofields	10/1185113
107.	65 Schofields Road, Schofields	14/1189148

No.	Street Address	Folio Identifier
108.	63 Schofields Road, Schofields NSW 2762	13/1189148
109.	61 Schofields Road, Schofields	12/1189148
110.	59 Schofields Road, Schofields NSW 2762	11/1189148
111.	57 Schofields Road, Schofields	10/1189148
112.	55 Schofields Road, Schofields	9/1189148
113.	53 Schofields Road, Schofields	8/1189148
114.	51 Schofields Road, Schofields	7/1189148
115.	68 Gordon Road, Schofields	27/39341
116.	51 Tallawong Road, Rouse Hill	28/30186
117.	57 Tallawong Road, Rouse Hill	29/30186
118.	5 Oak St, Schofields Road	28/39341
119.	2 Oak St, Schofields Road	29/39341

Substratum

No.	Folio Identifier
1.	100/1180951
2.	11/1180958
3.	111/1180955
4.	121/1180956
5.	130/1180963
6.	150/1180975
7.	161/1180965
8.	162/1180965
9.	163/1180965
10.	164/1180965
11.	165/1180965
12.	181/1180966
13.	182/1180966

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 140/1180973

SEARCH DATE	TIME	EDITION NO	DATE
8/7/2019	12:09 PM	2	9/11/2018

LAND

LOT 140 IN DEPOSITED PLAN 1180973
AT CASTLE HILL
LOCAL GOVERNMENT AREA THE HILLS SHIRE
PARISH OF CASTLE HILL COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1180973

FIRST SCHEDULE

SYDNEY METRO (R AN784557)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 DP633665 EASEMENT FOR ELECTRICITY PURPOSES AFFECTING THE PART DESIGNATED (B) IN THE TITLE DIAGRAM
2 DP1194607 EASEMENT FOR UNDERGROUND CABLES 1.5 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1194607
3 DP1194607 EASEMENT FOR PADMOUNT SUBSTATION 2.75 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1194607

NOTATIONS

UNREGISTERED DEALINGS: PE DP1253217.

*** END OF SEARCH ***

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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Received: 08/07/2019 12:09:57

Appendix H Council Records

Hills Shire Council - Online Services & Payments

Software Maintenance Notice

eServices Planned interruptions due to End of Financial Year: Friday 4:30pm 28th June 2019 - Mon 9am 1 July 2019

eServices functions such as Section 10.7 (s149), 603, 88G & 735A Certificates, Payments, Application lodgement, DA Searches and Rates will be unavailable during the End of Financial Year work.

Development Applications

Listed below are the results for the enquiry that you requested. If available, you can click on the first column to display the details for that entry.

Application Details

Application Number	Date	Application Description	Property Address	Status
633/2001/MC	6/09/2000	A New Bin Area	Hills Showground Railway Station, 1 Mandala Parade, CASTLE HILL NSW 2154	Approved
572/2001/NC	6/09/2000	A New Bin Area	Hills Showground Railway Station, 1 Mandala Parade, CASTLE HILL NSW 2154	Lodged
334/2002/CDC	10/04/2002	Alarm Panel Installation	Hills Showground Railway Station, 1 Mandala Parade, CASTLE HILL NSW 2154	Approved
174/2008/MC	26/07/2007	An Office Modification	Hills Showground Railway Station, 1 Mandala Parade, CASTLE HILL NSW 2154	Approved
133/2008/NC	26/07/2007	A office modification	Hills Showground Railway Station, 1 Mandala Parade, CASTLE HILL NSW 2154	Lodged
242/2011/CDC	8/02/2011	Internal Alterations	Hills Showground Railway Station, 1 Mandala Parade, CASTLE HILL NSW 2154	Approved
480/2014/PCDC	31/12/2013	Internal fitout works for ground floor	Hills Showground Railway Station, 1 Mandala Parade, CASTLE HILL NSW 2154	Approved
1617/2019/HA	13/05/2019	Early activation works at Showground Station including recreation area for 5 years, one shade sail and operation of a hardstand area for food and drink vehicle at one location on private land	Hills Showground Railway Station, 1 Mandala Parade, CASTLE HILL NSW 2154	Evaluation

New Search

Appendix I EPA Records

Preventing contaminated land
PFAS investigation program
PFAS investigation process
PFAS investigation program FAQs
Other contamination issues
Stay up to date

Map view | List view

Site	Address	Details
Albion Park Fire and Rescue NSW	Airport Road, Albion Park, 2527	More information
Alexandria Fire and Rescue NSW	189 Wyndham Street Alexandria	More information
Argenton: Mines Rescue	533 lake Road, Argenton NSW 2284	More information
Armidale Fire and Rescue NSW	10 Mann Street, Armidale, 2350	More information
Bathurst Airport	P J Moodie Memorial Dr, Raglan NSW 2795	More information
Bankstown Airport	3 Avro St, Bankstown NSW 2200	More information
Blamey Barracks Kapooka	Kapooka Dr, Kapooka NSW 2661	More information
Botany Bay area		More information
Botany Industrial Park	Dent Street, Botany, 2019	More information
Camden Airport	Aerodrome Rd, Cobbitty NSW 2570	More information
Currambene Creek	Currambene Creek	More information
Deniliquin Fire and Rescue NSW	Cobb Highway, Deniliquin, 2710	More information
Fuchs	2 Holland St, Wickham NSW 2293	More information
Gold Coast Airport	Eastern Avenue, Coolangatta, QLD 4225	More information
Greenacre Fire and Rescue	1 and 1A Amarina Avenue	More information
Hawkesbury River		More information
Heatherbrae: Total Fire Solutions	15 Giggins Rd, Heatherbrae NSW 2324	More information
HMAS Albatross	Nowra Hill, 2540	More information
Holsworthy Barracks	Macarthur Drive, Holsworthy, 2173	More information
Jervis Bay Range Facility / HMAS Creswell	Jervis Bay Territory, 2540	More information
Kemps Creek NSW Rural Fire Service	245 Devonshire Road	More information
Kurnell: Caltex	2 Solander St, Kurnell, 2231	More information
Lake Macquarie	Lake Macquarie	More information
Lake Toolooma	Heathcote National Park	More information
Lithgow: Mines Rescue	3 Proto Ave, Lithgow NSW 2790	More information
Londonderry TestSafe & Fire and Rescue NSW	667 The Northern Road, Londonderry, 2753	More information
Lord Howe Island	Lord Howe Island	More information
Mulwala - Thales	Bayly St, Mulwala NSW 2647	More information
Munmorah and Colongra Power Stations	Station Road, Colongra NSW 2262	More information
Orange Airport	136 Aerodrome Road, Orange NSW 2800	More information
Quirindi Airport	Quirindi NSW 2343	More information
Richmond RAAF Base	Middleton Avenue, Richmond, 2753	More information
Rutherford: Truegain	62 Kyle St, Rutherford NSW 2320	More information
Shoalhaven River	Shoalhaven River, 2541	More information
Salt Ash Weapons Range	Salt Ash NSW	More information
Singleton Heights: Mines Rescue Services	6 Lachland Avenue, Singleton Heights NSW 2330	More information
Singleton Military Area	Singleton NSW	More information
Singleton NSW Rural Fire Service		More information
South Nowra NSW Rural Fire Service	92 Albatross Road, South Nowra	More information
St Columba's Catholic College	168 Hawkesbury Rd, Springwood, 2777	More information
Swanson Industries	2 Georgetown Road, Broadmeadow, 2292	More information
Tamworth Regional Airport	Shand Cir, Tamworth, 2340	More information
Wagga Wagga RAAF Base	Sturt Highway, Wagga Wagga, 2650	More information
Wellington Fire and Rescue NSW	67 Falls Road, Wellington, 2820	More information
Westleigh NSW Rural Fire Service	12 Warrigal Drive, Westleigh	More information
Williamtown RAAF Base	49 Medowie Road, Williamtown, 2314	More information

Tags: PFAS

Sampling and analysis

The EPA is collecting samples of soils and/or waters for analysis for PFAS. The EPA is also looking for exposure pathways that may increase people's contact with the chemicals, such as bore and surface water usage.

Search results

Your search for:Suburb: CASTLE HILL

Search Again
Refine Search

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the planning process.

Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... more search tips

More information about particular sites may be available from:

- The POEO public register
- The appropriate planning authority: for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act.

See What's in the record and What's not in the record.

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.
This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register.POEO public register

24 June 2019

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CASINO	Corner Store	30 Barker STREET	Service Station	Regulation under CLM Act not required	-28.86316792	153.0389124
CASINO	Casino Roadhouse	86 Johnston STREET	Service Station	Under assessment	-28.85960698	153.0562429
CASULA	Caltex Casula Service Station	646 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.95641262	150.8934783
CATHERINE HILL BAY	Catherine Hill Bay Coal Handling and Preparation Plant	1A Keene STREET	Other Industry	Regulation under CLM Act not required	-33.16120556	151.6302456
CESSNOCK	Caltex Cessnock Service Station	103-105 Wollombi (Cnr James Street) ROAD	Service Station	Regulation under CLM Act not required	-32.83936243	151.3430078
CESSNOCK	Former Mobil Service Station	102 Wollombi ROAD	Service Station	Regulation under CLM Act not required	-32.83844074	151.3436022
CESSNOCK	Former Service Station	2-4 Allandale ROAD	Service Station	Regulation under CLM Act not required	-32.83118911	151.3560677
CHARBON	Charbon Colliery	Charbon ROAD	Other Industry	Regulation under CLM Act not required	-32.92390131	149.9839098
CHARLESTOWN	7-Eleven Charlestown	273 Charlestown ROAD	Service Station	Under assessment	-32.95802555	151.6897931
CHARLESTOWN	Caltex Service Station	81 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-32.96708479	151.6955919
CHARLESTOWN	Caltex Woolworths (Former BP)	91-93 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-32.96633569	151.6959051
CHARLESTOWN	Ausgrid Powell Street Depot	8 Powell STREET	Other Industry	Regulation under CLM Act not required	-32.95912375	151.6944136
CHARMHAVEN	Caltex Charmhaven Service Station	13-15 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.21655768	151.5091452
CHATSWOOD	Former Caltex Chatswood Service Station	607 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.80396472	151.1795766
CHATSWOOD	Woolworths Chatswood	364-366 Eastern Valley WAY	Service Station	Regulation under CLM Act not required	-33.78667419	151.2010828

Search results

Your search for: **General Search** with the following criteria

Suburb - castle hill

returned 31 results

Export to excel 1 of 2 Pages Search Again

Number	Name	Location	Type	Status	Issued date
11895	CRC INDUSTRIES (AUST) PTY LIMITED	9 GLADSTONE ROAD, CASTLE HILL, NSW 2154	POEO licence	Issued	23 May 2003
1050943	CRC INDUSTRIES (AUST) PTY LIMITED	9 GLADSTONE ROAD, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	02 Sep 2005
1095155	CRC INDUSTRIES (AUST) PTY LIMITED	9 GLADSTONE ROAD, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	23 Jun 2009
1526962	CRC INDUSTRIES (AUST) PTY LIMITED	9 GLADSTONE ROAD, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	28 Apr 2015
1534373	CRC INDUSTRIES (AUST) PTY LIMITED	9 GLADSTONE ROAD, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	06 Oct 2015
6735	ECOLAB PTY LTD	6 HUDSON AVENUE, CASTLE HILL, NSW 2154	POEO licence	No longer in force	09 Aug 2000
1002798	ECOLAB PTY LTD	6 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.91 Clean Up Notice	Issued	17 Nov 2000
1002799	ECOLAB PTY LTD	6 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	20 Nov 2000
1002832	ECOLAB PTY LTD	6 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.91 Clean Up Notice	Issued	20 Nov 2000
1027226	ECOLAB PTY LTD	6 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	19 May 2003
1051833	ECOLAB PTY LTD	6 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	12 Sep 2005
1076458	ECOLAB PTY LTD	6 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	08 Nov 2007
5968	HOBSON ENGINEERING CO PTY LTD	14 VICTORIA AVE, CASTLE HILL, NSW 2154	POEO licence	No longer in force	04 Feb 2000
1044241	HOBSON ENGINEERING CO PTY LTD	14 VICTORIA AVE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	03 Feb 2005
2872	HOLT LLOYD AUSTRALASIA PTY LTD	15 HUDSON AVE, CASTLE HILL, NSW 2154	POEO licence	Surrendered	24 May 2000
2847	PARKER HANNIFIN (AUSTRALIA) PTY. LIMITED	9 CARRINGTON ROAD, CASTLE HILL, NSW 2154	POEO licence	Surrendered	01 May 2000
1044239	PARKER HANNIFIN (AUSTRALIA) PTY. LIMITED	9 CARRINGTON ROAD, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	06 Feb 2005
12202	SIGMA-ALDRICH PTY. LIMITED	12 ANELLA AVENUE, CASTLE HILL, NSW 1765	POEO licence	Surrendered	23 Nov 2004
1074288	SIGMA-ALDRICH PTY. LIMITED	12 ANELLA AVENUE, CASTLE HILL, NSW 1765	s.58 Licence Variation	Issued	06 Nov 2007
6701	SMC CORPORATION (AUSTRALIA) PTY LTD	14-18 HUDSON AVENUE, CASTLE HILL, NSW 2154	POEO licence	Issued	19 May 2000

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Search results

Your search for: **General Search** with the following criteria

Suburb - castle hill

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Number	Name	Location	Type	Status	Issued date
1044239	PARKER HANNIFIN (AUSTRALIA) PTY. LIMITED	9 CARRINGTON ROAD, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	06 Feb 2005
1073465	PARKER HANNIFIN (AUSTRALIA) PTY. LIMITED	9 CARRINGTON ROAD, CASTLE HILL, NSW 2154	s.80 Surrender of a Licence	Issued	23 May 2007
12202	SIGMA-ALDRICH PTY. LIMITED	12 ANELLA AVENUE, CASTLE HILL, NSW 1765	POEO licence	Surrendered	23 Nov 2004
1074288	SIGMA-ALDRICH PTY. LIMITED	12 ANELLA AVENUE, CASTLE HILL, NSW 1765	s.58 Licence Variation	Issued	06 Nov 2007
1121925	SIGMA-ALDRICH PTY. LIMITED	12 ANELLA AVENUE, CASTLE HILL, NSW 1765	s.80 Surrender of a Licence	Issued	03 Dec 2010
6701	SMC CORPORATION (AUSTRALIA) PTY LTD	14-18 HUDSON AVENUE, CASTLE HILL, NSW 2154	POEO licence	Issued	19 May 2000
1046359	SMC CORPORATION (AUSTRALIA) PTY LTD	14-18 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	11 Apr 2005
1096759	SMC CORPORATION (AUSTRALIA) PTY LTD	14-18 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	22 Jan 2009
1097956	SMC CORPORATION (AUSTRALIA) PTY LTD	14-18 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	14 May 2009
1109342	SMC CORPORATION (AUSTRALIA) PTY LTD	14-18 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	16 Dec 2009
1529568	SMC CORPORATION (AUSTRALIA) PTY LTD	14-18 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	01 Jun 2015
1576491	SMC CORPORATION (AUSTRALIA) PTY LTD	14-18 HUDSON AVENUE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	11 Mar 2019
20319	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	POEO licence	Surrendered	30 Sep 2013
1517520	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	11 Nov 2013
1518596	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	29 Nov 2013
1519019	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	19 Dec 2013
1519320	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	09 Jan 2014
1521159	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	31 Mar 2014
1521476	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	14 Apr 2014
1521774	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway	s.58 Licence Variation	Issued	09 May 2014

Station, CASTLE HILL,
NSW 2154

1 2 3

16 September 2019

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Search Again

Number	Name	Location	Type	Status	Issued date
1522873	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	20 Jun 2014
1523337	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	14 Jul 2014
1523570	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	21 Jul 2014
1525214	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	30 Sep 2014
1525680	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	17 Oct 2014
1526354	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	17 Nov 2014
1529472	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	27 Mar 2015
1530676	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	15 May 2015
1531229	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	10 Jun 2015
1531910	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	06 Jul 2015
1532871	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	13 Aug 2015
1533757	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	07 Sep 2015
1534633	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	16 Oct 2015
1535892	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	23 Nov 2015
1541770	THIESS PTY LTD	Between Balmoral Road Bella Vista and Epping Railway Station,	s.80 Surrender of a Licence	Issued	12 Jul 2016

		CASTLE HILL, NSW 2154			
11782	WALTER SCHELLANDER	40/5 ANELLA AVENUE, CASTLE HILL, NSW 2154	POEO licence	No longer in force	04 Nov 2002
1048341	WALTER SCHELLANDER	40/5 ANELLA AVENUE, CASTLE HILL, NSW 2154	s.58 Licence Variation	Issued	31 May 2005

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Licence summary

Search Again | Return to Previous Page

Summary Licence No: 2847

View this licence (PDF document 198 kb)

Licence holder: PARKER HANNIFIN (AUSTRALIA) PTY. LIMITED
Premises: PARKER HANNIFIN (AUSTRALIA) PTY LIMITED
9 CARRINGTON ROAD, CASTLE HILL, NSW, 2154
LGA: THE HILLS SHIRE **Catchment:** Hawkesbury
Administrative fee: $760.00
Licence status: Surrendered
Activity type: Hazardous, Industrial or Group A Waste Generation or Storage
Licence review: Complete date 06 Feb 2005
Complete date 01 Jul 2002
Due date 06 Feb 2010
Pollution incident management plan: No

Applications

Number	Application type	Current status	Date received
1073465	s.80 Surrender of a Licence	Issued	10 May 2007

Notices

Number	Issue date	Notice type
1044239	06 Feb 2005	s.58 Licence Variation
1073465	23 May 2007	s.80 Surrender of a Licence

Annual Returns

Start date	End date	Date received	Non-compliance	LBL data
21-Jan-2007	24-May-2007	18-Jul-2007	No	Not available
21-Jan-2006	20-Jan-2007	16-Mar-2007	No	Not available
21-Jan-2005	20-Jan-2006	20-Mar-2006	No	Not available
21-Jan-2004	20-Jan-2005	07-Jun-2005	No	Not available
21-Jan-2003	20-Jan-2004	19-Mar-2004	No	Not available
21-Jan-2002	20-Jan-2003	07-Mar-2003	No	Not available
21-Jan-2001	20-Jan-2002	01-Mar-2002	No	Not available
21-Jan-2000	20-Jan-2001	13-Mar-2001	No	Not available

Section 55 Protection of the Environment Operations Act 1997

Environment Protection Licence

Licence - 11782

Department of **Environment & Climate Change** NSW

Licence Details	
Number:	11782
Anniversary Date:	04-November
Review Due Date:	31-May-2010

Licensee

SCHELLANDER; WALTER
UNIT 40/5 ANELLA AVENUE
CASTLE HILL NSW 2154

Licence Type

Premises

Premises

BRONZING STUDIO - CHROMETECH
40/5 ANELLA AVENUE
CASTLE HILL NSW 2154

Scheduled Activity

Waste Activities

Fee Based Activity	**Scale**
Hazardous, Industrial or Group A Waste Generation or Storage (73)	0 - 10 T

Region

Waste Operations
59-61 Goulburn Street
SYDNEY NSW 2000
Phone: 02 9995 5000
Fax: 02 9995 5999

PO Box A290 SYDNEY SOUTH
NSW 1232

Environment Protection Licence

Licence - 11782

Department of Environment & Climate Change NSW

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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act); and
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

SCHELLANDER; WALTER
UNIT 40/5 ANELLA AVENUE
CASTLE HILL NSW 2154

subject to the conditions which follow.

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Waste Activities

Fee Based Activity	Scale
Hazardous, Industrial or Group A Waste Generation or Storage (73)	0 - 10 T

A1.3 Not applicable.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
BRONZING STUDIO - CHROMETECH
40/5 ANELLA AVENUE
CASTLE HILL
NSW
2154
LOT 40 SP 48998

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:
(a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
(b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 Not applicable.

P1.3 Not applicable.

3 Limit conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

L2.1 Not applicable.

L2.2 Not applicable.

L3 Concentration limits

L3.1 Not applicable.

L3.2 Not applicable.

L3.3 Not applicable.

L4 Volume and mass limits

L4.1 Not applicable.

L5 Waste

L5.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.

L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.

L5.3 Except as provided by any other condition of this licence, only the hazardous and/or industrial and/or Group A waste listed below may be generated and/or stored at the premises.

Cyanides - inorganic [A130]; Chromium compounds [(hexavalent and trivalent) [D140]; Copper compounds [D190]; Nickel compounds [D210]; Selenium and selenium compounds [D240].

L5.4 The quantity of hazardous/and/or industrial and/or Group A waste generated and/or stored on the premises must not exceed 10 tonnes per year.

L6 Noise Limits

L6.1 Not applicable.

L7 Polychlorinated Biphenyls (PCBs)

Note: The licensee must comply with the conditions as specified in this licence or where no specific conditions are outlined in this licence, the licensee must comply with the "Chemical Control Order in Relation to Materials and Wastes Containing Polychlorinated Biphenyl, 1997".

L8 Asbestos

Note: The licensee must comply with the conditions as specified in this licence or where no specific conditions are outlined in this licence, the licensee must comply with the Protection of the Environment Operations (Waste) Regulation 1996.

L9 Potentially offensive odour

L9.1 No condition of this licence identifies a potentially offensive odour for the purposes of Section 129 of the Protection of the Environment Operations Act 1997.

L9.2 The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

4 Operating conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:
(a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
(b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
(a) must be maintained in a proper and efficient condition; and
(b) must be operated in a proper and efficient manner.

O3 Emergency response

O3.1 Within 3 months of the date of the issue of this licence, the licensee must develop, or update, an emergency response plan which documents the procedures to deal with all types of incidents (e.g. spill, explosions or fire) that may occur at the premises or outside of the premises (e.g. during transfer) which are likely to cause harm to the environment.

O4 Processes and management

O4.1 The licensee must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the EPA Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes, in force as at 1 July 1999.

O4.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5 Monitoring of waste movements within NSW

O5.1 Conditions O5.2 to O5.16 apply to the movement of the types of hazardous and/or industrial and/or Group A waste as listed in L5.3, within NSW.

Prerequisites for waste movements

O5.2 If the waste is transported from the premises, the licensee must ensure that the waste is transported:
(a) to a place which has been licensed by the EPA to issue consignment authorisation numbers; and
(b) to a place that can otherwise lawfully accept that class of waste.

O5.3 If the waste is transported from the premises, the licensee must;
(a) obtain a consignment authorisation number from the consignee;
(b) complete an approved waste data form in relation to the consigned waste in accordance with the instructions on the form and to the extent required, and give a copy of the form to the person transporting the waste;
(c) ensure that the waste data form:
(i) is completed accurately, and
(ii) is retained for a period of not less than 4 years from the time the form was completed, and
(iii) is made available for inspection by an authorised officer on request;
(d) ensure, if the waste is of such an amount as to require the person transporting it to be licensed, that the person transporting the waste is licensed.

Application for a consignment authorisation number

O5.4 To obtain a consignment authorisation number as required by 05.3 (a), the licensee must apply in writing to the consignee. An application must include the following information:
(a) a statement identifying the classification of the waste in accordance with the requirements of condition 04.1;
(b) copies of all information used to classify the waste;
(c) an estimate of the amount of waste to which the application applies;
(d) whether the consignment will consist a single load or multiple loads;
(e) an estimate of the total period required for transportation of the consignment;
(f) the date of dispatch of at least the first load in the consignment.

Note: The licensee may nominate the dates of dispatch of as many loads as is feasible. This should be discussed with the consignee and will depend on the predictability of the rate of generation of the waste and the likelihood of the need for amendments to the dates nominated. If the waste is predictable, a schedule may be able to be submitted for the entire consignment, however if it is unpredictable, the date of only one future load may be able to be determined at a time (see also 05.9 about amending notified dates).

Note: The requirement for a written application for a consignment authorisation number does not preclude preliminary contact to obtain quotes and/or advice. Such preliminary contact does not require the formal provision of the above information that need only be supplied in the formal application.

O5.5 Once an application for a consignment authorisation number, as set out in 05.4 has been submitted, the licensee must not submit an application for the same consignment to another consignee until notification is received concerning the outcome of the application.

Notification of dates of dispatch of the second and subsequent loads in a consignment.

O5.6 The licensee must provide the consignee with written notification of the date of dispatch of each load of waste.

O5.7 The notification referred to in 05.6 must be received by consignee no later than the date of arrival of the preceding load at the destination.

Notification of a final load in a consignment.

O5.8 Unless the movement of an entire consignment of waste occurs in a single load, by the time the final load in a consignment is accepted at the destination, the licensee must have informed the consignee in writing, that no further loads are to be dispatched under that consignment authorisation number.

Note: The notifications referred to in conditions 05.6 and 05.8 may be attached to the waste data form of the preceding load.

Amendments to the nominated date(s) of dispatch

O5.9 If the date of dispatch for a load of waste is changed, the licensee must give written notification of this to the consignee and nominate a revised date of dispatch.

O5.10 A notification referred to in 05.9 must occur on or before the date of delivery as previously nominated.

Note: More than one amendment to dates of dispatch may occur.

Cancellation of consignment authorisations

O5.11 If the licensee determines that the delivery of a consignment of waste is to be discontinued for any reason, the consignee must be notified in writing before the nominated date of dispatch of the next expected load.

Notification of delayed delivery by transporter

O5.12 If the licensee receives written notification from a transporter who removed waste from the premises specifying a revised date of delivery to the destination which is more than 7 days after the date of dispatch, the licensee must note and record that date.

Record keeping

O5.13 The licensee must record and retain all information related to each consignment of waste.

Note: This includes waste data forms and copies of other documents such as notifications of revised delivery dates, regular and other reports, etc.

O5.14 The records referred to in 05.13 must be kept so that:
(a) all records relating to individual consignment authorisation numbers are kept physically together;
(b) consignments transported by each transporter can be readily identified and accessed; and
(c) consignments sent to each destination can readily be identified and accessed.

Note: The licensee must keep all information for at least 4 years.

Exception reporting

O5.15 The licensee must notify the EPA, in writing, within 48 hours of becoming aware of any suspected breaches of the Act, the Protection of the Environment Operations (Waste) Regulation 1996 or this licence.

O5.16 The licensee must notify the EPA in writing within 48 hours of becoming aware of any of the following:
(a) the refusal by a person to whom the licensee has applied for a consignment authorisation number in accordance with 05.4 to issue such a number;
(b) the refusal of a transporter to transport waste after arriving at the licensee's premises for the purposes of transporting that waste;
(c) a transporter who transports, or attempts to transport, waste without a waste data form completed to the extent required;
(d) the refusal of a consignee to accept waste from the licensee;
(e) the failure of the licensee to receive written confirmation of receipt of waste from a consignee within 21 days of dispatch, or where a transporter has provided written notification of a revised date of delivery as set out in 05.12 within 21 days of that date;
(f) the notification by a transporter of a revised date of delivery which is more than 90 days after the date of dispatch of the waste.

Note: The EPA should be notified of exception reports by sending a facsimile to:

Manager, Hazardous Waste Regulation

NSW Environment Protection Authority

O6 Monitoring of interstate movements of controlled wastes

O6.1 Conditions O6.2 to O6.11 apply to the movement of the types of hazardous and/or industrial and/or Group A waste as listed in L5.3, into and out of NSW.

Note: The requirements of the NEPM apply to the interstate movement of any of the wastes listed in Appendix 1 of this licence.

Classification of controlled waste

O6.2 The licensee must accurately identify the waste, in accordance with 04.1, and determine if the waste is a controlled waste within the meaning of the NEPM.

Note: The waste producer must check with the agency in the State or Territory of destination to determine whether waste is classified as a controlled waste under the NEPM. Unless advised otherwise by the agency of the State or Territory of destination, any waste included in Appendix 1 of this licence is a controlled waste for the purposes of the NEPM.

Application for a consignment authorisation

O6.3 If the waste is transported from the premises to another participating State or Territory, the

licensee must comply with all conditions attached to the consignment authorisation issued by an agency or a facility delegated by an agency in the destination State or Territory.

Note: The waste producer is required by the Protection of the Environment Operations (Waste) Regulation 1996 to obtain, prior to the waste being dispatched, a consignment authorisation from an agency, or a facility delegated by an agency, in the destination State or territory to allow the movement of controlled waste.

Waste movements

O6.4 If the waste is transported from the premises to another participating State or Territory, the licensee must ensure that the waste is transported to a place that can lawfully be used as a waste facility for that waste.

O6.5 The licensee must ensure that the waste transporter is licensed as required by the agency of each participating State or Territory through which the waste is transported.

O6.6 The licensee must:
(a) retain a copy of the waste transport certificate for the waste for a period of not less than 4 years from the time the form was completed, and
(b) make the copy of the waste transport certificate available for inspection by an authorised officer on request.

Note: The waste producer is required by the Protection of the Environment Operations (Waste) Regulation 1996 to complete a waste transport certificate for the waste. This should be done in accordance with the instructions printed on the certificate and the required copy of the waste transport certificate should be forwarded to the agency in the State of destination.

Notification of delayed delivery by transporter

O6.7 If the licensee receives written notification from the transporter who removed waste from the licensee's premises specifying a revised date of delivery to the destination which is more than 7 days after the date of dispatch, the licensee must note and record that date.

Record keeping

O6.8 The licensee must record and retain all information related to each consignment of waste.

Note: This includes the waste transport certificates and copies of other documents such as consignment authorisations issued by an agency in the destination State or Territory, notifications of revised delivery dates by transporters, regular and other reports, etc.

O6.9 The records referred to in 06.8 must be kept so that:
(a) all records relating to each consignment authorisation are kept physically together;
(b) consignments transported by each transporter can be readily identified and accessed, and
(c) consignments sent to each destination can readily be identified and accessed.

Note: The licensee must keep all information for at least 4 years.

Exception reporting

O6.10 The licensee must notify the EPA in writing within 48 hours of becoming aware of a suspected breach of the Act, the Protection of the Environment Operations (Waste) Regulation 1996 or this licence.

O6.11 The licensee must notify the EPA in writing within 48 hours of becoming aware of any of the following:
(a) the refusal by an agency, or facility delegated by an agency, in participating State or Territory to whom the licensee has applied for a consignment authorisation in accordance with 06.3, to issue such an authorisation;
(b) the refusal of a transporter to transport waste after arriving at the licensee's premises for the purposes of transporting that waste to another participating State or Territory to the extent required;
(c) a transporter who transports, or attempts to transport, waste to another participating State or Territory without a waste transport certificate completed to the extent required;
(d) the refusal of a destination in another participating State or Territory to accept from the licensee waste for which a consignment authorisation has been issued;
(e) the failure of the licensee to receive written confirmation of receipt of waste from a destination in another participating State or Territory within 28 days of dispatch.

Note: The EPA should be notified of exception reports by sending a facsimile to:

Manager, Hazardous Waste Regulation
NSW Environment Protection Authority

5 Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
(a) in a legible form, or in a form that can readily be reduced to a legible form;
(b) kept for at least 4 years after the monitoring or event to which they relate took place; and
(c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
(a) the date(s) on which the sample was taken;
(b) the time(s) at which the sample was collected;
(c) the point at which the sample was taken; and
(d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 Not applicable.

M3 Testing methods - concentration limits

M3.1 Not applicable.

M3.2 Not applicable.

M4 Recording of pollution complaints

M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M4.2 The record must include details of the following:
(a) the date and time of the complaint;
(b) the method by which the complaint was made;
(c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
(d) the nature of the complaint;
(e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
(f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

M5.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M5.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
(a) the date of the issue of this licence or

(b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

M6 Requirement to monitor volume or mass

M6.1 Not applicable.

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
(a) a Statement of Compliance; and
(b) a Monitoring and Complaints Summary.
A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:
(a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
(b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
(a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
(b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

Deadline for Annual Return

R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

Notification where actual load can not be calculated

R1.6 Not applicable.

Licensee must retain copy of Annual Return

R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

Certifying of Statement of Compliance and signing of Monitoring and Complaints Summary

R1.8 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
(a) the licence holder; or
(b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
(a) where this licence applies to premises, an event has occurred at the premises; or
(b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
(a) the cause, time and duration of the event;
(b) the type, volume and concentration of every pollutant discharged as a result of the event;
(c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
(d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
(e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
(f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
(g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Regular reporting of transportation of certain wastes within NSW

R4.1 Conditions R4.2 to R4.5 apply to the transport of hazardous and/or industrial and/or Group A waste within NSW.

Regular reporting

R4.2 The licensee must supply to the EPA, for each transporter that transported waste from the licensees premises, the information as set out in Appendix 2, table 1.

R4.3 The licensee must supply to the EPA, for each destination within NSW which received waste from the licensee, the information as set out in Appendix 2, table 2.

Reporting periods

R4.4 Reports to the EPA in accordance with R4.2 and R4.3 shall be supplied on or before:
(a) 30 April for the reporting of information relating to wastes transported from the premises between 1 January and 31 March of that year;
(b) 31 July for the reporting of information relating to wastes transported from the premises between 1 April and 30 June of that year;
(c) 31 October for the reporting of information relating to wastes transported from the premises between 1 July and 30 September of that year;
(d) 31 January for the reporting of information relating to wastes transported from the premises between 1 October and 31 December of the previous year.

Note: The EPA should be notified of exception reports by sending a facsimile to:
Manager, Hazardous Waste Regulation

NSW Environment Protection Authority

Nil reports

R4.5 If waste has not been transported from the premises in any reporting period as set out in R4.4 the EPA must be advised in writing by the licensee, by the dates referred to in R4.4 in lieu of reporting as required in R4.2 and R4.3.

R5 Regular reporting of interstate movements of controlled wastes

R5.1 Conditions R5.2 to R5.5 apply to the movement of <hazardous and/or industrial and/or Group A> waste as listed in L5.3, into and out of NSW.

Note: The requirements of the NEPM apply to the interstate movement of any of the wastes listed in Appendix 1 of this licence.

Regular reporting

R5.2 The licensee must supply to the EPA, for each transporter that transported waste from the premises to a destination in another participating State or Territory, the information as set out in Appendix 2, table 3.

Reporting periods

R5.3 Reports to the EPA in accordance with R5.2 shall be supplied on or before:
(a) 30 April for the reporting of information relating to wastes transported from the premises between 1 January and 31 March of that year;
(b) 31 July for the reporting of information relating to wastes transported from the premises between 1 April and 30 June of that year;
(c) 31 October for the reporting of information relating to wastes transported from the premises between 1 July and 30 September of that year;
(d) 31 January for the reporting of information relating to wastes transported from the premises between 1 October and 31 December of the previous year.

Nil reports

R5.4 If waste has not been transported from the premises in any reporting period as set out in R5.3, the EPA must be advised in writing by the licensee, by the dates referred to in R5.3 in lieu of reporting as defined in R5.2.

Interstate transport of controlled wastes

R5.5 The licensee must comply with the requirements of the NEPM.

General conditions

G1 Copy of licence kept at the premises

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Pollution studies and reduction programs

U1.1 Not applicable.

Special conditions

E1.1 Not applicable.

Appendices

APPENDIX 1

WASTE DESCRIPTIONS AND CORRESPONDING WASTE CODES

The waste descriptions and waste codes shown below must be used to identify hazardous, industrial and Group A wastes on the waste data form for movements of those wastes within NSW, and to identify controlled wastes on the waste transport certificate for those wastes moved between NSW and other States and Territories. The waste codes must also be used to identify wastes when reporting the information required in the Tables in Appendix 2.

Description	Waste Code		Description	Waste Code
Acidic solutions or acids in solid form	B100		Organohalogen compounds - other than substances referred to in this list	M160
Animal effluent and residues (abattoir effluent, poultry and fish processing	K100		Perchlorates	D340

Environment Protection Licence



wastes)				
Antimony; antimony compounds	D170		Phenols, phenol compounds including chlorophenols	M150
Arsenic; arsenic compounds	D130		Phosphorus compounds excluding mineral phosphates	D360
Asbestos	N220		Polychlorinated dibenzo-furan (any congener)	M170
Barium compounds (excluding barium sulphate)	D290		Polychlorinated dibenzo-p-dioxin (any congener)	M180
Basic solutions or bases in solid form	C100		Residues from industrial waste treatment/disposal operations	T190
Beryllium; beryllium compounds	D160		Selenium; selenium compounds	D240
Boron compounds	D310		Sewage sludge and residues including nightsoil and septic tank sludge	K130
Cadmium; cadmium compounds	D150		Soils contaminated with a waste	N120
Ceramic-based fibres with physico-chemical characteristics similar to those of asbestos	N230		Surface active agents (surfactants), containing principally organic constituents and which may contain metals and inorganic materials	M250
Chlorates	D350		Tannery wastes (including leather dust, ash, sludges and flours)	K140
Chromium compounds (hexavalent and trivalent)	D140		Tellurium; tellurium compounds	D250
Clinical and related wastes	R100		Thallium; thallium compounds	D180
Cobalt compounds	D200		Triethylamine catalysts for setting foundry sands	M230
Containers and drums which are contaminated with residues of substances referred to in this list	N100		Tyres	T140
Copper compounds	D190		Vanadium compounds	D270
Cyanides (inorganic)	A130		Waste chemical substances arising from research and development or teaching activities including those which are not identified and/or are new and whose effects on human health are not known	T100
Cyanides (organic)	M210		Waste containing peroxides other than hydrogen peroxide	E100
Encapsulated, chemically-fixed, solidified or polymerised wastes	N160		Waste from heat treatment and tempering operations containing cyanides	A110
Ethers	G100		Waste from manufacture, formulation and use of wood-preserving chemicals	H170
Filter cake	N190		Waste from the production, formulation and use of biocides and phytopharmaceuticals	H100
Fire debris and fire washwaters	N140		Waste from the production, formulation and use of inks, dyes, pigments, paints, lacquers and varnish	F100
Fly ash	N150		Waste from the production, formulation and use of organic solvents	G160
Grease trap waste	K110		Waste from the production, formulation and use of photographic chemicals and processing materials	T120
Halogenated organic solvents	G150		Waste from the production, formulation and use of resins, latex, plasticisers, glues and adhesives	F110
Highly odorous organic chemicals (including mercaptans and acrylates)	M260		Waste from the production and preparation of pharmaceutical products	R140
Inorganic fluorine compounds excluding calcium fluoride	D110		Waste mineral oils unfit for their original intended use	J100
Inorganic sulfides	D330		Waste oil/water, hydrocarbons/water mixtures or emulsions	J120
Isocyanate compounds	M220		Waste pharmaceuticals, drugs and medicines	R120
Lead; lead compounds	D220		Waste resulting from surface treatment of metals and plastics	A100
Mercury; mercury compounds	D120		Waste tarry residues arising from refining, distillation, and any pyrolytic treatment	J160
Metal carbonyls Nickel compounds Non toxic salts Organic phosphorous compounds	D100 D210 D300 H110		Waste substances and articles containing or contaminated with polychlorinated biphenyls, polychlorinated napthalenes, polychlorinated terphenyls and/or polybrominated biphenyls	M100
Organic solvents excluding halogenated solvents	G110		Wool scouring wastes Zinc compounds	K190 D230

Environment Protection Licence

APPENDIX 2

Table 1

[Table 1 refers to the regular reporting requirements in R4.2. Its purpose is to provide information on the total amount of waste moved by each transporter from waste activities in NSW.]

1. The licensee must provide a copy of the information in the following table for each transporter used by the licensee in the reporting period.

Waste Activities Table 1: Waste Movements By Transporter and Waste Category			
Name of Licensed Waste Activity:		**Waste Activity Licence No.:**	
Reporting Period:		**ANZSIC Code for Waste Activity:**	
Name of Transporter:		**Licence No. of Transporter**	

Waste class	**Waste Code**	**Amount of Waste Transported in Reporting Period (tonnes)**
Hazardous Non-Liquid Waste	*Code for each waste of this class*	*Total Weight for waste of each code*
Hazardous Liquid Waste	*Code*	*Weight*
	Code	*Weight*
Industrial Non-Liquid Waste	*Code*	*Weight*
	Code	*Weight*
Group A Liquid Waste	*Code*	*Weight*

	Code	Weight

[NOTES: ***Waste code*** *refers to the codes listed in Appendix 1 of this licence and entered on the waste transport certificates.*
Waste class *refers to the classification of waste in accordance with Appendix 1 of the Protection of the Environment Operations Act 1997 and its regulations.*

ANZSIC code *means the Australian and New Zealand Standard Industrial Classification code published by the Australian Bureau of Statistics.]*

Table 2:

[Table 2 refers to the reporting requirements in R4.3. Its purpose is to provide information on the total amount of waste sent to each destination within NSW. Cross referencing by ANZSIC code provides data on which types of industry are sending wastes to disposal and treatment facilities.]

1. The licensee must provide a copy of the information in the following table for each destination within NSW used by the licensee in the reporting period for the purposes of the receipt of controlled waste.

Waste Activities Table 2: Waste Movements By Destination (within NSW) and Waste Category			
Name of Licensed Waste Activity:		**Waste Activity Licence No.:**	
Reporting Period:		**ANZSIC Code for Waste Activity**	
Destination:			

Waste class	**Waste Code**	**Amount of Waste Transported in Reporting Period (tonnes)**
Hazardous Non-Liquid Wastes	*Code for each waste of this class*	*Total Weight for waste of each code*
	Code	*Weight*
Industrial Non-Liquid Wastes	*Code*	*Weight*
	Code	*Weight*
Hazardous Liquid Wastes	*Code*	*Weight*
	Code	*Weight*
Group A Liquid Wastes	*Code*	*Weight*

Environment Protection Licence

Department of **Environment & Climate Change** NSW

NOTES:
***Waste code** refers to the codes listed in Appendix 1 of this licence and entered on waste data forms.*
***Waste class** refers to the classification of waste in accordance with Schedule 1 of the Protection of the Environment Operations Act 1997 and its regulations.*

***ANZSIC code** means the Australian and New Zealand Standard Industrial Classification code published by the Australian Bureau of Statistics.*

Table 3:

[Table 3 refers to the regular reporting requirements in R5.2. Its purpose is to provide information on the total amounts of controlled wastes sent from NSW licensed waste activities to other States and Territories. Cross-referencing by ANZSIC code allows data on which types of industries are sending wastes interstate.]

1. The licensee must provide a copy of the information in the following table for each destination outside NSW used by the licensee in the reporting period for the purposes of the receipt of controlled waste.

Waste Activities Table 3: Controlled Waste Movements By Interstate Destination and Waste Category			
Name of Licensed Waste Activity:		**Waste Activity Licence No.:**	
Reporting Period:		**ANZSIC Code Waste Activity:**	
Destination State or Territory:		**Destination Facility**	
Waste class	**Waste Code**	**Amount of Waste Transported in Reporting Period (tonnes)**	
Hazardous Non-Liquid Waste	*Code for each waste of this type*	*Total Weight for waste of this code*	
	Code	*Weight*	
Industrial Non-Liquid Waste	*Code*	*Weight*	
	Code	*Weight*	
Hazardous Liquid Waste	*Code*	*Weight*	
	Code	*Weight*	
Group A Liquid Waste	*Code*	*Weight*	

Other Types of Waste (eg Group B and C Liquid Wastes, Used Tyres)	*Code*	*Weight*

*[NOTES: **Waste code** refers to the codes listed in Appendix 1 of this licence and entered on the waste transport certificates.*
***Waste class** refers to the classification of waste in accordance with Appendix 1 of the Protection of the Environment Operations Act 1997 and its regulations.*
***ANZSIC code** means the Australian and New Zealand Standard Industrial Classification code published by the Australian Bureau of Statistics.]*

Dictionary

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
COD	Means chemical oxygen demand

composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997

regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Model Licence Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

Agency	A body or bodies of a participating State or a participating Territory which that State or Territory has nominated for the purposes of the NEPM.
Chemical control order (CCO)	An order under sections 22 and 23 of the Environmentally Hazardous Chemicals Act 1985.
Consignee	The person to whom the waste is dispatched, and includes: (a) in the case of a waste facility that is licensed - the occupier; (b) in the case of a person carrying on mobile waste processing that is licensed - the person operating the mobile place; (c) in the case of a place that can be otherwise lawfully be used as a waste facility for that waste - the owner or occupier of that place.
Consignment	One or more shipments of a specified waste dispatched to a particular destination.

Consignment authorisation	An approval which includes a unique identifier granted by an agency, or a facility delegated by an agency, in the jurisdiction of destination to allow the movement of controlled waste.
Controlled waste	Any waste included in List 1 of Schedule A of the NEPM, provided that the waste possesses one or more of the characteristics in List 2, of Schedule A of the NEPM.
Date of dispatch	The date on which a load of waste is removed from the premises**.**
Destination	Where hazardous, industrial or Group A wastes are transported within NSW, the place described in the waste data form as the destination for the waste. Where controlled wastes are transported between NSW and another participating State or Territory, the place described in Part 3 of the waste transport certificate as the facility receiving the waste.
Facility	A place where controlled wastes are received.
Facility Operator	A person in charge of a facility.
Jurisdiction of destination	In relation to a particular consignment of waste means the State or Territory in which the facility is located to which the waste is intended to be transported.
Load	The amount of a consignment of waste placed on a vehicle for any single dispatch from the premises at which it was generated or stored.
Load number	A consecutive number identifying each load of waste within a consignment and starting with 1 for the first load of each consignment. One or more loads may make up a consignment.
NEPM	The National Environment Protection (Movement of Controlled Wastes between States and Territories) Measure 1998.
Non-liquid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997.
Participating State or Territory	A State or Territory that is (a) a party to the Intergovernmental Agreement on the Environment made on 1 May 1992 between the Commonwealth, the States, the Australian Capital Territory, the Northern Territory and the Australian Local Government Association, a copy of which is set out in the Schedule to the Commonwealth Act; and (b) in which an Act that corresponds to the National Environment Protection Council Act 1994 of the Commonwealth is in force in accordance with the Agreement.
Recycling of waste	The processing of waste into a similar non-waste product.
Regulation	The Protection of the Environment Operations (Waste) Regulation 1996.
Transporter	A person responsible for moving controlled wastes either from one participating State or Territory to another or through participating States or Territories.
Waste activity	An activity, whether required to be licensed or not, carried on for business or other commercial purposes, that involves the generating or storage of any of the following waste classes: (a) hazardous waste, (b) industrial waste,

	(c) Group A waste.
Waste class	Means either hazardous, industrial or Group A waste.
Waste data form	A certificate in the form approved by the EPA.
Waste guidelines	The document called *"Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes"* issued by the EPA and in force as at 1 July 1999.
Waste producer	Means the licensee.
Waste transport certificate	A certificate in the form approved by the EPA as fulfilling the requirements of Schedule B of the National Environment Protection (Movement of Controlled Wastes between States and Territories) Measure 1998.

Mr Julian Thompson

Environment Protection Authority

(By Delegation)

Date of this edition - 09-Sep-2005

End Notes

1	Licence varied by notice 1048341, issued on 31-May-2005, which came into effect on 25-Jun-2005.
2	Licence transferred through application 143681, approved on 09-Sep-2005, which came into effect on 04-Nov-2004.

Licence summary

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Summary Licence No: 11782

View this licence (PDF document 199 kb)

Licence holder: **WALTER SCHELLANDER**
Trading as: BRONZING STUDIO - CHROMETECH
Premises: BRONZING STUDIO - CHROMETECH
40/5 ANELLA AVENUE, CASTLE HILL, NSW, 2154
LGA: THE HILLS SHIRE **Catchment:** Hawkesbury
Administrative fee: $476.00
Licence status: No_longer_in_force
Activity type: Hazardous, Industrial or Group A Waste Generation or Storage
Licence review: Complete date 31 May 2005
Due date 31 May 2010
Pollution incident management plan: No

Applications

Number	Application type	Current status	Date received
143681	s.55 Licence Transfer	Approved	05 Sep 2005

Notices

Number	Issue date	Notice type
1048341	31 May 2005	s.58 Licence Variation

Annual Returns

Start date	End date	Date received	Non-compliance	LBL data
04-Nov-2006	03-Nov-2007	04-Jan-2008	No	Not available
04-Nov-2005	03-Nov-2006	21-Nov-2006	No	Not available
04-Nov-2004	03-Nov-2005	09-Dec-2005	No	Not available
04-Nov-2003	03-Nov-2004	24-Dec-2004	No	Not available
04-Nov-2002	03-Nov-2003	01-Dec-2003	No	Not available

Licence summary

Search Again | Return to Previous Page

Summary Licence No: 20319

View this licence (PDF document 163 kb)

Licence holder: THIESS PTY LTD
Premises: North West Rail Link Tunnels and Station Civil Works Between Balmoral Road Bella Vista and Epping Railway Station, CASTLE HILL, NSW, 2154
LGA: THE HILLS SHIRE **Catchment:** Hawkesbury
Administrative fee: $6,450.00
Licence status: Surrendered
Activity type: Railway systems activities
Licence review: Due date 30 Sep 2018
Pollution incident management plan: Last tested 29 Oct 2014
Current Environmental Risk Level: Level 1

Applications

Number	Application type	Current status	Date received
1519019	s.58 Licence Variation	Issued	06 Dec 2013
1519320	s.58 Licence Variation	Issued	12 Dec 2013
1521159	s.58 Licence Variation	Issued	03 Mar 2014
1521476	s.58 Licence Variation	Issued	11 Apr 2014
1521774	s.58 Licence Variation	Issued	19 Mar 2014
1522873	s.58 Licence Variation	Issued	27 May 2014
1523337	s.58 Licence Variation	Issued	24 Jun 2014
1523570	s.58 Licence Variation	Issued	11 Jul 2014
1525214	s.58 Licence Variation	Issued	17 Sep 2014
1525680	s.58 Licence Variation	Issued	07 Oct 2014
1526354	s.58 Licence Variation	Issued	12 Nov 2014
1529472	s.58 Licence Variation	Issued	25 Feb 2015
1530676	s.58 Licence Variation	Issued	30 Apr 2015
1531229	s.58 Licence Variation	Issued	18 May 2015
1531910	s.58 Licence Variation	Issued	02 Jul 2015
1532871	s.58 Licence Variation	Issued	02 Jul 2015
1533757	s.58 Licence Variation	Issued	21 Aug 2015
1534633	s.58 Licence Variation	Issued	08 Oct 2015
1535892	s.58 Licence Variation	Issued	09 Nov 2015
1541770	s.80 Surrender of a Licence	Issued	20 Jun 2016

Notices

Number	Issue date	Notice type
1517520	11 Nov 2013	s.58 Licence Variation
1518596	29 Nov 2013	s.58 Licence Variation
1519019	19 Dec 2013	s.58 Licence Variation
1519320	09 Jan 2014	s.58 Licence Variation
1521159	31 Mar 2014	s.58 Licence Variation
1521476	14 Apr 2014	s.58 Licence Variation
1521774	09 May 2014	s.58 Licence Variation
1522873	20 Jun 2014	s.58 Licence Variation
1523337	14 Jul 2014	s.58 Licence Variation
1523570	21 Jul 2014	s.58 Licence Variation
1525214	30 Sep 2014	s.58 Licence Variation

1525680	17 Oct 2014	s.58 Licence Variation
1526354	17 Nov 2014	s.58 Licence Variation
1529472	27 Mar 2015	s.58 Licence Variation
1530676	15 May 2015	s.58 Licence Variation
1531229	10 Jun 2015	s.58 Licence Variation
1531910	06 Jul 2015	s.58 Licence Variation
1532871	13 Aug 2015	s.58 Licence Variation
1533757	07 Sep 2015	s.58 Licence Variation
1534633	16 Oct 2015	s.58 Licence Variation
1535892	23 Nov 2015	s.58 Licence Variation
1541770	12 Jul 2016	s.80 Surrender of a Licence

Annual Returns

Start date	End date	Date received	Non-compliance	LBL data
30-Sep-2015	12-Jul-2016	31-Jul-2016	No	Not available
30-Sep-2014	29-Sep-2015	23-Nov-2015	yes	Not available
30-Sep-2013	29-Sep-2014	26-Nov-2014	yes	Not available

Environment Protection Licence

Licence - 20319

Licence Details	
Number:	20319
Anniversary Date:	30-September

Licensee

THIESS PTY LTD

PO BOX 6904

BAULKHAM HILLS NSW 2153

Premises

NORTH WEST RAIL LINK TUNNELS AND STATION CIVIL WORKS

BETWEEN BALMORAL ROAD BELLA VISTA AND EPPING RAILWAY STATION

CASTLE HILL NSW 2154

Scheduled Activity

Railway Systems Activities

Fee Based Activity	Scale
Railway systems activities	Any annual capacity

Region

Metropolitan Infrastructure

Level 13, 10 Valentine Ave

PARRAMATTA NSW 2150

Phone: (02) 9995 5000

Fax: (02) 9995 6900

PO Box 668 PARRAMATTA

NSW 2124

Environment Protection Licence

Licence - 20319

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Environment Protection Licence

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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Environment Protection Licence

Licence - 20319

The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

THIESS PTY LTD
PO BOX 6904
BAULKHAM HILLS NSW 2153

subject to the conditions which follow.

Environment Protection Licence

Licence - 20319

1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Railway Systems Activities	Railway systems activities	Any annual capacity

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
NORTH WEST RAIL LINK TUNNELS AND STATION CIVIL WORKS
BETWEEN BALMORAL ROAD BELLA VISTA AND EPPING RAILWAY STATION
CASTLE HILL
NSW 2154
LAND IDENTIFIED IN CONDITION A2.2 FOR THE CONSTRUCTION OF TUNNELS AND STATION CIVIL WORKS BETWEEN BALMORAL ROAD BELLA VISTA AND EPPING RAILWAY STATION. THIS INCLUDES SURFACE SITES AT EPPING, CHELTENHAM, CHERRYBROOK, CASTLE HILL, THE HILLS CENTRE, NORWEST AND BELLA VISTA.

A2.2 The premises is defined by the most recently approved premises maps held on the EPA Electronic File EF13/5184.

A2.3 Premises maps are not deemed to be approved by the EPA unless confirmed as such in writing by the EPA.

A2.4 Premises maps must be submitted to the EPA no later than 3 business days prior to any proposed changes to those maps.

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

A3.2 Unless specifically stated by other conditions of this licence, Environmental Management Plans or Systems supplied to the EPA by the licensee do not form part of this licence.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Discharge and monitoring at the outlet of sediment basins	Discharge and monitoring at the outlet of sediment basins	the outlet from sediment basins refered to in P1.3 of this licence

P1.3 The location of discharge points is defined by the most recently approved discharge point register held on the EPA Electronic File EF13/5184.

P1.4 The discharge point register is not deemed to be approved by the EPA unless confirmed as such in writing by the EPA.

P1.5 The discharge register must be submitted to the EPA no later than 5 business days prior to any proposed changes to the register.

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

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L2 Concentration limits

L2.1 For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.

L2.4 Water and/or Land Concentration Limits

POINT 1

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Oil and Grease	Visible				not visible
pH	pH				6.5-8.5
Total suspended solids	milligrams per litre				50

L2.5 Exceedence of a quality limit specified in Condition L2.4 of this licence for the discharge of pH and TSS from the sediment basins identified in Condition P1.3 of this licence is permitted if:

(a) the discharge occurs solely as a result of rainfall measured at the Premises exceeding 36mm over any consecutive five (5) day period immediately prior to the discharge occurring from basins listed in Condition P1.3.

(b) The sediment basins and other erosion and sediment controls on the site have been designed, constructed, installed, maintained and managed in accordance with best management principles and practices described in the guideline “Managing Urban Stormwater – Soils and Construction – Volume 1, 4th edition, 2004” produced by the NSW Department of Housing.

L2.6 If the licensee uses turbidity (NTU) in place of TSS to determine compliance with Condition L2.4, the licensee must develop a statistical correlation which identifies the relationship between NTU and TSS for water quality in the sediment basin/s in order to determine the NTU equivalent of 50 mg/L TSS before its use.

L2.7 The licensee must provide the EPA with a copy of the statistical correlation assessment methodology and results before using NTU in place of TSS.

L2.8 The licensee must develop and implement a method to enable the ongoing verification of the relationship between NTU and TSS.

L2.9 The licensee must provide the EPA with any amendments the licensee makes to the statistical correlation as a result of the ongoing verification required by Condition L2.7 before using the revised statistical correlation

L3 Noise limits

L3.1 All works and activities must be undertaken in a manner that will minimise noise and vibration impacts on sensitive receivers.

L3.2 The licensee must ensure that all feasible and reasonable noise and vibration mitigation and management measures are implemented during construction work authorised by this licence, in accordance with the
Interim Construction Noise Guideline (DECC, 2009).

L4 Hours of operation

L4.1 **Standard construction hours**

Unless permitted by another condition of this licence, construction works and activities must:

a) only be undertaken between the hours of 7:00 am and 6:00 pm Monday to Friday;

b) only be undertaken between the hours of 8:00 am and 1:00 pm Saturday; and

c) not be undertaken on Sundays or Public Holidays.

L4.2 **Exemptions to standard construction hours**

The following construction work may be undertaken outside of the hours specified by Condition L4.1:

a) Construction work that causes $L_{Aeq(15minute)}$ noise levels that are:

(i) no more than 5 dB above rating background level at any residence in accordance with the *Interim Construction Noise Guideline* (DECC, 2009); and

(ii) no more than the noise management levels specified Table 3 of the *Interim Construction Noise Guideline* (DECC, 2009) at other sensitive land uses;

b) Delivery of plant, equipment and materials required to be delivered out of hours for safety reasons; and

c) Emergency construction works or activities to ensure the safe operation of the activity or avoid loss of life, damage to property, or environmental harm. The licensee must:

(i) on becoming aware of the need to undertake emergency construction work, notify the Environment Protection Authority's Environment Line on 131 555 of the need for those activities or work; and:

(ii) the next working day following the emergency works, submit a report to the EPA's Manager Metropolitan Infrastructure detailing:

1. the cause, time and duration of the emergency;

2. action taken by the licensee in relation to the emergency; and

3. details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of the emergency.

L4.3 **High Noise Impact Works**

High noise impact works and activities must only be undertaken:

a) between the hours of 8:00am to 6:00pm Monday to Friday;

b) between the hours of 8:00am to 1:00pm Saturday; and

c) in continuous blocks not exceeding 3 hours each with a minimum respite from those activities and works of not less than 1 hour between each block.

except as expressly permitted by Condition L4.4 and L4.5 or another condition of this licence.

For the purposes of this condition 'continuous' includes any period during which there is less than a 1 hour respite between ceasing and recommencing any of the work that is the subject of this condition.

L4.4 **Works Approved Outside of Standard Construction Hours – Weekends**

(a) Activities and works may be undertaken during the hours outlined in Condition L4.4(b) but only if one or more of the following applies:

(i) carrying on those works and activities during the hours specified in Condition L4.1 would cause unacceptable risks to one or more of the following:

(1) construction personnel safety;

(2) road user and public safety;

(3) road network operational performance as may be notified from time to time by the Roads and Maritime Services;

(4) essential utility services;

(ii) the Transport for NSW Traffic Management Centre (or other road authority) refuse to issue a road occupancy licence for the works or activities during the hours specified in Condition L4.1

(b) For the situations outlined in Condition L4.4(a), activities and works may be undertaken (except on public holidays) during the hours of:

(i) 1.00 pm and 6.00pm on Saturdays; and

(ii) 8.00 am and 6.00 pm on Sundays

(c) In undertaking any works or activities under Condition L4.4 the licensee must:

(i) comply with the requirements of Condition E1; and

(ii) implement noise and vibration mitigation detailed in the *Interim Construction Noise Guidelines* (DECC 2009).

(d) High noise impact works and activities must only be undertaken:

(i) between the hours of 8:00am to 6:00pm; and

(ii) in continuous blocks not exceeding 3 hours each with a minimum respite from those activities and works of not less than 1 hour between each block.

For the purposes of this condition 'continuous' includes any period during which there is less than a 1 hour respite between ceasing and recommencing any of the work that is the subject of this condition.

L4.5 **Works Approved Outside of Standard Construction Hours - Weekday evenings and nights**

(a) Activities and works may be undertaken during the hours outlined in L4.5(b) but only if one or more of the following applies:

(i) carrying on those works and activities during the hours specified in Condition L4.1 would cause unacceptable risks to one or more of the following:

(1) construction personnel safety;

(2) road user and public safety;

(3) road network operational performance as may be notified from time to time by the Transport for NSW Traffic Management Centre;

(4) essential utility services

(ii) the Transport for NSW Traffic Management Centre (or other road authority) refuse to issue a road occupancy licence for the works or activities during the hours specified in Condition L3.1.

(b) For the situations outlined in L4.5(a) works and activities may be undertaken (except on public holidays) between the hours of:

(i) 6:00 pm and 7:00 am the following day on Mondays, Tuesdays, Wednesdays, and Thursdays; and

(ii) 6:00 pm and 8:00 am the following day on Fridays.

(c) In undertaking any activities and works under Condition L4.5(b) the licensee must:

(i) comply with the requirements of Condition E1;

(ii) implement noise and vibration mitigation measures as detailed in the *Interim Construction Noise Guidelines* (DECC 2009);

(iii) unless otherwise agreed to by relevant community stakeholders, ensure out of hours works and activities are not undertaken within the same local noise catchment on more than:

(a) 3 consecutive evenings or nights per week; and

(b) 4 evenings or nights per week; and

(c) 10 evenings or nights per month.

(iv) ensure high noise impact works and activities are not undertaken on more than 2 evenings or nights per week within the same local noise catchment.

L4.6 Additional works agreed outside of standard construction hours

A) Deleted

B) Out of Hours Works may be undertaken for the Norwest Local Area and Utilities Works provided that;

1) works are undertaken as per the application TF602-06.02F01 (REV6) NW_LAU OOHW dated 11 December 2013; and

2) works do not exceed the number of nights in Appendix C of the above document plus 1 contingency night per construction item.

C) Deleted

D) Out of hours works may be undertaken at the Bella Vista Worksite provided that;

1) works are undertaken as per the application TF602-06.01F04(rev 7) BV_TBM & Precast CNIS Dated 27 March 2014, and

2) Mitigation measures set out in Table 19 of the application are put in place.

3) works are undertaken as per TF602-06.01F08 (rev 1) BV CNIS Add1 TBM-DM OOHW dated 28 April 2015

E) Out of hours works may be undertaken at the Castle Hill Worksite provided that;

1) works are undertaken as per the application TF602-06.04F02 (rev 9) Castle Hill CNIS dated 14

October 2014, and

2) mitigation measures set out in Table 22 of the application are put in place.
3) works are undertaken as per the application TF602-06.04F05 (rev 2) CH_OOHW TBM OOHW Castle Hill CNIS dated 21 August 2015
F) Out of hours works may be undertaken for Settlement Monitoring Installation Works at Castle Hill provided that;

1) works are undertaken as per the TF602-06.04F03 (rev 2) CH_OOHW Settlement, application dated 29 April 2014, and

2) works do not exceed the number of nights in Appendix C of the above document.

G) Out of hours works may be undertaken at the Cherrybrook Worksite including station box excavation and Tunnel Boring Machine support works provided that;

1) works are undertaken as per the application TF602-06.05F04 (rev 3) CB_CNIS dated 19 May 2014, and

2) mitigation measures set out in Table 23 of the application are put in place,

3) offsite spoil haulage is not undertaken between 10pm and 7am.

4) works are undertaken as per TF602-0605F06 (rev2) Cherrybrook CNIS addendum dated 6 November 2015.

H) Out of hours works may be undertaken at the Norwest Worksite including station box excavation provided that;

1) works are undertaken as per the application TF602-06.02F03 (rev 9) NW CNIS dated 4 August 2014, and

2) mitigation measures set out in Table 21 of the application are put in place.

I) Out of hours works may be undertaken at the Showground work site including station box excavation and tunnel boring machine support works provided that;

1) works are undertaken as per the application TF602-06 03F02 (rev 7) SG_CNIS dated 12 August 2014,

2) mitigation measures set out in Table 23 of the application are put in place,

3) works are undertaken as per TF602-06.03F05 (rev1) SG CNIS addendum dated 3 October 2014.

4) works are undertaken as per TF602-06 03F06 (Rev 1) SG_CNIS Add2 TBM-OOHW dated 28 April 2015

J) Out of hours work may be undertaken at the Epping work site provided that;

1) works are undertaken as per the application TF602-06.07F07 CNIS (rev 16) Epping
CNIS dated 30 June 2015 and a letter from the licensee dated 15 July 2015 reference number 2.4.243.

2) mitigation measures set out in Table 22 of the application are put in place.

3) evening surface crane operations between 6pm and 10pm must only occur for a maximum of:

i) 3 consecutive evenings per week,
ii) 4 evenings per week total, and
iii) 12 evenings per month.

K) Out of hours work may be undertaken at the Cheltenham work site provided that;
1) works are undertaken as per the application TF602-06.06F04 (r2) CN_CNIS Add1 Cheltenham CNIS dated 22 June 2015, and
2) works are undertaken as per the application TF602-06 06F05 (r2) CN_CNIS Add2 Cheltenham CNIS Addendum 2 dated 21 August 2015

24 Hour Tunnelling Works

L4.7 A) Tunnelling works may be undertaken 24 hours per day, seven days per week provided that works are undertaken as per the application TF602-05F11 (rev 9) Tunnelling CNIS dated 4 July 2014 [or validated model predictions as set out in Condition L4.7 H)].

B) Tunnel Boring Machine, roadheader and rock breaking works can be undertaken 24 hours per day, seven days per week.

C) If the ground borne noise levels are predicted to exceed 45dB(A) for residential receivers between:
1) 10 pm and 7 am, Monday to Friday; or
2) 10 pm to 8 am , Saturdays; or
3) 6 pm to 7 am, Sundays and public holidays;
for more than two days an offer of alternative accommodation must be made no less than 5 days before the expected date when tunnelling will be 500m from the property, or no less than 10 days before the commencement of rock hammering.
4) Condition L4.7 C) does not apply to rock hammering for the construction of nozzles and stub tunnels.
5) If the offer of alternative accommodation set out in Condition L4.7 C) is not accepted by the resident the licensee must make an alternative respite offer to the resident such as movie tickets.

Note: For the avoidance of doubt this Condition should not be interpreted to require any monetary compensation to affected residents.

D) Rock hammering for the excavation of stub tunnels and nozzles must not be undertaken between:
1) 10 pm and 7 am, Monday to Friday; or
2) 10 pm to 8 am , Saturdays; or
3) 6 pm to 7 am, Sundays and public holidays;
where ground borne noise levels are predicted to exceed 45dB(A) for residential receivers for more than

two days.

E) The Licensee must notify the occupant of each residence and sensitive receiver located within the 35dB(A) ground borne noise contour shown in TF602-05F11 (rev 9) Tunnelling CNIS dated 4 July 2014 [or validated model predictions as set out in Condition 4.7H)] via letter box drop no less than 5 days before the expected date when tunnelling will be 500m from the property.

F) The Licensee must offer the occupant of each residence and sensitive receiver located within the 45dB(A) ground borne noise contour shown in TF602-05F11 (rev 9) Tunnelling CNIS dated 4 July 2014 [or validated model predictions as set out in Condition L4.7H)] all of the following:
1) Individual briefing;
2) Updates via phone or email or doorknock;
3) An alternative respite offer such as movie tickets.

G) Attended noise monitoring must be undertaken to verify the ground borne noise and vibration models documented in TF602-05F11 (rev 9) Tunnelling CNIS dated 4 July 2014 [or validated model predictions as set out in Condition L4.7H)].

H) 1) If the monitoring indicates that the predicted ground borne noise or vibration levels require refinement a copy of the verification report must be provided to the EPA for information within 20 days after completion of monitoring.
2) The verification report referred to in Condition L4.7 H)1) is not deemed to be approved by the EPA unless confirmed as such in writing by the EPA.

I) 1) Ground borne noise and/or vibration complaints must be investigated as set out in Condition M6.5 a).
2) If the complainant's premises is located within the 45 dB(A) ground borne noise contour or predicted to exceed the vibration disturbance criteria shown in TF602-05F11 (rev 9) Tunnelling CNIS dated 4 July 2014 [or validated model predictions as set out in Condition L4.7H)] the complainant must be offered attended noise monitoring.

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.
This includes:
a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
a) must be maintained in a proper and efficient condition; and
b) must be operated in a proper and efficient manner.

O3 Dust

O3.1 The licensee must minimise the emission of dust at the premises and prevent its emission from the premises to the greatest extent practicable.

O4 Processes and management

O4.1 The licensee must ensure that any polymer based flocculents used to treat water before discharge from the premises has an LC50 greater than 100 milligrams per litre for water fleas and fish. For the purpose of this condition "LC50" means the concentration of material that is estimated to be lethal to fifty percent of the test organisms, after an exposure period of 24 hours for water fleas and 96 hours for fish.

O4.2 **Community Meetings**

a) Community meetings or open forums must be held on an issue-specific basis for key construction activities.

Note: It is acknowledged that the full details of future construction works and activities may not be known at the time of a community meeting or forum. In accordance with Condition E1.3, detailed and targeted notification of the community must be undertaken before any out of hours construction works commence.

b) The licensee must keep minutes of any community meeting held in accordance with this condition and must submit a copy of the relevant minutes to the EPA when requested by an EPA officer.

O5 Waste management

O5.1 The licensee must assess, classify and manage any waste generated at the premises in accordance with the *Waste Classification Guidelines Part 1 : Classifying Waste, April 2008 (Waste Guidelines)* prior to dispatching the waste offsite.

O5.2 The licensee must not cause, permit or allow any waste generated:

(a) outside the premises to be received at the premises, except for recycled materials from Sydney Trains rail corridor (EPL12208) or Sydney Trains recycling facility (EPL7515) or materials that meet the EPA's Resource Recovery Exemptions for engineered fill purposes.

(b) at the premises to be disposed of at the premises, except as permitted in Condition O5.3.

O5.3 Excavated material suitable for re-use within the premises, may be transported from one part of the premises or the Sydney Trains rail corridor or Sydney Trains recycling facility to another part by road in accordance with Condition O5.4.

O5.4 The licensee must ensure that:

(a) the body of any vehicle or trailer, used to transport waste or excavation spoil from the premises, is covered before leaving the premises to minimise any spill or escape of any dust, waste, or spoil from the

vehicle or trailer; and

(b) mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the premises, is removed to the greatest extent practicable before the vehicle, trailer or motorised plant leaves the premises; and

(c) road surfaces subject to the tracking of material by vehicles leaving the premises are effectively cleaned at the end of each work day.

O6 Other operating conditions

O6.1 **Erosion and Sediment Control**

The licensee must, before undertaking any construction work (including any earthmoving or vegetation removal works), implement all soil and water management works required to minimise pollution of waters.

5 Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
a) in a legible form, or in a form that can readily be reduced to a legible form;
b) kept for at least 4 years after the monitoring or event to which they relate took place; and
c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
a) the date(s) on which the sample was taken;
b) the time(s) at which the sample was collected;
c) the point at which the sample was taken; and
d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Water and/ or Land Monitoring Requirements

Environment Protection Licence

Licence - 20319

POINT 1

Pollutant	Units of measure	Frequency	Sampling Method
Oil and Grease	Visible	Daily during any discharge	Visual Inspection
pH	pH	Daily during any discharge	In situ
Total suspended solids	milliequivalents per litre	Daily during any discharge	Grab sample

M3 Testing methods - concentration limits

M3.1 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Weather monitoring

M4.1 The licensee must monitor hourly temperature, humidity, wind velocity and rainfall at the nearest Australian Bureau of Meteorology weather station or the project weather station.

M5 Recording of pollution complaints

M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M5.2 The record must include details of the following:
a) the date and time of the complaint;
b) the method by which the complaint was made;
c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
d) the nature of the complaint;
e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
f) if no action was taken by the licensee, the reasons why no action was taken.

M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M6 Telephone complaints line

M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

Note: For the purposes of this condition, the telephone complaints line is operated by Transport for NSW. The licensee will have staff available to respond to complaints during its operating hours.

M6.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M6.3 The preceding two conditions do not apply until ; the date of the issue of this licence.

M6.4 **Notification of Community Complaints Line**

The licensee must ensure that the community notification required by condition M4.2 is undertaken :

a) on not less than two occasions at least seven days apart;

b) not less than 7 days and not more than 30 days before initial construction work commences at the premises;

c) by general advertisements and public notices in newspapers, including community language newspapers, that are regularly circulated within the communities likely to be affected by noise or other construction impacts; and

d) by including on the home page of the project web site information on:

(i) how the public can make a complaint on the telephone complaints line; and

(ii) how complaints will be processed.

Note: For the purposes of this condition, the initial notification has been undertaken by Transport for NSW and the project website is operated by Transport for NSW. Additional ongoing notification will be undertaken by the licensee following approval from TfNSW.

M6.5 **Noise and Vibration Complaints**

a) The licensee must investigate noise and vibration complaints from the occupants of dwellings or the management of noise sensitive receivers other than dwellings:

(i) within two hours of the complaint being made; or

(ii) in accordance with any prior complaint management agreement the licensee may have made with the complainant.

b) The licensee must ensure that any investigation referred to in this condition that identifies works or activities being undertaken on the licensed premises as the likely source of the complaint, includes an offer to the complainant to undertake attended noise or vibration monitoring at their premises.

c) If the occupant of the dwelling or the management of a noise sensitive receiver other than a dwelling

accepts the offer of attended noise or vibration monitoring the licensee must undertake that attended monitoring:

(i) as soon as practicable; or

(ii) at a time agreed with the complainant.

M6.6 **Notifying Results of Complaint Investigation**

The licensee must, in respect of each complaint made to the telephone complaints line required by condition M4.1, advise each complainant of the results of its investigation of their complaint and any proposed remedial action.

M6.7 **Authorised Licensee Representatives**

a) The licensee must ensure that two duly authorised representatives of the licensee are available for contact by the EPA at all times.

b) The licensee must provide the EPA with up to date details of natural persons authorised to represent the licensee in respect of:

(i) answering general enquiries made by the EPA or its authorised officers;

(ii) speaking on behalf of the licensee;

(iii) signing on behalf of the licensee; and

(iv) acting as the licensee's 'out of hours' contact with authority to direct the licensee's employees, agents and contractors to undertake such action as may be necessary to ensure that construction work complies with this licence.

c) The details required by condition M4.7 b) must include:

(i) the full name of each authorised representative and the scope of their authority to represent the licensee;

(ii) that status and title of each authorised representative within the licensee Organisation; and

(iii) the direct landline telephone number, mobile telephone number, pager number, fax number, email address and postal address of each authorised representative.

M7 Other monitoring and recording conditions

M7.1 The licensee must monitor noise and vibration from construction work and especially during work undertaken out of hours.

M7.2 All noise monitoring must be undertaken in accordance with *Australian Standard AS 2659.1 – 1998: Guide to the use of sound measuring equipment – Portable sound level meters*, or any revisions of that standard which may be made by Standards Australia, and the compliance monitoring guidance provided

in the *NSW Industrial Noise Policy*.

M7.3 All vibration monitoring must be undertaken in accordance with the guidance provided in the *Environmental Noise Management Assessing Vibration: A Technical Guideline* published by the Department of Environment and Conservation, February 2006. All vibration monitoring results must be assessed and reported against the acceptable values of human exposure to vibration set out in Tables 2.2 and 2.4 in this guideline.

M7.4 The licensee must undertake noise and vibration monitoring as directed by an authorised officer of the EPA.

6 Reporting Conditions

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
a) a Statement of Compliance; and
b) a Monitoring and Complaints Summary.
At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:
a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.7 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
a) the licence holder; or
b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
a) where this licence applies to premises, an event has occurred at the premises; or
b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
a) the cause, time and duration of the event;
b) the type, volume and concentration of every pollutant discharged as a result of the event;
c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Other reporting conditions

R4.1 Daily Reports

a) The licensee must submit, by 2:00 pm each business day, a report to the EPA that provides details of all complaints received in relation to construction activities regulated by the licence on the telephone complaints line required by Condition M6.1.

b) The report must:

(i) be submitted to the email address nominated from time to time by the EPA;

(ii) include a unique identifier number for each complaint together with the details required by condition M3.2;

(iii) include the date and time, as reported by the complainant, of the event the subject of the complaint;

(iv) include an outline of the work or activity the subject of the complaint;

(v) include the complaints received between 12.00 pm on that day and 12.00pm on the previous business day; and

(vi) if the works have been carried out under Conditions L3.4, L3.5 and L3.6, the report must include a copy of any assessments required by these conditions, unless previously provided to EPA, and details of how the requirements of these conditions have been met.

c) The licensee is not required to submit a report for any reporting period during which no complaints have been received.

R4.2 Noise and Vibration Reports

a) Upon request of an authorised officer of the EPA, the licensee must submit a Preliminary Investigation Report to the EPA in respect of any noise or vibration monitoring undertaken in accordance with the requirements of Condition M4.5.

b) The Preliminary Investigation Report must be submitted to the EPA by 4.30 pm of the afternoon of the next working day following any noise or vibration monitoring.

c) The Preliminary Investigation Report must:

(i) include numerical and/or graphical representation of the noise and vibration monitoring results; and

(ii) highlight any detected exceedance of noise goals or limits specified in:

(1) this licence;

(2) relevant noise guidelines; and

(3) relevant noise modelling.

d) In the event of any exceedance of the noise goals or limits referred to in Condition R4.2 c)(ii), the licensee must:

(i) modify work practices and methods and implement all practicable and reasonable measures to prevent a recurrence of the exceedance; and

(ii) submit a Follow-up Investigation Report to the EPA within 5 working days of any noise or vibration monitoring having been undertaken (unless otherwise approved by the EPA).

e) the Follow-up Investigation Report must include:

(i) confirmation of whether noise monitoring has been undertaken in accordance with AS2659 and the compliance monitoring guidance provided in the INP;

(ii) confirmation of whether vibration monitoring has been undertaken in accordance with the guidance provided in the Assessing vibration: a technical guideline (DEC, 2006);

(iii) details of the prevailing meteorological conditions during the period when the noise or vibration monitoring was undertaken;

(iv) a map of each noise and vibration monitoring location in relation to the noise source, including relevant distances;

(v) numerical and graphical representation of the noise and vibration monitoring results;

(vi) an analysis of the noise and vibration monitoring results;

(vii) details of any remedial action taken in relation to the matter; and

(viii) in cases not the subject of remedial action, detailed justification of the decision not to undertake remedial action.

R4.3 **Dust and Weather Reports**

a) The licensee must, when requested by an authorised officer of the EPA, provide a report concerning dust control and management at the premises.

b) The licensee must, for the period specified by the authorised officer, include the following in the report:

(i) the results of monitoring undertaken in accordance with condition M2.1;

(ii) details of any incident during which dust was emitted from the premises, including any photographs taken of the incident; and

(iii) details of the type and frequency of any dust control measures implemented at the premises.

c) The report must be submitted to the email address nominated from time to time by the EPA by 4.30 pm on the second working day after receiving a request referred to in this condition.

7 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

G2 Other general conditions

G2.1 **Environmental Induction**

a) The licensee must ensure that before any construction work is undertaken all personnel involved in undertaking that work receive environmental induction training.

b) The induction training must:

(i) clearly identify the location of all noise sensitive receivers likely to be affected by noise or vibration generated during the course of work undertaken by those personnel; and

(ii) highlight the licence requirements to minimise noise and vibration impacts on noise sensitive receivers.

8 Special Conditions

E1 Requirements for works permissible under conditions L4.4, L4.5 and L4.6

E1.1 Noise and Vibration Impact Assessment
a) A noise and vibration impact assessment is required for any works undertaken under Conditions L4.4, L4.5 and L4.6.
b) The noise and vibration impact assessment must be prepared by an appropriately qualified person experienced in assessing the impacts of noise and vibration from civil engineering works.
c) The noise and vibration impact assessment must include:
(i) details of the nature and scope of each activity and work, including details of times, vehicles, plant and equipment to be used to undertake that activity or work;
(ii) detailed analysis to justify the scheduling and duration of each activity and work outside the hours specified in Condition L4.1, including taking into account:
(1) the predicted impact on noise sensitive receivers of any activities and works undertaken outside the hours specified in Condition L4.1; and
(2) the preference that high noise impact works be undertaken during the day;
(iii) detailed analysis to justify use of the selected construction and work methods, plant and equipment compared to alternatives taking into consideration noise and vibration impacts;
(iv) a table showing details of the noise and vibration mitigation measures for each activity and

work, including respite periods, proposed to be adopted to minimise noise and vibration impacts on surrounding noise sensitive receivers in each locality;
(v) a table showing for each activity and work in each noise catchment
(1) the address of each of the most affected noise sensitive receivers;
(2) the background noise level for each of the noise sensitive receivers listed in the table,
(3) noise management levels as described in Section 4 of the Interim Construction Noise Guideline (DECC, 2009);
(4) the predicted LAeq (15 min) noise level, incorporating any 5 dB correction for particularly annoying activities as listed on page 16 of the Interim Construction Noise Guideline (DECC, 2009); and
(5) an assessment of sleep disturbance as set out in Section 4.3 of the Interim Construction Noise Guideline (DECC, 2009), where works are planned to extend over more than two consecutive nights
(vi) details of the specific noise mitigation measures to be adopted in respect of any activity or work predicted to generate noise levels at any noise sensitive receiver exceeding the noise affected LAeq(15minute) level of background plus 5 dB outside the standard hours set in Condition L4.1;
(vii) a diagram showing the location of noise and vibration monitoring locations in relation to each of the most affected noise sensitive receivers for each activity and work in each noise catchment;
d) The licensee must document the formal assessment required by this condition in a detailed report that includes all maps, calculations and analyses relied upon in making its determination of:
(i) whether the proposed activity or work may be undertaken pursuant to Conditions L4.4, L4.5 and L4.6;
(ii) the scheduling of each proposed activity and work;
(iii) the construction methods, plant and equipment used in each activity and work;
(iv) the noise and vibration impact mitigation measures adopted for each activity and work; and
(v) the location of each noise and vibration monitoring location.

E1.2 a) When the licensee undertakes works or activities or simultaneous combination of works or activities in accordance with Condition E1.1, the licensee must:
(i) undertake attended noise and vibration monitoring at representative stages of the activity or work to confirm whether the noise and vibration predictions in its noise and vibration assessment were accurate; and
(ii) review the work or activity or combination of simultaneous works or activities as soon as practicable following the events referred to in (1) and (2) below and where possible, modify the work or activity to prevent any recurrence of these events:
(1) noise monitoring referred to in (i) indicates that the activity, work or combination of simultaneous activities or works has caused or is causing noise or vibration levels higher than the predicted levels at any noise sensitive receiver; or
(2) the licensee, its contractors or its agents receive 2 or more complaints found to result from the activity, work or combination of simultaneous activities or works on the telephone complaints line referred to in condition M6.1 or by any other means.

E1.3 Community notification of works outside standard construction hours
a) The licensee must notify the community likely to be affected by noise or vibration from works or activities proposed to be undertaken outside of the hours specified by Condition L4.1 and L4.2, of those works or activites.
b) The notification must:
(i) be made by targeted letterbox drop, by clearly posting on the licensee’s project website and by email to noise sensitive receivers who have elected to be notified by email;

(ii) be made not less than 5 days and not more than 14 days before commencement of any out of hours works or activities;
(iii) include:
(1) a diagram that clearly identifies the location of the proposed out of hours works in relation to nearby cross streets and local landmarks or geographical features;
(2) details of the timing, nature, scope and duration of the proposed works and activities;
(3) detail of why the proposed works and activities are being undertaken outside of standard construction hours;
(4) details of the predicted noise and vibration impacts of the works on identified sensitive receivers;
(5) details of all proposed mitigation measures, including respite periods and proposed scheduling;
(6) details of the types of plant and equipment that will be used to undertake the work;
(7) details of how complaints may be made and additional information obtained about the work;
(8) contact details of an interpreter and translation service in community languages relevant to the locality who will assist callers in making contact with the licensee
(9) include notification of any upcoming project community meetings or forums.

E2 Special Dictionary

E2.1

Term	Meaning
AS 2659	means Australian Standard AS 2659.1 – 1988 : Guide to the use of sound measuring equipment – Portable sound level meters
Business day	excludes Saturdays, Sundays, public holidays and rostered days off (RDOs)
Operating hours	means hours during which any construction-related works or activities are being undertaken, including outside of standard construction hours
Construction work	includes all construction work and activities, and all construction-related work and activities, undertaken on the premises.
Day	the period from 0700 and 1800 h (Monday to Saturday) and 0800 to 1800 h (Sundays and Public Holidays) as per the definition in the New South Wales Government' s Industrial Noise Policy.
ENMAV	means the Environmental Noise Management technical guideline Assessing Vibration published by the Department of Environment and Conservation in February 2006.
Essential utility services	means telephone, electricity, gas and water services.
Evening	the period from 1800 to 2200 h as per the definition in the New South Wales Government's Industrial Noise Policy.

Environment Protection Licence

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High noise impact activities and works	means jack hammering, rock breaking or hammering, pile driving, vibratory rolling, cutting of pavement, concrete or steel or other work occurring on the surface that generates noise with impulsive, intermittent, tonal or low frequency characteristics.
INP	means the New South Wales Industrial Noise Policy published by the EPA in January 2000.
Impulsive noise	has the same meaning as in section 4.2 of the INP.
Interim Construction Noise Guidelines	Interim Construction Noise Guidelines (DECC, July 2009).
Intermittent noise	has the same meaning as in section 4.2 of the INP.
Local noise catchment	means an area in which all identified noise sensitive receivers are exposed to similar noise levels from the same source at the same time.
Low-frequency noise	the same meaning as in section 4.2 of the INP.
Out of hours	means hours outside those prescribed by condition O3.1.
Night	the period from 2200 to 0700 h (Monday to Saturday) and 2200 to 0800 h (Sundays and Public Holidays) as per the definition in the New South Wales Government' s Industrial Noise Policy.
Noise sensitive receiver	means any dwelling, boarding-house, child care centre, educational establishment, hospital, motel, nursing home, or place of public worship.
Practicable and reasonable	has the same meaning as 'reasonable and feasible' in the INP.
Soil and water management works	include all measures to control erosion and sediment such as sediment filters, drains, ponds, basins, stormwater run on and runoff controls, site stabilisation works, temporary water crossings and vehicular access controls.
Tonal noise	the same meaning as in section 4.2 of the INP.

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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder describe d at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 mo nths. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.

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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Mr Mark Hanemann

Environment Protection Authority

(By Delegation)

Date of this edition: 30-September-2013

Environment Protection Licence

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End Notes

2	Licence varied by notice 1517520 issued on 11-Nov-2013
3	Licence varied by notice 1518596 issued on 29-Nov-2013
4	Licence varied by notice 1519019 issued on 19-Dec-2013
5	Licence varied by notice 1519320 issued on 09-Jan-2014
6	Licence format updated on 27-Feb-2014
7	Licence varied by notice 1521159 issued on 31-Mar-2014
8	Licence varied by notice 1521476 issued on 14-Apr-2014
9	Licence varied by notice 1521774 issued on 09-May-2014
10	Licence varied by notice 1522873 issued on 20-Jun-2014
11	Licence varied by notice 1523337 issued on 14-Jul-2014
12	Licence varied by notice 1523570 issued on 21-Jul-2014
13	Licence varied by notice 1525214 issued on 30-Sep-2014
14	Licence varied by notice 1525680 issued on 17-Oct-2014
15	Licence varied by notice 1526354 issued on 17-Nov-2014
16	Licence varied by notice 1529472 issued on 27-Mar-2015
17	Licence varied by notice 1530676 issued on 15-May-2015
18	Licence varied by notice 1531229 issued on 10-Jun-2015
19	Licence varied by notice 1531910 issued on 06-Jul-2015
20	Licence varied by notice 1532871 issued on 13-Aug-2015
21	Licence varied by notice 1533757 issued on 07-Sep-2015
22	Licence varied by notice 1534633 issued on 16-Oct-2015
23	Licence varied by notice 1535892 issued on 23-Nov-2015

Appendix J Department of Defence

Australian Government
Department of Defence

Defence Environmental Remediation Program

New South Wales

Property Identification Number	Property Name
0026	HMAS Albatross
0027	Beecroft Air Weapons Range
0030	HMAS Penguin
0034	NFI Chowder Bay
0042	Spectacle Island
0056	HMAS Watson
0058	HMAS Waterhen
0290	Cootamdundra Reserve Depot
0315	Blamey Barracks Kapooka
0329	Marrangarroo Army Depot
0336	Muswellbrook GRES Depot
0340	Adamstown MUD
0356	Singleton Military Area
0367	Moorebank Area
0375	Timor Barracks - Dundas
0382	Holsworthy Barracks
0396	Banksmeadow Depot
0402	Victoria Barracks - Paddington
0404	Lancer Barracks - Parramatta
0407	Randwick Barracks
0417	Tamworth GRES Depot
0884	Evans Head Air Weapons Range
0892	Orange AAFC
0895	Londonderry Parachute Drop Zone
0899	Defence Establishment Orchard Hills
0902	RAAF Base Richmond
0906	RAAF Base Wagga
0908	RAAF Base Williamtown

0909	Salt Ash Air Weapons Range
1022	Garden Island Precinct
1278	Myambat Ammunition/Explosives Depot
1319	Duckhole Hill
1404	Fleet Headquarters
1408	Defence Mulwala Facility Mulwala Project Website
1521	Point Perpendicular Lighthouse
3001	DNSDC Moorebank

Australian Government
Department of Defence

Detailed Environmental Investigation & Management Sites

Northern Territory	Queensland	New South Wales
Robertson Barracks	Army Aviation Centre Oakey	RAAF Base Williamtown
RAAF Base Darwin	RAAF Base Townsville	HMAS Albatross
RAAF Base Tindal	RAAF Base Amberley	RAAF Base Richmond
	Lavarack Barracks	RAAF Base Wagga
	HMAS Cairns	Holsworthy Barracks
		Singleton Military Area
		Blamey Barracks (Kapooka)



Western Australia

- RAAF Base Pearce
- HMAS Stirling
- Naval Communication Station Harold E Holt A & B
- RAAF Base Learmonth
- Gingin Satellite Airfield

South Australia

- RAAF Base Edinburgh

Victoria

- RAAF Base East Sale
- HMAS Cerberus
- Bandiana Military Area
- RAAF Williams (Laverton)

Jervis Bay Territory

- Jervis Bay Range Facility

Legend

- Investigation sites are light grey
- Management sites are orange

Preliminary Site Investigations

Where required, Defence conducts preliminary investigations to review the historical use and storage of legacy firefighting foams at Defence sites. The findings of preliminary investigations are used to determine if further, more detailed, environmental investigations into PFAS are necessary. Current and past Preliminary Site Investigations are listed below. Click on an investigation for further information.

Salt Ash Air Weapons Range - Ongoing

The Department of Defence has engaged AECOM Australia Pty Ltd to undertake a Preliminary Site Investigation on the Salt Ash Air Weapons Range, as part of a national environmental program to investigate and manage the presence of per- and poly- fluoroalkyl substances (PFAS), across the Defence estate.

The Preliminary Site Investigation will involve reviewing the historical use, storage and disposal of legacy firefighting foam at the Base and include on-base sampling of groundwater, surface water, soil and sediment.

On-Base sampling is expected to commence in the third quarter of 2018 and the Preliminary Site Investigation Report is anticipated to be completed by the end of fourth quarter 2018.

Limited off-Base sampling will also be undertaken, as part of the Preliminary Site Investigation. Requests for residential sampling will be considered on a case-by-case basis.

Defence has also engaged Earth Environmental Services as the Site Auditor, who will provide assurance that the investigation is conducted in accordance with the National Environment Protection (Assessment of Site Contamination) Measure.

For further information contact the information line on 1800 714 139 or SaltAsh.Defence@aecom.com, or view the factsheet below.

Salt Ash Preliminary Site Investigation Update - October 2018
Factsheet - PDF - 385KB

Salt Ash residents within the existing EPA PFAS Management Area

In November 2017, the NSW Environmental Protection Authority (EPA) designated a Management Area, as part of the nearby RAAF Base Williamtown Environmental Investigation. This Management Area is approximately 4 kilometres south-west of the Salt Ash Air Weapons Range.

Salt Ash residents within this Management Area should continue to follow the EPA's precautionary advice, as part of minimising exposure

to PFAS, originating from the RAAF Base Williamtown. For more information contact 131 555 or visit www.epa.nsw.gov.au.

RAAF Base Scherger - Complete

In January 2018, Defence finalised a Preliminary Site Investigation into per- and poly-fluoroalkyl substances (PFAS) at RAAF Base Scherger. Based on the findings of this report, it has been determined that there is currently no requirement for further environmental investigations into PFAS at and surrounding the Base.

The Preliminary Site Investigation involved the review of historical use, storage, and disposal of legacy firefighting foam and included sampling of soil, sediment, surface water, and groundwater, to identify where and when the foam was used, stored, and disposed (sources), and associated PFAS contamination at the property.

Key findings of the Preliminary Site Investigation:

- Sampling of soil, surface water, sediment and groundwater on base found PFAS was not widespread and only found in low concentrations.
- PFAS was not detected in the RAAF Base Scherger drinking water.
- Surface water from the base flows into Mission River, to the north and west of the base, through a drainage network and tributaries. The highest concentration of perfluorooctane sulfonic acid plus perfluorohexane sulfonic acid (PFOS+PFHxS) found in surface water on the base was below the drinking water guidelines.
- Previous investigations showed groundwater flowing in a west to north-west direction towards Mission River. The highest concentration of PFOS+PFHxS found in groundwater between the base and Mission River was below the drinking water guidelines.

The full Preliminary Site Investigation report is available below:

Preliminary Site Investigation Report - October 2017
Report - Golder - PDF - 9.2MB

Preliminary Site Investigation Report - Figures Part 1 - October 2017
Report - Golder - PDF - 9.1MB

Preliminary Site Investigation Report - Figures Part 2 - October 2017
Report - Golder - PDF - 8.6MB

Preliminary Site Investigation Report - Tables - October 2017
Report - Golder - PDF - 852KB

Appendix K Heritage Records

Search Results

6 results found.

Castle Hill House 215-219 Old Northern Rd	Castle Hill, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Castle Hill Public School and Residence (former) 266 Old Northern Rd	Castle Hill, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Castle Hill Settlement Site Old Castle Hill Rd	Castle Hill, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Elwatan Castle Hill Rd	Castle Hill, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
St Pauls Anglican Church (former) 225 Old Northern Rd	Castle Hill, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
The Old Parsonage 210 Old Northern Rd	Castle Hill, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)

Report Produced: Mon Jun 24 12:24:34 2019

Accessibility | Disclaimer | Privacy | © Commonwealth of Australia (cc) BY

Search for NSW heritage

Return to search page where you can refine/broaden your search.

Statutory listed items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into three sections.

- **Section 1** - contains Aboriginal Places declared by the **Minister for the Environment** under the National Parks and Wildlife Act. This information is provided by the Heritage Division.
- **Section 2** - contains heritage items listed by the **Heritage Council of NSW** under the NSW Heritage Act. This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Division.
- **Section 3** - contains items listed by **local councils** on Local Environmental Plans under the Environmental Planning and Assessment Act, 1979 and **State government agencies** under s.170 of the Heritage Act. This information is provided by local councils and State government agencies.

Section 1. Aboriginal Places listed under the National Parks and Wildlife Act.

Your search did not return any matching results.

Section 2. Items listed under the NSW Heritage Act.

Your search returned 2 records.

Item name	Address	Suburb	LGA	SHR
St. Paul's Anglican Church	221 Old Northern Road	Castle Hill	The Hills	00332
Third Government Farm (former)	Gilbert Road	Castle Hill	The Hills	01448

Section 3. Items listed by Local Government and State Agencies.

Your search returned 27 records.

Item name	Address	Suburb	LGA	Information source
Bellerive	164-166 Excelsior Avenue	Castle Hill	The Hills	LGOV
Castle Hill House	6-10 Francis Street	Castle Hill	The Hills	LGOV
Castle Hill Public School	264 and 266 Old Northern Road	Castle Hill	The Hills	LGOV
Castle Hill Reservoir (WS 0021)	Old Northern Road and Marie Street	Castle Hill	The Hills	SGOV
Christadelphian Church	245 Old Northern Road	Castle Hill	The Hills	LGOV

Dogwoods	74 Showground Road	Castle Hill	The Hills	LGOV
Durham Park	8/174 Old Northern Road	Castle Hill	The Hills	LGOV
Fairholme	157 Castle Hill Road	Castle Hill	The Hills	LGOV
Garden Tree	121-123 David Road	Castle Hill	Hornsby	LGOV
Garthowen	14 Garthowen Crescent	Castle Hill	The Hills	LGOV
Gate and gateposts	36 Melia Court	Castle Hill	The Hills	LGOV
Gilroy College	19-37 Marie Street	Castle Hill	The Hills	LGOV
Glenowen and Garden	173-177 David Road	Castle Hill	Hornsby	LGOV
House	108 Old Castle Hill Road	Castle Hill	The Hills	LGOV
Marymount Mercy Centre - grounds	36-56 David Road	Castle Hill	Hornsby	LGOV
Mowl Village Group: Gate House	284 Castle Hill Road	Castle Hill	Hornsby	LGOV
Mowll Memorial Village: Lober House	284 Castle Hill Road	Castle Hill	Hornsby	LGOV
Mowll Memorial Village: Tower House	284 Castle Hill Road	Castle Hill	Hornsby	LGOV
Oakhill College original building, gatehouse and grounds	421-521 Old Northern Road	Castle Hill	Hornsby	LGOV
Old Government Farm Site (Heritage Park)	Heritage Park Old Northern Road	Castle Hill	The Hills	LGOV
Old Parsonage (The)	210 Old Northern Road	Castle Hill	The Hills	LGOV
Police Station (former)	264 and 266 Old Northern Road	Castle Hill	The Hills	LGOV
St Paul's Cemetery	247 Old Northern Road	Castle Hill	The Hills	LGOV
St Paul's Anglican Church (former)	221-225 Old Northern Road	Castle Hill	The Hills	LGOV
Street trees	Castle Hill Road (north side)	Castle Hill	Hornsby	LGOV
Wansbrough House	230 Old Northern Road	Castle Hill	The Hills	LGOV
Windsor Road from Baulkham Hills to Box Hill	Windsor Road	Baulkham Hills	The Hills	LGOV

There was a total of 29 records matching your search criteria.

Key:
LGA = Local Government Area
GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.
Note: While the Heritage Division seeks to keep the Inventory up to date, it is reliant on State agencies and local councils to provide their data. Always check with the relevant State agency or local council for the most up-to-date information.

Appendix L SafeWork Dangerous Goods Search

NSW GOVERNMENT | SafeWork NSW

Locked Bag 2906, Lisarow NSW 2252
Customer Experience 13 10 50
ABN 81 913 830 179 | www.safework.nsw.gov.au

Our Ref: D19/175909

20 August 2019

Chris Kauffman
JBS & G Australia Pty Ltd
Level 1
50 Margaret Street
SYDNEY NSW 2000

Dear Chris

RE SITE: 1-5 Carrington Road, Castle Hill NSW 2154

I refer to your site search request received by SafeWork NSW on 1 August 2019 requesting information on Storage of Hazardous Chemicals for the above site.

Enclosed are copies of the documents that SafeWork NSW holds on record number 35/017370 relating to the storage of Hazardous Chemicals at the above-mentioned premises.

For further information or if you have any questions, please call us on 13 10 50 or email licensing@safework.nsw.gov.au

Yours sincerely

Customer Service Officer
Customer Experience - Operations
SafeWork NSW

NDG 017370.

ATP

NSW GOVERNMENT | SafeWork NSW

Notification of Schedule 11 Hazardous Chemicals

Reference Code: **T3KD4D**

Your form has been submitted for processing. Please keep a copy for your records. Once processed, you will receive an acknowledgement.

Date and Time: **02 May 2016 11:55:54 AM**

Submission Reference Number: **notification-of-sche-1115**

To save or print a copy of your completed form, go to the "File menu and select "Save as" or "Print".

Application Information

Application Information

Notification of Schedule 11 hazardous chemicals

This form is to be used by the person conducting a business or undertaking (PCBU) at a workplace to notify SafeWork NSW when:

1. Hazardous chemicals are used, handled or stored at the workplace in quantities that exceed manifest quantities, as specified in column 5 of table 11.1 of Schedule 11 of the WHS Regulation.
2. There will be a significant change to a current notification record in the risk of using, handling or storing the Schedule 11 hazardous chemicals. A significant change includes: a change to the quantity, location or manner of storage of chemicals, or when the affected chemicals are of a quantity greater than the placard quantity for that chemical or group of chemicals.
3. A new owner and/or PCBU has taken control of a site.
4. Requesting a closure of record or when hazardous chemicals no longer exceed manifest quantities, as specified in column 5 of table 11.1 of Schedule 11 of the WHS Regulation, or cease to be used, handled or stored at the workplace.
5. There is abandonment of an underground tank, partially underground, or fully mounded tank that was used to store flammable gases or flammable liquids.
6. There is a need to change contact details, or emergency contact details.
7. Your notification certificate is lost, stolen, damaged, not received or if there was a printing error.

Privacy Compliance Statement

This information is collected by SafeWork NSW for the purposes of undertaking the evaluation, assessment and processing of a notification of Schedule 11 hazardous chemicals, as required by the WHS Act and WHS Regulation.

This information may also be used by SafeWork NSW for the purposes of confirming applicant details, to establish and maintain an internal and external database and to assist SafeWork NSW and its inspectorate with its work generally. It may also be provided to other state, territory and the Commonwealth regulatory authorities.

Except for the purposes of prosecution and unless such disclosure is otherwise required by law, the information will not be accessed by other third parties in a way that would identify the individual without the consent of that individual.

You may also apply to SafeWork NSW to access and correct any information about yourself that SafeWork NSW holds if that information is inaccurate, incomplete, not relevant or out of date. Applications should be made in writing to:

Privacy Contact Officer,
SafeWork NSW,
Locked Bag 2906,
Lisarow NSW 2252.

Baulkham Hills Shire
Carrington Rd
Castle Hill

Proposed installation of a 1x10000L +
1x 45000l u/g tanks

JRB
1-5-85

45'000 m.s
12 000 m.²

N/K

CASTLE HILLS

~~CASTLE HILLS~~

BOROUGH HILLS SHIRE COUNCIL.

~~CASTLE HILLS~~ CARRINGTON RD

CASTLE HILLS

1/4000 GAL C/C TANK

1/2000 " " "

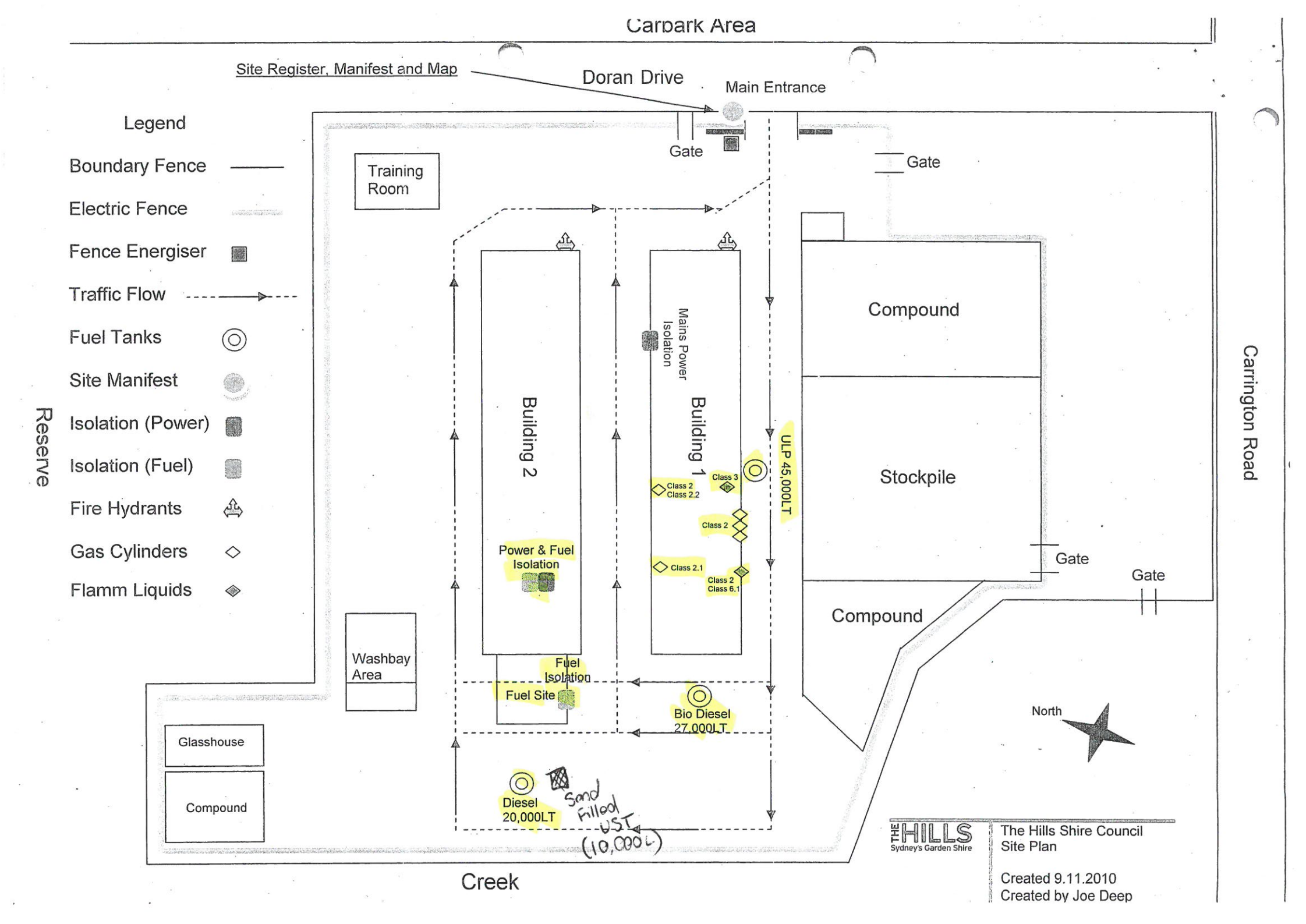
TO BE INSTALLED BY CASTLE.

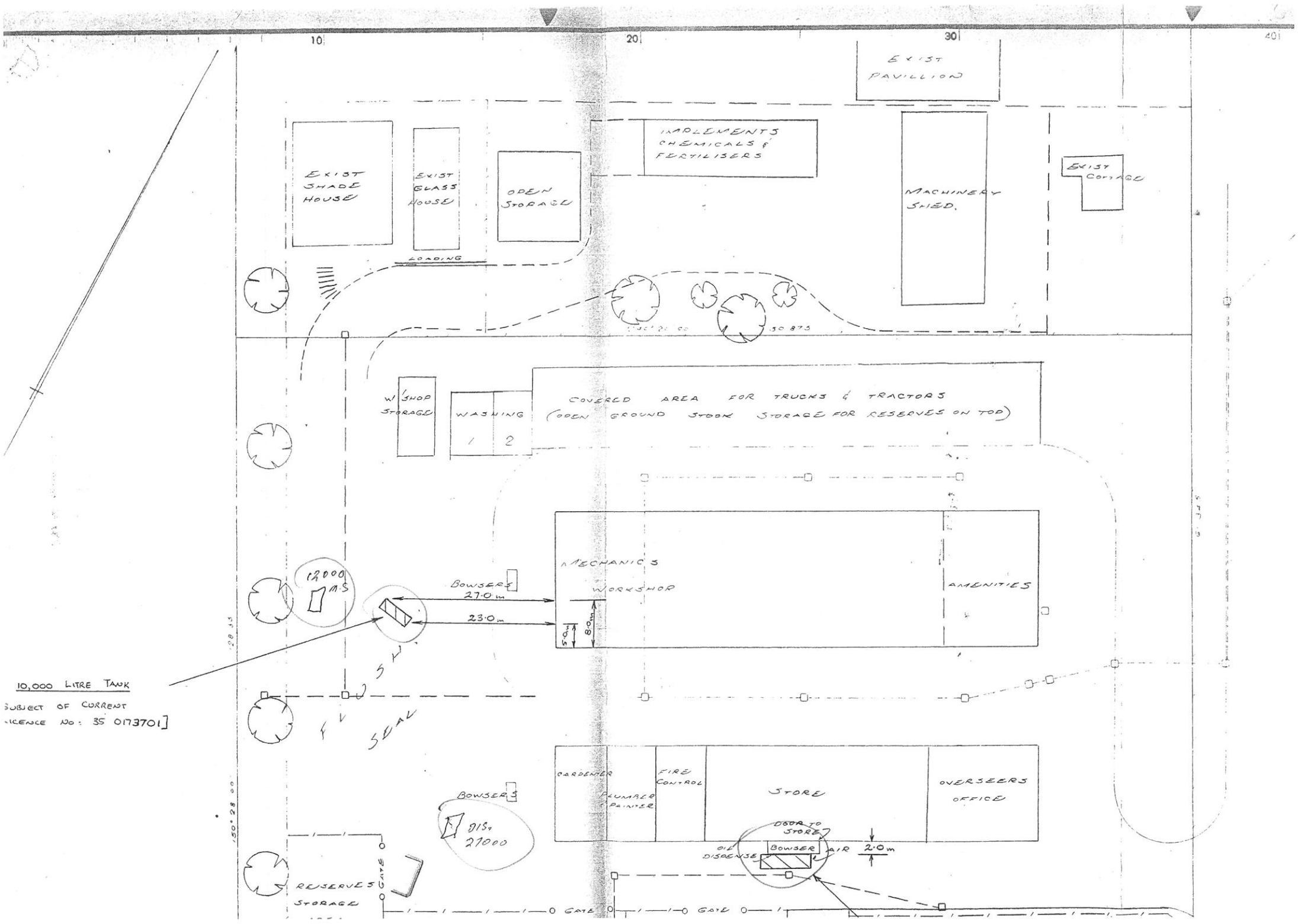
(SEE PLAN ATTACHED)

R/S. 1.12.76

R.L.R.K

15.10.76.

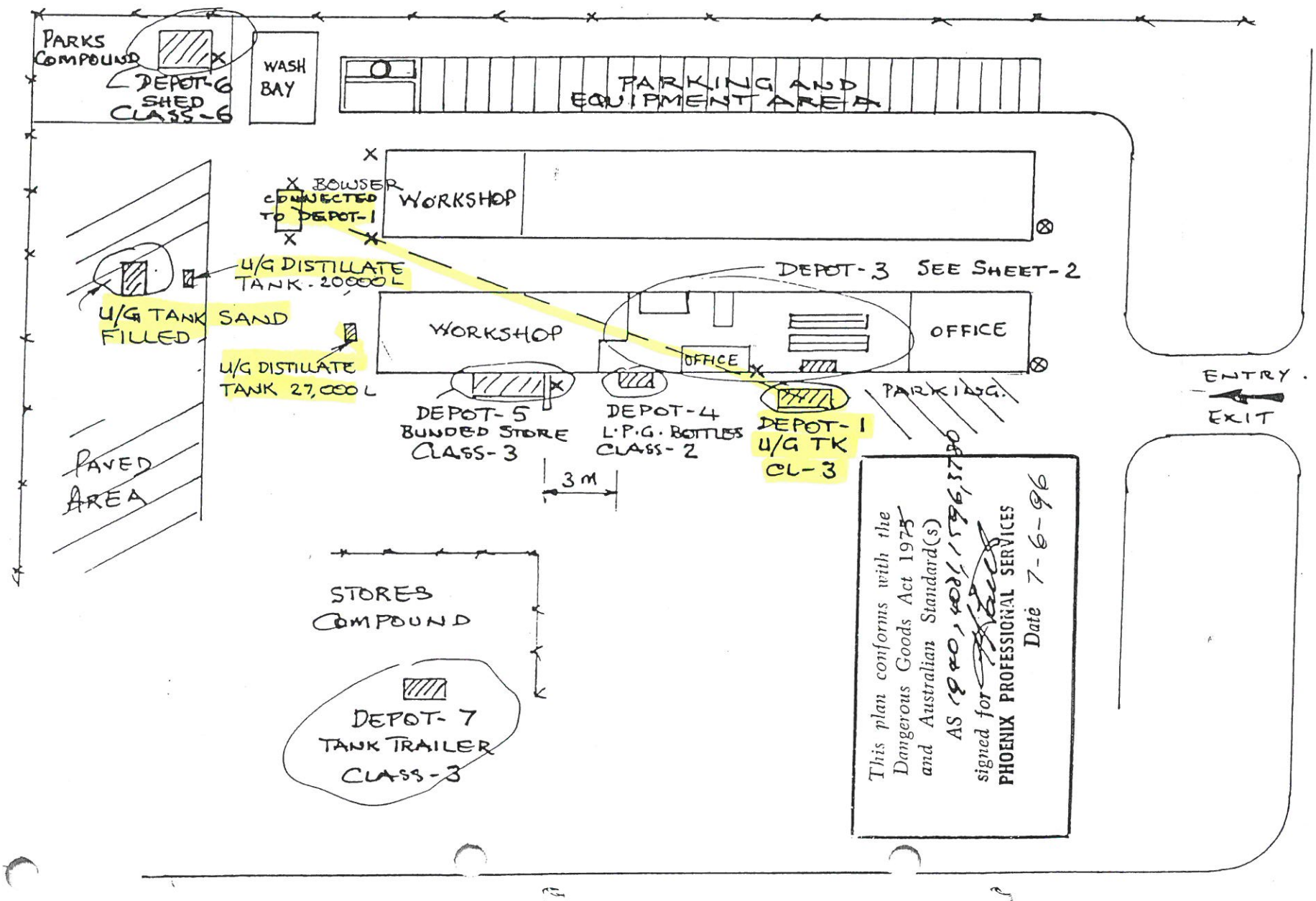

Carpark Area
Site Register, Manifest and Map
Doran Drive
Main Entrance
Legend
Boundary Fence
Electric Fence
Fence Energiser
Traffic Flow
Fuel Tanks
Site Manifest
Isolation (Power)
Isolation (Fuel)
Fire Hydrants
Gas Cylinders
Flamm Liquids
Gate
Gate
Training Room
Building 2
Building 1
Mains Power Isolation
ULP 45,000LT
Class 3
Class 2
Class 2.2
Class 2
Class 2.1
Class 2
Class 6.1
Power & Fuel Isolation
Compound
Stockpile
Gate
Gate
Compound
Carrington Road
Reserve
Washbay Area
Fuel Isolation
Fuel Site
Bio Diesel 27,000LT
Glasshouse
Compound
Diesel 20,000LT
Sand Filled UST (10,000L)
North
Creek
THE HILLS Sydney's Garden Shire
The Hills Shire Council
Site Plan
Created 9.11.2010
Created by Joe Deep


10
20
30
40
EXIST PAVILLION
EXIST SHADE HOUSE
EXIST GLASS HOUSE
OPEN STORAGE
IMPLEMENTS CHEMICALS & FERTILISERS
MACHINERY SHED.
EXIST COTTAGE
LOADING
W/SHOP STORAGE
WASHING 1 2
COVERED AREA FOR TRUCKS & TRACTORS (OPEN GROUND STOCK STORAGE FOR RESERVES ON TOP)
MECHANICS WORKSHOP
AMENITIES
12000 MS
BOWSER 27.0m
23.0m
5.0m
8.0m
10,000 LITRE TANK
SUBJECT OF CURRENT LICENCE No: 35 0173701]
GARDENER
PLUMBER PAINTER
FIRE CONTROL
STORE
OVERSEERS OFFICE
BOWSER
DIS 27000
DOOR TO STORE
OIL DISPENSE
BOWSER
AIR
2.0m
RESERVES STORAGE
GATE
GATE
GATE

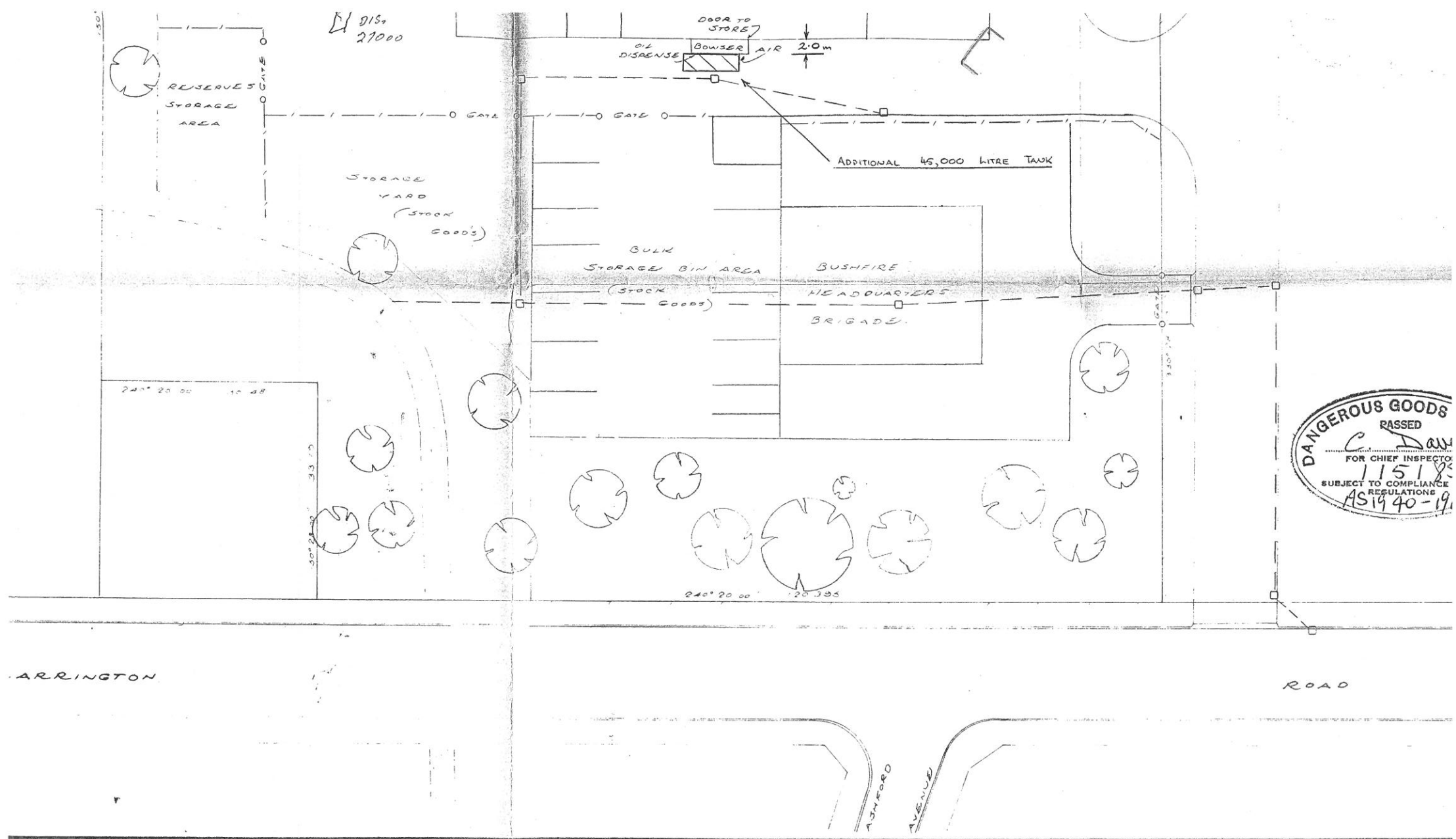
Site Sketch - SHEET- 1

Please carefully read the instructions in Part B of the guide before sketching the site.

LEGEND :
⊗ FIRE HYDRANT
X FIRE EXTINGUISHER



BAULKHAM HILLS COUNCIL PROPERTY



BAULKHAM HILLS SHIRE COUNCIL

BAULKHAM HILLS SHIRE COUNCIL
WORKS DEPOT MANAGEMENT PLAN
CARRINGTON ROAD
CASTLE HILL

Type of Notification

Notification Type

Please select the type of notification you are making: *

◯ New Notification

◉ Amendment to a Current Notification

SafeWork NSW Reference Number (if known)

Type of Amendment *
Please select all that apply.

☐ Significant Change to a current record of Hazardous Chemicals stored on site
A significant change includes: a change to the quantity, location or manner of storage of chemicals, when the affected chemicals are of a greater quantity than the placard quantity for that chemical or group of chemicals.

☐ Closure of Record
PCBU is no longer using, handling or storing Schedule 11 - hazardous chemicals above manifest quantities.

☒ Abandonment of Tank
When there is an abandoned tank that is underground, partially underground or fully moulded and the tank was used to store flammable gases or liquids, and the PCBU does not intend to use the tank to store flammable gases or flammable liquids.

☐ Contact Details
There has been a change in the contact person, contact details or emergency contact for this site.

☐ New Owner
A new owner or PCBU has taken control of the site.

☐ Replacement
Select this option ONLY if your notification certificate is lost, stolen, damaged, not received or if there was a printing error. (For all amendments, a new acknowledgement will automatically be sent to you)

Application Details

Contact Person

Title

Mr

Family Name *

Thompson

Given Name *

Robert

Middle / Other Name

John

Daytime Contact Number *

02 8045 1689

Mobile Number

0439 635 317

Email Address

rjthompson1@thiess.com.au

Business Name/PCBU

Registered Business Name/PCBU *

CPB Contractors John Holland Dragados Joint Venture

ABN (for Australian Businesses only)

Type of business or undertaking being conducted *

Construction

Activities of the PCBU *

Describe the activities of the business or undertaking that involve using, handling or storing hazardous chemicals.

Construction of Sydney Metro North West tunnels.

Site Address

Address of the business or undertaking where Schedule 11 hazardous chemicals exceeding manifest quantities are to be used, handled or stored.

Street Address (must NOT be PO Box)

Building / Property Name

The Hills Shire Council Works Depot - previous function before commencement of construction work

Address Line 1 *

Doran Drive

Address Line 2

Suburb *

Castle Hill

State

NSW

Postcode *

2153

Nearest Cross Street

Nearest Cross Street

Carrington Road

Postal Address

Same as Street Address? *

◯ Yes ◉ No

Address Line 1 *

129 Showground Road

Address Line 2

Suburb *

Castle Hill

State *

NSW

Postcode *

2153

Please provide either the UN Number or Previous Contents. *

UN Number *
Note: If you are notifying Diesel or any other Combustible Liquid C1, please enter 00C1 in the UN number field.

UN Number
1203

Previous Contents
Unleaded Petrol

Date Abandoned *
24 Jun 2013

Has the abandoned tank been removed? *

(•) Yes ( ) No

Date of Removal *
18 Apr 2016

Abandonment of Tank 3

Tank Identifier *
UST 3

Design / Maximum Capacity *
27000

Units *
(•) Litres ( ) Kilograms

Please provide either the UN Number or Previous Contents. *

UN Number *
Note: If you are notifying Diesel or any other Combustible Liquid C1, please enter 00C1 in the UN number field.

UN Number
00C1

Previous Contents
Diesel

Date Abandoned *
24 Jun 2013

Has the abandoned tank been removed? *

(•) Yes ( ) No

Date of Removal *
18 Apr 2016

Abandonment of Tank 4

Abandonment of Tank

Abandonment of Tank

Please ensure all site documentation such as manifest, emergency plans, hazardous chemicals registers have been updated to reflect the changes as a result of the tank abandonment.

Abandonment of Tank 1

Tank Identifier *

UST 1

Design / Maximum Capacity *

20000

Units *

(•) Litres ( ) Kilograms

Please provide either the UN Number or Previous Contents. *

UN Number *
Note: If you are notifying Diesel or any other Combustible Liquid C1, please enter 00C1 in the UN number field.

UN Number

00C1

Previous Contents

Diesel

Date Abandoned *

24 Jun 2013

Has the abandoned tank been removed? *

(•) Yes ( ) No

Date of Removal *

18 Apr 2016

Abandonment of Tank 2

Tank Identifier *

UST 2

Design / Maximum Capacity *

45000

Units *

(•) Litres ( ) Kilograms

Tank Identifier *

AGST 01

Design / Maximum Capacity *

5000

Units *

(•) Litres ( ) Kilograms

Please provide either the UN Number or Previous Contents. *

UN Number *
Note: If you are notifying Diesel or any other Combustible Liquid C1, please enter 00C1 in the UN number field.

UN Number

00C1

Previous Contents

Diesel

Date Abandoned *

24 Jun 2013

Has the abandoned tank been removed? *

(•) Yes ( ) No

Date of Removal *

18 Apr 2016

Lodgement Fees

Lodgement Fees

Description	Price
No fee payable	$0.00

Total Amount Payable (GST exempt)

$0.00

Applicant Declaration

Applicant Declaration

Name *

Robert John Thompson

I, Robert John Thompson, declare that:

- I am 18 years of age or over
- I have authority from the PCBU (if applicable) to lodge this application
- The information in this notification is true and correct to the best of my knowledge
- I consent to SafeWork NSW making enquiries and exchanging information with work health and safety regulators in other states, territories of the Commonwealth regarding any matter relevant to this application

☒ I agree *

Date of Declaration

02 May 2016

Invoice

Gilbarco AUST LTD
A.C.N 000 020 799

35/017370

12-38 Talavera Road PO Box 63 North Ryde NSW 2113
Tel:(02) 888 4888 • Fax:(02) 878 4038

Workcover Authority
The Chief Inspector of Dangerous Goods
Locked Bag 10
SYDNEY NSW 2000

Contractor's Certificate
Abandonment of Underground Tanks

Gilbarco Aust Ltd hereby certifies that the tanks referred to in the Schedule of this Certificate have been taken out of service by the following method:

1. **Removal of tank/s to an approved place.**
2. **Filling with an inert solid material, sand or concrete.**
(Delete as applicable)

The procedure has been carried out under the provisions of the Dangerous Goods Act, 1975, and Section 9.8.13 of Australian Standard 1940-1993 and acceptance of the Chief Inspector of Dangerous Goods.

35-017370

Owner of Premises: BAULKHAM HILLS COUNCIL.

Address of Premises: CARRINGTON RD
CASTLE HILL.

6/7/96

SCHEDULE

1 x Tank	10,000 Litres
~~Tank~~	~~Litres~~
Tank	~~Litres~~
~~Tank~~	~~Litres~~

RECEIVED
27 JUN 1996
SCIENTIFIC SERVICES
BRANCH

Dated this 25 day of JUNE 1996.

GILBARCO AUST LTD
Authorised Officer

Gilbarco AUST LTD

12-38 Talavera Road PO Box 63 North Ryde NSW 2113
Tel:(02) 888 4888 • Fax:(02) 878 4038

A.C.N 000 020 799

Workcover Authority
The Chief Inspector of Dangerous Goods
Locked Bag 10
SYDNEY NSW 2000

Contractor's Certificate
Abandonment of Underground Tanks

Gilbarco Aust Ltd hereby certifies that the tanks referred to in the Schedule of this Certificate have been taken out of service by the following method:

1. **Removal of tank/s to an approved place.**
2. **Filling with an inert solid material, sand or concrete.**
(Delete as applicable)

The procedure has been carried out under the provisions of the Dangerous Goods Act, 1975, and Section 9.8.13 of Australian Standard 1940-1993 and acceptance of the Chief Inspector of Dangerous Goods.

Owner of Premises: BAULKHAM HILL'S COUNCIL (MR. C. ASLIN)

Address of Premises: CNR SHOWGROUND AND CARRINGTON
CASTLE HILL.

SCHEDULE

1 x Tank 6,000 x Litres
~~Tank~~ ~~Litres~~
~~Tank~~ ~~Litres~~
~~Tank~~ ~~Litres~~

Dated this 17 day of June 1996.

GILBARCO AUST LTD
Authorised Officer

17/06 '96 12:56 TX/RX NO.4063 P.002

THE NEW SOUTH WALES GOVERNMENT
Putting people first by managing better

PART A

SCIENTIFIC SERVICES BRANCH
22 SEP 1993
DANGEROUS GOODS

WorkCover Authority

LICENCE TO KEEP DANGEROUS GOODS

(Dangerous Goods Act 1975)

Application for new licence, amendment or transfer

Accredited Consultant, Mixed Storage 3/2/8 one area C. Davies 22-6-94

1. Name of applicant — ACN
   BAULKHAM HILLS COUNCIL
2. Site to be licensed
   No: | Street: CARRINGTON ROAD
   Suburb/Town: CASTLE HILL | Postcode: 2154
3. Previous licence number (if known): 35/017370
4. Nature of site: COUNCIL WORKS DEPOT
5. Emergency contact on site:
   Phone: 899 2584 | Name: GARY TURNER (STOREKEEPER)
6. Site staffing: Hours per day: 9 | Days per week: 5
7. Major supplier of dangerous goods: VARIOUS
8. If new site or significant modification
   Plan stamped by: | Accredited consultant's name: N/A | Date stamped:
9. Number of dangerous goods depots at site: 6
10. Trading name or occupier's name
    BAULKHAM HILLS COUNCIL
11. Postal address of applicant
    P.O. Box 75 | Suburb/Town: CASTLE HILL | Postcode: 2154
12. Contact for licence enquiries:
    Phone: 634 0111 | Fax: 899 1346 | Name: WAL HAUSMAN

I certify that the details contained in this application (or the accompanying computer disk) are true and correct

13. Signature of applicant: Wal Hausman FOR GM | Date: 9

Please complete attached site sketch, depot listing and check sheet (if required) and return to WorkCover Authority in envelope provided.

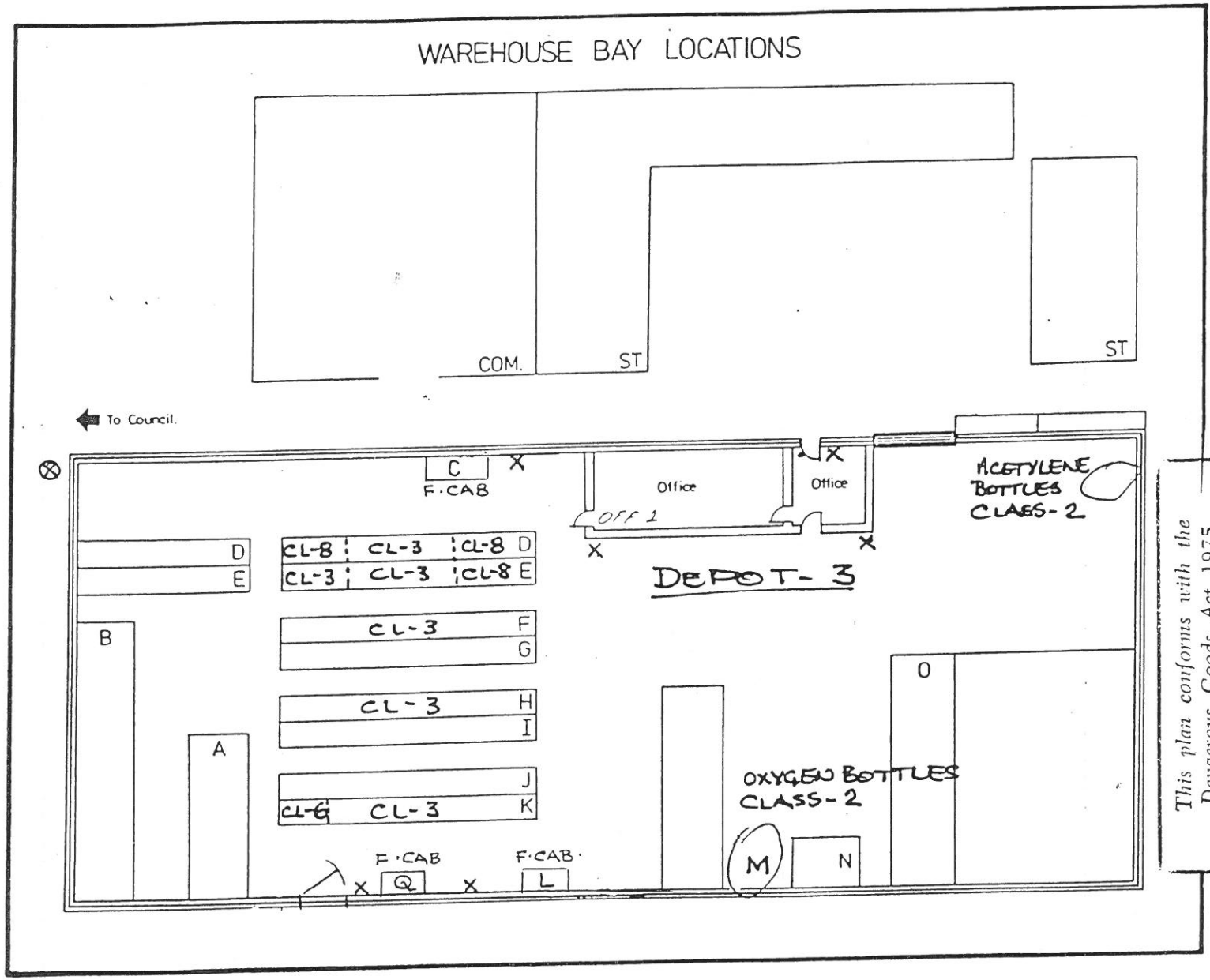
Form DG1

SITE SKETCH - SHEET - 2

LEGEND:

⊗ HYDRANT

X FIRE EXTINGUISHER

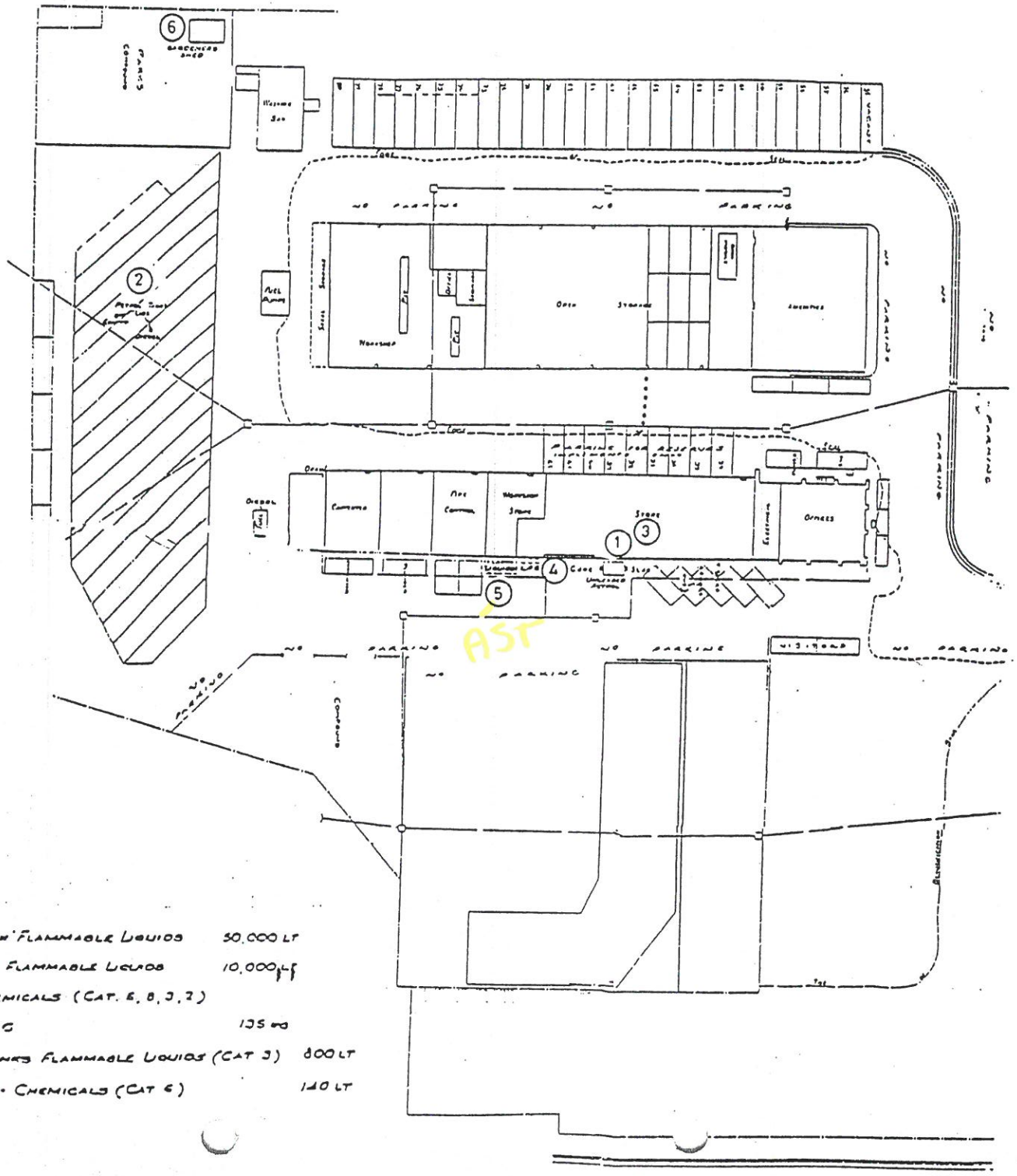


This plan conforms with the Dangerous Goods Act 1975 and Australian Standard(s) AS 1940, 4081, 1796, 3780

signed for [signature]

PHOENIX PROFESSIONAL SERVICES

Date 7-6-96



1. Underground Tank Flammable Liquids — 50,000 LT
2. Underground Tank Flammable Liquids — 10,000 LT
3. Storehouse - Chemicals (Cat. 6, 8, 3, 2)
4. Gas Filling - LPG — 135 KG
5. Above Ground Tanks Flammable Liquids (Cat 3) — 800 LT
6. Gardeners Shed - Chemicals (Cat 6) — 140 LT

PART C – Dangerous Goods Storage *Complete one section per depot.*

If you have more depots than the space provided, photocopy sufficient sheets first.

Depot Number	Type of depot	Depot Class	Maximum storage capacity
1	U/G TANK leave as is	3	50,000 L

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
1203	PETROL	3 II	UNLEADED PETROL	45000	LT

Depot Number	Type of depot	Depot Class	Maximum storage capacity
2 delete depot no. 2	U/G TANK SAND FILLED – TAKEN OUT OF SERVICE		

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³

Depot Number	Type of depot	Depot Class	Maximum storage capacity
3	SEE SEPARATE LISTING		

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³

Depot Number	Type of depot	Depot Class	Maximum storage capacity
4	OPEN L·P·G. CYLINDER DECANTING AREA leave as is	2	135 Kg

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
1075	LIQUID PETROLEUM GAS	2 –	L.P.G.	3x45	Kg

Form DG1

DEPARTMENT OF INDUSTRIAL RELATIONS

LICENCE No. 35 · 003701

DANGEROUS GOODS ACT, 1975

DG 8601

APPLICATION FOR LICENCE (or AMENDMENT or TRANSFER of LICENCE) FOR THE KEEPING OF DANGEROUS GOODS

DATA ENTERED 08 MAY 1986 OPERATOR THREE

Application is hereby made for—described below.

*a ~~licence~~ (or amendment of the licence)
*~~the transfer of~~ the licence
(*delete whichever is not required)

for the keeping of dangerous goods/and on the premises

FEE: $~~10~~15.00 per Depot for new licence.
$~~10~~15.00 for amendment or transfer.

Name of Applicant in full (see over)	BAULKHAM HILLS SHIRE COUNCIL
Trading name or occupier's name (if any)	252 7/05/86 DGA
Postal address	P.O. BOX 75 CASTLE HILL Postcode 2154
Address of the premises including street number (if any)	WORKS DEPOT CARRINGTON RD. CASTLE HILL Postcode 2154
Nature of premises (see over)	DEPOTS
Telephone number of applicant	STD Code Number 634 0111

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (see over)	Storage capacity	Dangerous goods: Product being stored	C & C Office use only
1	UNDERGROUND TANK	45000	MINERAL SPIRIT	DD002020 0 / 2020 54
2	" "	12000	" "	2020 14
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

15 A

INSPECTORIAL FIELD COLLECTION
52
RECEIPT No 69779
23.4.86
AMOUNT $ 15

Has site plan been approved? Yes / ~~No~~ — If yes, no plans required. If ~~no, please attach site plan~~.

Have premises previously been licensed? Yes — If yes, state name of previous occupier. / ~~No~~ — ABOVE

Name of company supplying flammable liquid (if any) VAA

Signature of applicant [signature] Date 11.4.86

For external explosives magazine(s), please fill in side 2.

FOR OFFICE USE ONLY

CERTIFICATE OF INSPECTION

I, RAYMOND CHARLES MCRATH being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector [signature] Date 23.4.86

Licence No.

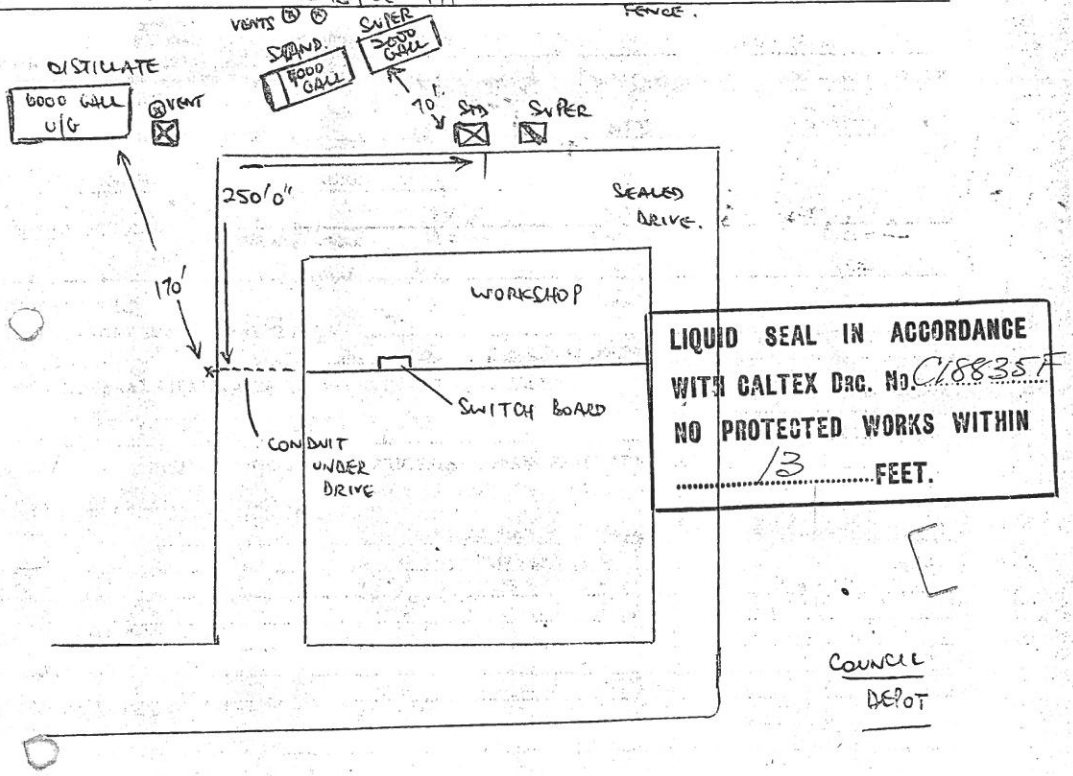
PLAN OF PROPOSED WORK FOR CALTEX

(Measurements as per Page 2)

Show Buildings, Fences, other Structures, Fall of Ground etc. Switchboard - Vent Location)

ACCURATE MEASUREMENTS

CLIENT'S NAME & ADDRESS BANKHAM HILLS COUNCIL
CASTLE HILL.



LIQUID SEAL IN ACCORDANCE WITH CALTEX DRG. NO. C18835F
NO PROTECTED WORKS WITHIN 13 FEET.

THE ABOVE LAYOUT MEETS WITH MY APPROVAL .....
Customer Signature Essential

EXPLOSIVES: Requirements do not permit fill points inside a building or within 5' of any door. No pump inside a building or on a wharf without special approval. U/ground Gasoline Tanks must be seperated from protected from protected works, as under:

CALTEX DRAWING C18835F

						Approx. Weight
500	gallon	=	7'6" x 4'	dia)	– 10 ft	– 620 lbs.
1000	"	=	8'6" x 5'	dia)	– 10 ft.	– 910 lbs.
2000	"	=	9'2" x 7'	dia)	– 10 ft.	– 2050 lbs.
3000	"	=	13'2" x 7'	dia)	– 13 ft.	– 2745 lbs.
4000	"	=	17'2" x 7'	dia)	– 15 ft.	– 3415 lbs.
5000	"	=	21'2" x 7'	dia)	– 18 ft.	– 4100 lbs.
6000	"	=	25'2" x 7'	dia)	– 18 ft.	– 4795 lbs.

from Protected Works

ELECTRICAL: Each pump to have its own circuit. Fuse 4½ amps. S/E 9 amps D/E pump.

Client to provide switchboard at own expense.
Multiple tanks to be separated by 2'0".

EXPLOSIVES BRANCH
PASSED
for CHIEF INSPECTOR
14/10/76
SUBJECT TO COMPLIANCE WITH REGULATIONS

Application for Licence to Keep Dangerous Goods

WorkCover NEW SOUTH WALES

Application for | | new licence | ✓ amendment | | transfer | | renewal of expired licence

Expiry: 21.1.97

RECEIVED 02 JUL 1996 ENTERED

PART A – Applicant and site information

1 Name of applicant: BAULKHAM HILLS SHIRE COUNCIL — ACN: —

2 Postal address of applicant: CARRINGTON ROAD — Suburb/Town: CASTLE HILL — Postcode: 2154

3 Trading name or site occupier's name: BAULKHAM HILLS SHIRE COUNCIL

4 Contact for licence inquiries
Phone: 02-843.0555 — Fax: 02 843.0409 — Name: GRAHAM ASLIN

RECEIVED 20 JUN 1996 SCIENTIFIC SERVICES BRANCH

5 Previous licence number (if known): 35/ 017370

6 Previous occupier (if known): —

7 Site to be licensed
No: — — Street: CARRINGTON ST.
Suburb / Town: CASTLE HILL — Postcode: 2154

8 Main business of site: COUNCIL WORKS DEPOT *8113

9 Site staffing: Hours per day: 9 — Days per week: 5

10 Emergency contact
Phone: *899 2584 / 838 8998 — Name: GARY TURNER / GRAHAM ASLIN

11 Major supplier of dangerous goods: VARIOUS

12 If a new site or for amendments to depots
Plan stamped by: Name of Accredited Consultant: PHOENIX PROFESSIONAL SERVICES — Date stamped: 7-6-96

- I certify that the details in this application (including any accompanying computer disk) are correct and cover all licensable quantities of dangerous goods kept on the premises.

13 Signature of applicant — Date: 13-6-96

Sent ND 3/7/96

Please send your application, marked *CONFIDENTIAL*, to:
Dangerous Goods Licensing, Level 3, Locked Bag 10, Clarence Street, SYDNEY NSW 2000

DANGEROUS GOODS DECLARATIONS A & B CHECKSHEETS

Date Checked by LMT: 21/11/08

Cleanskin Yes ☑ No ☐ **Checked By:** Katrina ☐ Kim ☐ Katherine ☐ Bjerre ☐ Ashley ☑

☑ **Declaration A** ☐ **Declaration B**

Licence/Acknowledgment Number: 35/ 017370

Site Occupier:

Site Address: Carrington Rd, Castle Hill

Current Expiry Date: 18/1/09

DOCUMENTATION REQUIRED

Declaration A

Statement completed	☑
Signed	☑

Declaration B

Statement completed	☐
Signed	☐

DATA ENTRY (SCID)

Declaration A

	Yes	No
Record Closed	☐	☐
Note Left	☐	☐
Acknowledgment of Closure Letter Produced	☐	☐
Closed sites register updated	☐	☐

Declaration B

	Yes	No
Record correct for Dec B	☐	☐
Note Left	☐	☐
Record renewed for 12 months	☐	☐
Acknowledgment Letter produced	☐	☐

0010/00421
485G.

WorkCover
NEW SOUTH WALES

Your completed declaration (where applicable) is to be returned to:

WorkCover NSW
Dangerous Goods Notification Team
LOCKED BAG 2906 LISAROW NSW 2252

OR FAXED TO 02 9287 5500

RECEIVED
CHIVICE CENTRE
24 NOV 2003
WORKCOVER
NEW SOUTH WALES

DECLARATION A

To be completed where notifiable amounts of Dangerous Goods **are not** stored or handled.

I MATTHEW LEENMAN (name), of 129 SHOWGROUND ROAD, CASTLE HILL (address)
declare that I do not store and handle Dangerous Goods at premises 35/017370,
site CARRINGTON RD, CASTLE HILL 2154
in quantities that exceed or are likely to exceed the manifest quantity in the Table to Schedule 5 of the Occupational Health and Safety Regulation 2001.

Matthew Leenman Signature

21.11.08 Date

Ph: 98430219

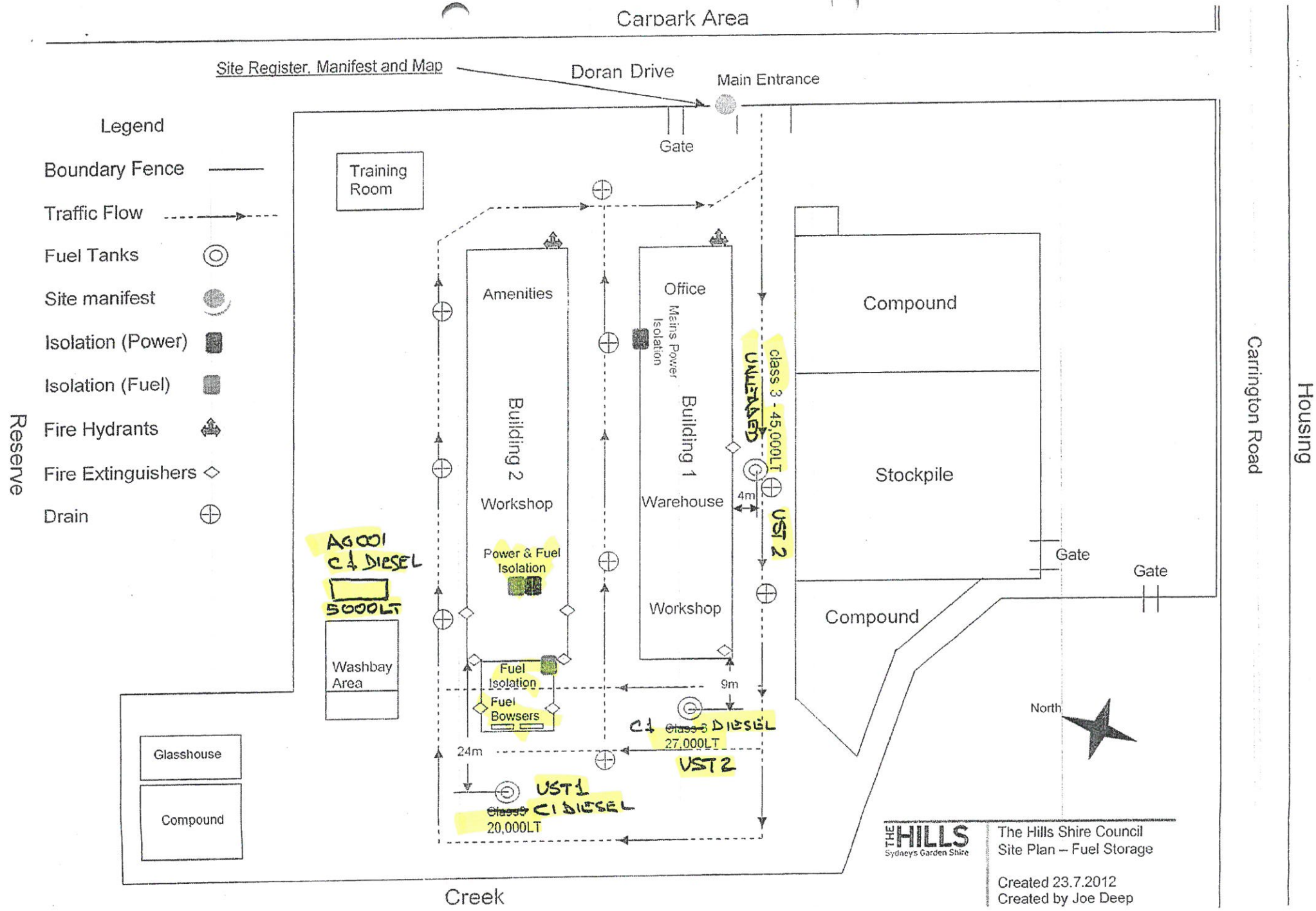
DECLARATION B

I.....(name), of .....(address)
declare that I only store and handle either Class 1 Dangerous Goods or Security Sensitive Dangerous Substances, or both, at premises 35/017370,
at site CARRINGTON RD, CASTLE HILL 2154
and there has been no change to the quantities stored or handled as previously notified to WorkCover.

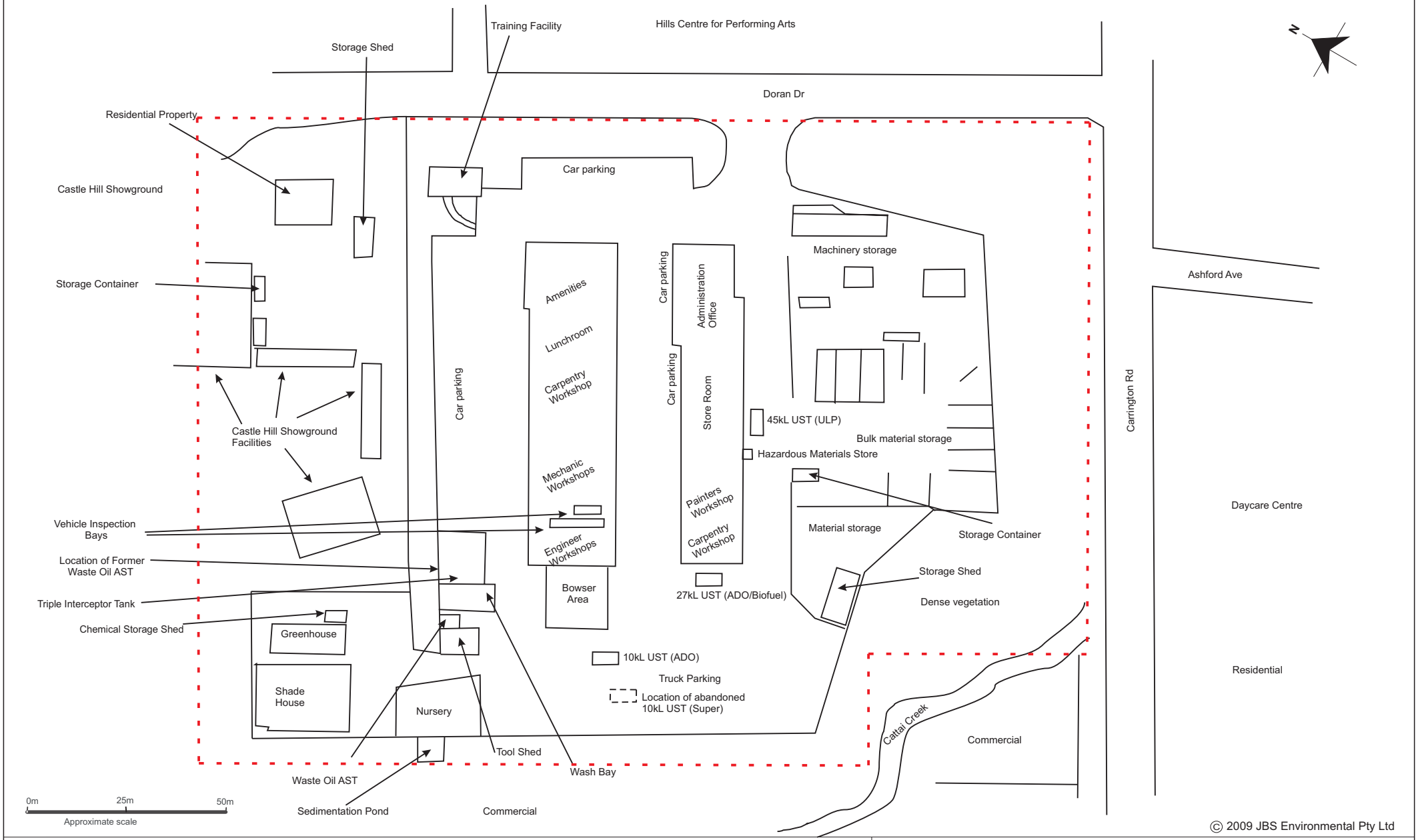
.....Signature

.....Date

NDA 017370.


Carpark Area
Site Register, Manifest and Map
Doran Drive
Main Entrance
Gate
Legend
Boundary Fence
Traffic Flow
Fuel Tanks
Site manifest
Isolation (Power)
Isolation (Fuel)
Fire Hydrants
Fire Extinguishers
Drain
Training Room
Amenities
Building 2
Workshop
Power & Fuel Isolation
Office
Mains Power Isolation
Building 1
Warehouse
Workshop
UNLEADED
class 3 - 45,000LT
4m
UST 2
Compound
Stockpile
Gate
Gate
Compound
AG001
C1 DIESEL
5000LT
Washbay Area
Fuel Isolation
Fuel Bowsers
9m
C1 ~~Class 3~~ DIESEL
27,000LT
UST 2
24m
UST 1
~~Class 3~~ C1 DIESEL
20,000LT
Glasshouse
Compound
North
Reserve
Carrington Road
Housing
Creek
THE HILLS
Sydneys Garden Shire
The Hills Shire Council
Site Plan – Fuel Storage
Created 23.7.2012
Created by Joe Deep

Appendix M Historic Data



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Legend

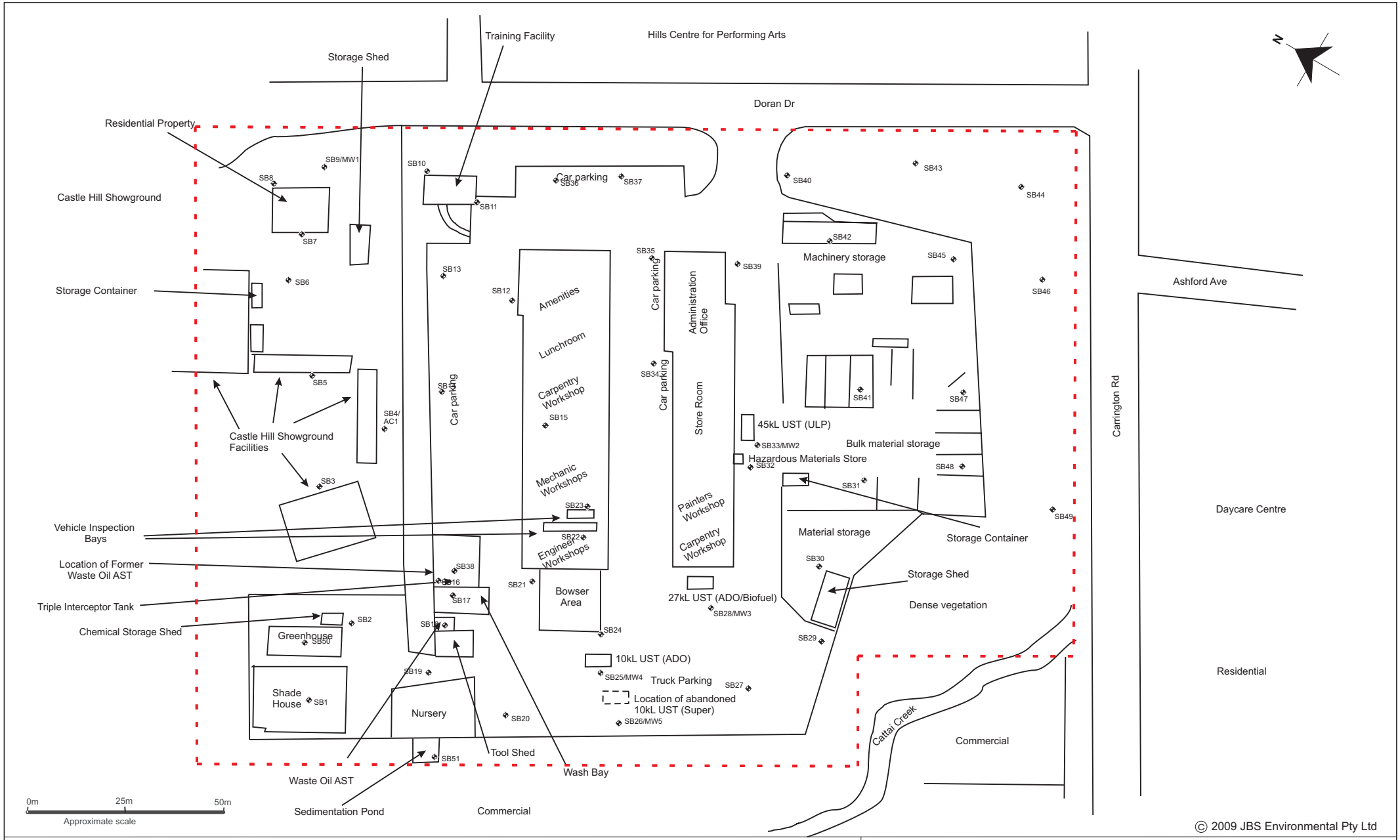
Site Boundary

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Figure 2 Detailed Site Layout

Client: NSW Department of Planning **Job Number: 40638**

Project: Carrington Rd, Castle Hill, NSW **File Name: 40638_02.cdr**



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Legend

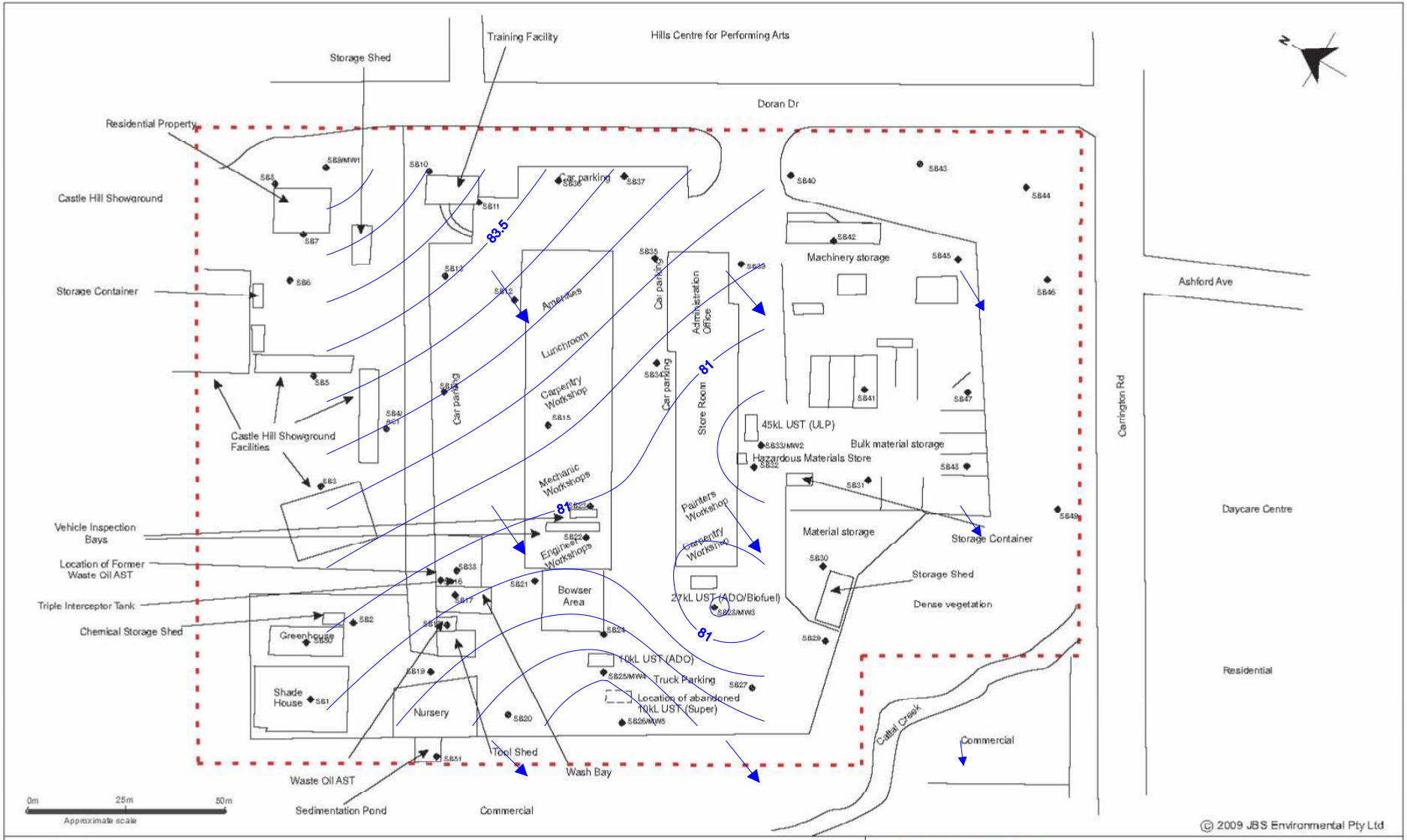
- Site Boundary
- SB1/MW1 Soil/Groundwater Sampling Locations

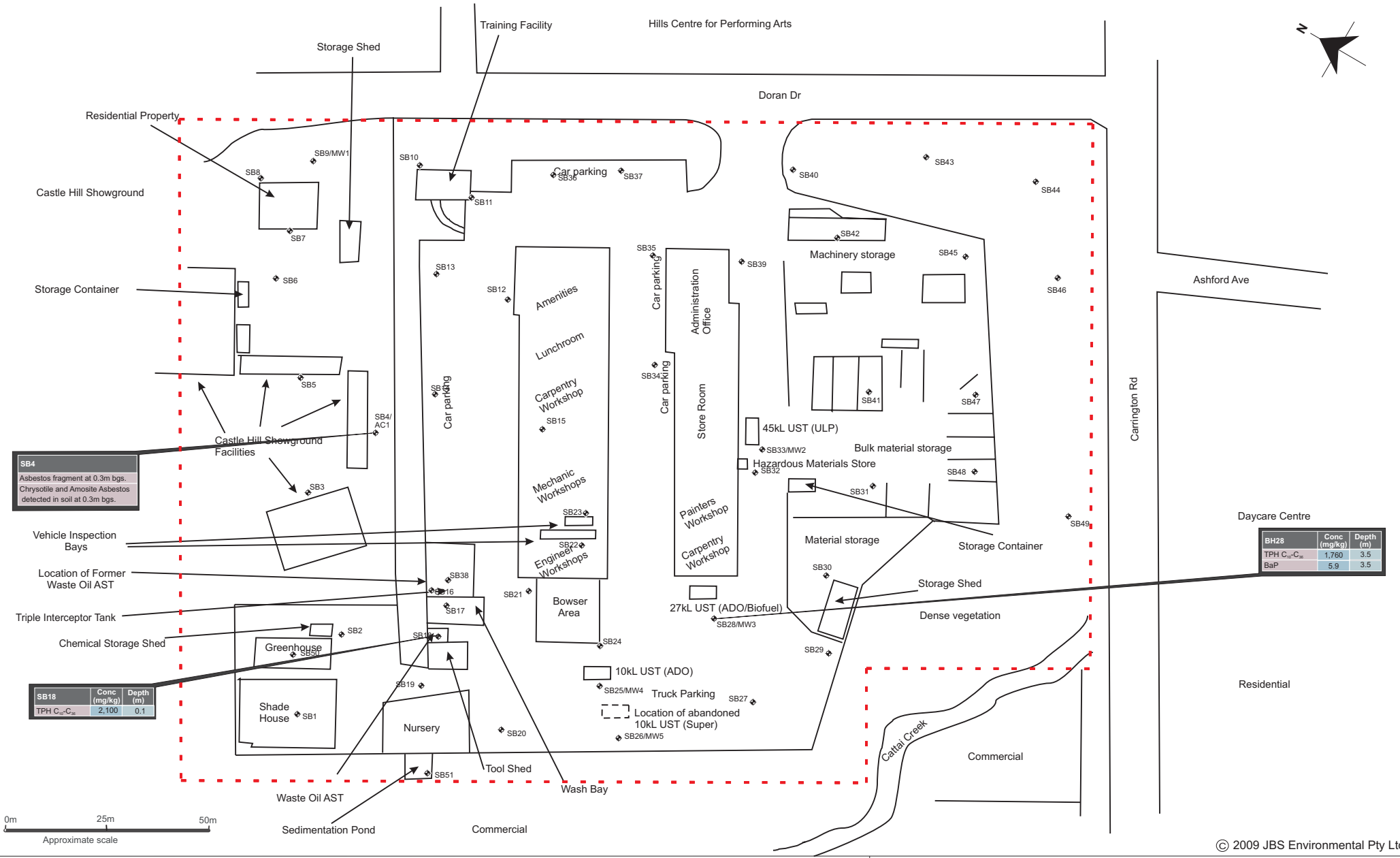
JBS ENVIRONMENTAL

Figure 3 Soil and Groundwater Sampling Locations

Client: NSW Department of Planning **Job Number:** 40638

Project: Carrington Rd, Castle Hill, NSW **File Name:** 40638_03.cdr


Storage Shed
Training Facility
Hills Centre for Performing Arts
Doran Dr
Residential Property
Castle Hill Showground
Storage Container
Castle Hill Showground Facilities
Vehicle Inspection Bays
Location of Former Waste Oil AST
Triple Interceptor Tank
Chemical Storage Shed
Shade House
Greenhouse
Nursery
Waste Oil AST
Sedimentation Pond
Commercial
Tool Shed
Wash Bay
Bowser Area
Amenities
Lunchroom
Carpentry Workshop
Mechanic Workshops
Engineering Workshops
Painters Workshop
Carpentry Workshop
Car parking
Administration Office
Store Room
45kL UST (ULP)
27kL UST (ADO/Biofuel)
10kL UST (ADO)
Location of abandoned 10kL UST (Super)
Truck Parking
Hazardous Materials Store
Bulk material storage
Machinery storage
Material storage
Storage Container
Storage Shed
Dense vegetation
Carrington Rd
Ashford Ave
Daycare Centre
Residential
Commercial
Cattai Creek
83.5
81
0m
25m
50m
Approximate scale
© 2009 JBS Environmental Pty Ltd
Legend
Site Boundary
SB1/MW1 Soil/Groundwater Sampling Locations
Groundwater Contour (interval 0.5m)
Interpreted Groundwater flow direction
JBS ENVIRONMENTAL
Figure 4 Groundwater Contour Map
Client: NSW Department of Planning
Job Number: 40638
Project: Carrington Rd, Castle Hill, NSW
File Name: 40638_02.cdr



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Legend

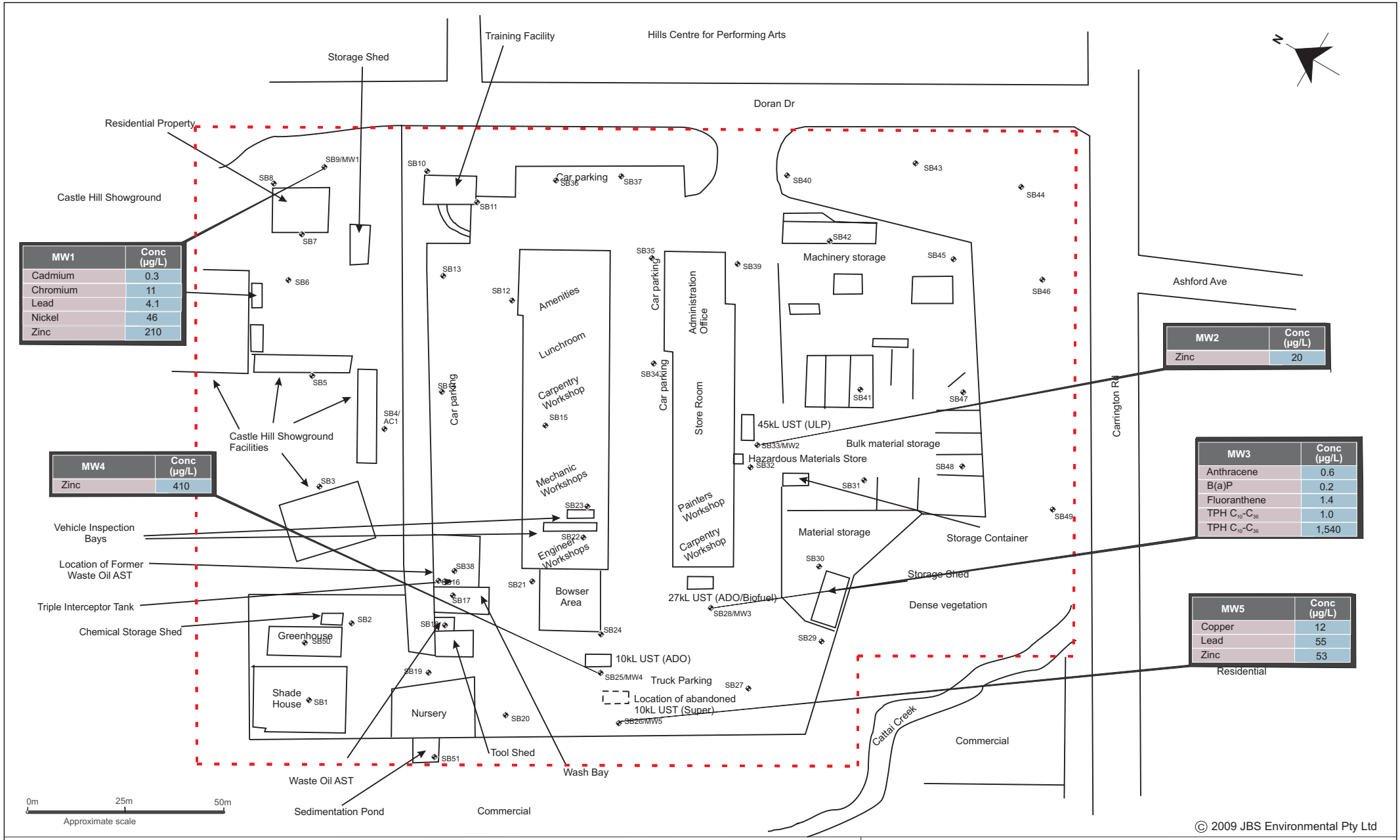
- Site Boundary
- SB1/MW1 Soil/Groundwater Sampling Locations

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Figure 5 Soil Sampling Locations Exceeding Adopted Site Criteria

Client: NSW Department of Planning **Job Number:** 40638

Project: Carrington Rd, Castle Hill, NSW **File Name:** 40638_05.cdr



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Legend

- Site Boundary
- SB1/MW1 Soil/Groundwater Sampling Locations

Figure 6 Groundwater Sampling Locations Exceeding Adopted Site Criteria

Client: NSW Department of Planning **Job Number:** 40638

Project: Carrington Rd, Castle Hill, NSW **File Name:** 40638_06.cdr

Job No. 40638
Department of Planning - Cnr Carrington Road and Doran Drive, Castle Hill NSW
Combined Phase 1 and Phase 2 Environmental Site Assessment
Table A - Soil Analytical Results

			8 metals in soil								sTPH in Soil					Aromatic & Aliphatic TPH in Soil			BTEX in Soil						PAHs in Soil																Asbestos ID (materials)	Asbestos ID (soils)
			Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	TPH C 6 - C 9 Fraction	TPH C10 - C14 Fraction	TPH C15 - C28 Fraction	TPH C29-C36 Fraction	TPH+C10 - C36 (Sum of total)	TPH > C35 Aliphatic	TPH C16 - C35 Aliphatic	TPH C16 - C35 Aromatic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b)&(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Total PAHs		
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-
EQL			4	0.5	1	1	1	0.1	1	1	25	50	100	100		1000	1000	50	0.5	1	0.5	2	1		0.1	0.1	0.1	0.1	0.05	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.55		
EPA 1994 Health and Ecological							300				65				1000				1	50	130			25																		
NEPM 1999 HIL F			500	100		5000	1500	75	3000	35000						280000	28000	450											5											100		
Date	Field_ID	Depth																																								
8/12/2008	SB1	0.1	<4	0.5	22	58	5	<0.1	160	58	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
10/12/2008	SB2	0.1	<4	<0.5	10	32	16	<0.1	23	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB3	0.1	<4	<0.5	5	13	52	<0.1	6	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
8/12/2008	SB4	0.1	<4	<0.5	26	28	13	<0.1	32	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB4	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Chrysotile & amosite asbestos detected
8/12/2008	SB4	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
8/12/2008	SB5	0.1	<4	<0.5	6	14	50	<0.1	5	120	<25	<50	<100	110	110	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
8/12/2008	SB6	0.1	5	<0.5	9	27	23	<0.1	17	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB7	0.1	<4	<0.5	15	11	28	<0.1	6	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB8	0.1	10	0.5	22	28	46	<0.1	20	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
11/12/2008	SB9	0.1	6	<0.5	20	25	39	<0.1	24	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB9	0.3	9	<0.5	20	13	24	<0.1	6	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB10	0.1	4	0.9	10	22	18	<0.1	6	360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB11	0.1	<4	<0.5	7	22	10	<0.1	23	46	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	ND
11/12/2008	SB12	0.1	<4	0.5	18	62	4	<0.1	120	52	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	ND
11/12/2008	SB13	0.1	<4	<0.5	9	24	7	<0.1	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB14	0.08	<4	<0.5	10	2	9	<0.1	2	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB15	0.15	<4	<0.5	12	<1	7	<0.1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB16	0.15	<4	<0.5	6	3	4	<0.1	6	15	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	ND
11/12/2008	SB16	0.26	<4	<0.5	7	2	6	<0.1	2	11	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
11/12/2008	SB17	0.22	<4	<0.5	8	4	6	<0.1	8	13	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
8/12/2008	SB18	0.1	<4	0.6	14	100	160	<0.1	24	1000	<25	<50	1200	900	2100	<1000	1300	910	<0.5	<1	<0.5	<2	<1	<3	0.9	1.1	0.8	0.9	1	2.1	1.2	1.3	0.1	3.9	0.9	1.3	<0.1	3.3	3.8	22.6	-	-
10/12/2008	SB19	0.1	<4	<0.5	10	63	8	<0.1	27	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB20	0.2	6	<0.5	13	6	19	<0.1	3	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB21	0.13	<4	<0.5	17	62	11	<0.1	95	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB22	0.15									<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	ND
11/12/2008	SB23	0.15	<4	<0.5	14	29	8	<0.1	48	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB24	0.15	<4	<0.5	12	10	18	<0.1	4	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB25	0.1	<4	<0.5	8	50	8	<0.1	45	54	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB25	0.5	-	-	-	-	-	-	-	-	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB26	0.1	<4	<0.5	12	48	7	<0.1	41	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
10/12/2008	SB26	4.5	<4	<0.5	11	11	19	<0.1	5	15	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
10/12/2008	SB27	0.1	5	<0.5	15	5	16	<0.1	4	13	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
9/12/2008	SB28	1	5	<0.5	12	28	27	<0.1	19	40	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
9/12/2008	SB28	3	-	-	-	-	-	-	-	-	<25	<50	140	240	380	-	-	-	-	-	-	-	-	-	0.1	<0.1	0.2	0.5	1.6	2.5	1.2	0.7	0.1	1.4	0.1	1.6	<0.1	0.7	1.5	12.1	-	-
9/12/2008	SB28	3.5	<4	<0.5	11	39	18	<0.1	25	33	<25	<50	660	1100	1760	<1000	1100	1800	<0.5	<1	<0.5	<2	<1	<3	0.9	0.2	1.7	4.4	5.9	9.1	3.4	4.4	0.6	11	1	4.1	<0.1	2.9	11	60.6	-	-
10/12/2008	SB29	0.1	<4	<0.5	12	56	5	<0.1	54	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB29	1.5	<4	<0.5	12	26	17	<0.1	18	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	0.6	0.2	0.4	0.9	0.9	0.4	0.5	<0.1	0.5	0.3	0.5	0.4	0.7	1	7.3	-	-
10/12/2008	SB30	0.1	7	<0.5	13	15	29	<0.1	11	28	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	ND
10/12/2008	SB31	0.14	4	<0.5	12	11	29	<0.1	7	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB32	0.1	<4	0.6	13	47	5	<0.1	110	44	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
10/12/2008	SB32	1.5	-	-	-	-	-	-	-	-	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
9/12/2008	SB33	0.1	<4	0.8	13	47	19	<0.1	70	35	<25	<50	<100	210	210	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	0.3	0.2	0.9	2.6	3.5	2.5	1	0.3	1.7	<0.1	2.5	<0.1	0.5	2.1	17.1	-	-
9/12/2008	SB33	1.5	<4	<0.5	16	20	20	<0.1	19	35	<25	<50	<100	170	170	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	0.2	0.3	1	1.5	2.1	0.9	1	0.1	2.8	0.2	1	0.2	1.6	3.2	16.1	-	-
11/12/2008	SB34	0.1	6	<0.5	15	8	15	<0.1	5	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
11/12/2008	SB35	0.1	<4	<0.5	13	75	5	<0.1	72	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB36	0.1	5	<0.5	13	20	24	<0.1	11	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB37	0.1	5	<0.5	8	46	25	<0.1	30	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB38	0.22	<4	<0.5	8	1	9	<0.1	2	14	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
11/12/2008	SB39	0.1	6	<0.5	16	7	13	<0.1	7	13	<25	<50	<100	<100	<250	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
8/12/2008	SB40	0.1	<4	<0.5	8	22	7	<0.1	25	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB41	0.15	<4	0.5	10	49	6	<0.1	81	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB42	0.1	7	<0.5	21	4	16	<0.1	4	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB43	0.3	5	<0.5	8	15	20	<0.1	7	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB44	0.1	6	<0.5	11	16	22	<0.1	7	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB45	0.1	4	<0.5	8	9	15	<0.1	5	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB46	0.1	6	<0.5	16	21	37	<0.1	10	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB47	0.3	<4	0.6	12	49	4	<0.1	100	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB47	1.5	15	<0.5	16	32	20	<0.1	10	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0.3	0.3	0.5	0.2	0.4	<0.1	0.9	<0.1	0.2	<0.1	0.6	0.9	4.3	-	-
8/12/2008	SB49	0.1	4	<0.5	14	19	44	<0.1	11	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB50	0.1	5	<0.5	18	34	19	<0.1	29	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB51	0.1	5	<0.5	15	17	16	<0.1	14	31	<25	<50	<100	150	150	-	-	-	<0.5	<1	<0.5	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.55	-	-
8/12/2008	AC1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Chrysotile asbestos detected.	-

Job No. 40638
Department of Planning - Cnr Carrington Road and Doran Drive, Castle Hill NSW
Combined Phase 1 and Phase 2 Environmental Site Assessment
Table A - Soil Analytical Results

			pH	Organochlorine Pesticides																							Organophosphorus Pesticides								PCBs in Soil						Phenols in Soil
			pH	Aldrin + Dieldrin	DDT+DDE+DDD	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dimethoate	Ethion	Fenitrothion	Ronnel	Arochlor 1016	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Phenolics Total
			pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5
EPA 1994 Health and Ecological																																								
NEPM 1999 HIL F				50	1000																	50																		
Date	Field_ID	Depth																																							
8/12/2008	SB1	0.1	8.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
10/12/2008	SB2	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB3	0.1	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
8/12/2008	SB4	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB4	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB4	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB5	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB6	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB7	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB8	0.1	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
11/12/2008	SB9	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB9	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB10	0.1	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB11	0.1	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
11/12/2008	SB12	0.1	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
11/12/2008	SB13	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB14	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB15	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB16	0.15	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
11/12/2008	SB16	0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB17	0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB18	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5
10/12/2008	SB19	0.1	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
10/12/2008	SB20	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB21	0.13	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
11/12/2008	SB22	0.15	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
11/12/2008	SB23	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB24	0.15	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB25	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB25	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB26	0.1	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB26	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB27	0.1	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
9/12/2008	SB28	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB28	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB28	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB29	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB29	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB30	0.1	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
10/12/2008	SB31	0.14	7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB32	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB32	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB33	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB33	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB34	0.1	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
11/12/2008	SB35	0.1	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
11/12/2008	SB36	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB37	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB38	0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB39	0.1	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
8/12/2008	SB40	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB41	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB42	0.1	8.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB43	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB44	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/12/2008	SB45	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB46	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB47	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2008	SB47	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB49	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/12/2008	SB50	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/12/2008	SB51	0.1	-	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
8/12/2008	AC1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Job No. 40638
Department of Planning - Cnr Carrington Road and Doran Drive, Castle Hill NSW
Combined Phase 1 and Phase 2 Environmental Site Assessment
Table A - Soil Analytical Results

| | | | VOCs in soil | | |

Job No. 40638
Department of Planning - Cnr Carrington Road and Doran Drive, Castle Hill NSW
Combined Phase 1 and Phase 2 Environmental Site Assessment
Table B - Groundwater Quality

FILE REF: G:\JBS Environmental\Projects\Dept. of Planning\40638 - Baulkham Hills Shire Depot, Carlingford Rd\Tables\[Tables Rev A.xls]Table B - GW Water Quality

Well Number	Date Sampled	Top of Well Casing Elevation (m AHD)	Measured Depth to Water (m)	Corrected Water Elevation (m AHD)	DO (mg/L)	pH	Temp (°C)	Redox (mV)	TDS (ppm)	EC (µS/cm)	Observations
MW1	18-Dec-08	89.12	3.68	85.44	3.34	4.55	18.4	182	1,148	1,766	Slightly turbid, light brown, no odour or sheen noted. Insufficient water to collect post purge parameters.
MW2	18-Dec-08	84.75	4.74	80.01	2.69	5.04	20.5	123	298	458	Slightly turbid, light brown, no odour or sheen noted. Insufficient water to collect post purge parameters.
MW3	18-Dec-08	84.62	2.98	81.64	0.58	6.76	22.9	-114	577	888	Slightly turbid, light brown, no odour or sheen noted.
MW4	18-Dec-08	84.31	5.28	79.03	1.03	6.28	22.4	69	729	1,121	Clear, no odour or sheen noted. Insufficient water to collect post purge parameters.
MW5	18-Dec-08	83.92	5.34	78.59	0.94	5.12	21.0	110	407	626	Slightly turbid, light brown, no odour or sheen noted.

Notes:
NA = Monitoring well not surveyed
DO = Dissolved Oxygen
EC = Electrical Conductivity
Redox = Oxidation/Reduction Potential
Temp = Temperature
TDS = Total Dissolved Solids (Approximate value calculated using the following equation: TDS (ppm)= EC x 0.65)

Job No. 40638
Department of Planning - Cnr Carrington Road and Doran Drive, Castle Hill NSW
Combined Phase 1 and Phase 2 Environmental Site Assessment
Table C - Groundwater Analytical Results

		8 HM in water - dissolved								sTPH in Water					vTPH & BTEX in Water						PAHs in Water - Low Level														
		Arsenic (Filtered)	Cadmium (Filtered)	Chromium (III+VI) (Filtered)	Copper (Filtered)	Lead (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Zinc (Filtered)	TPH C 6 - C 9 Fraction	TPH C10 - C14 Fraction	TPH C15 - C28 Fraction	TPH C29-C36 Fraction	TPH+C10 - C36	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b)&(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL		1	0.1	1	1	1	0.5	1	1	10	50	100	100		1	1	1	2	1		0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ANZECC 2000 FW 95%		**25**	**0.2**	**1**	**1.4**	**3.4**	**0.6**	**11**	**8**					**600** [2]	**950**				**350**					**0.01** [1]		**0.1** [1]					**1.0** [1]			**16**	**0.6** [1]	
NEPM Drinking		7	2	50	2000	10	1	20	3000						1	300	800			600					0.01										
Field_ID	**Sampled_Date**																																		
MW1	18/12/2008	<1	**0.3**	**1.1**	<1	**4.1**	<0.5	**46**	**210**	<10	99	310	<100	459	<1	<1	<1	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	0.2	0.1	<0.1	<0.1	0.2	0.2
MW2	18/12/2008	<1	<0.1	<1	<1	<1	<0.5	8.2	**20**	<10	<50	180	<100	255	<1	<1	<1	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	0.3	0.2
MW3	18/12/2008	2.3	<0.1	<1	<1	<1	<0.5	<1	<1	<10	200	1200	140	**1540**	<1	<1	<1	<2	<1	<3	2.6	<0.1	**0.6**	0.2	**0.2**	0.4	0.2	0.2	<0.1	**1.4**	1.7	0.2	0.3	**1**	1.1
MW4	18/12/2008	1.6	<0.1	<1	<1	3	<0.5	2.3	**36**	<10	<50	120	<100	195	<1	<1	<1	<2	<1	<3	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2	<2	<2
MW5	18/12/2008	3.6	0.1	<1	**12**	**5.5**	<0.5	6.2	**53**	<10	<50	160	<100	235	<1	<1	<1	<2	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1

Notes:

1. Insufficient data to derive a reliable trigger value. In these instances, reference has been made to low reliability trigger levels contained in ANZECC/ARMCANZ (2000).
2. Dutch Criterion for Mineral Oil

Job No. 40638
Department of Planning - Cnr Carrington Road and Doran Drive, Castle Hill NSW
Combined Phase 1 and Phase 2 Environmental Site Assessment
Table D - Soil Relative Difference Calculations

Field Duplicates (soil) Filter: SDG in('25296','25102','25079','25079-A')		SDG	25079	25079		25079	Interlab_D		25079	25079		25079	Interlab_D		25079	25079		25079	Interlab_D		25102	25102		25102	Interlab_D		25102	25102		25102	Interlab_D	
		Field_ID	SB11	QC1	RPD	SB11	QC1A	RPD	SB18	QC2	RPD	SB18	QC2A	RPD	SB32	QC4	RPD	SB32	QC4A	RPD	SB9	QC5	RPD	SB9	QC5A	RPD	SB35	QC6	RPD	SB35	QC6A	RPD
		Sampled_Date-Time	8/12/2008	8/12/2008		8/12/2008	8/12/2008		8/12/2008	8/12/2008		8/12/2008	8/12/2008		10/12/2008	10/12/2008		10/12/2008	10/12/2008		11/12/2008	11/12/2008		11/12/2008	11/12/2008		11/12/2008	11/12/2008		11/12/2008	11/12/2008	
Method_Type	**ChemName**	**Units**	**EQL**																												
8 metals in soil	Arsenic	mg/kg	4 (Primary): 3 (Interlab)	<4.0	<4.0	0	<4.0	4.0	0	<4.0	<4.0	0	<4.0	<3.0	0	<4.0	<4.0	0	<4.0	<3.0	0	6.0	8.0	29	6.0	5.0	18	<4.0	<4.0	0	<4.0	<3.0	0
	Cadmium	mg/kg	0.5 (Primary): 0.3 (Interl	<0.5	<0.5	0	<0.5	0.4	0	0.6	<0.5	18	0.6	0.7	15	0.6	0.6	0	0.6	0.6	0	<0.5	<0.5	0	<0.5	0.4	0	<0.5	<0.5	0	<0.5	0.5	0
	Chromium (III+VI)	mg/kg	1 (Primary): 0.3 (Interlab	**7.0**	**13.0**	**60**	**7.0**	**12.0**	**53**	14.0	18.0	25	14.0	16.0	13	13.0	13.0	0	13.0	12.0	8	20.0	23.0	14	20.0	14.0	35	13.0	11.0	17	13.0	11.0	17
	Copper	mg/kg	1 (Primary): 0.5 (Interlab	22.0	27.0	20	22.0	23.0	4	100.0	71.0	34	100.0	93.0	7	47.0	49.0	4	47.0	49.0	4	25.0	21.0	17	25.0	22.0	13	75.0	62.0	19	75.0	64.0	16
	Lead	mg/kg	1	10.0	14.0	33	10.0	13.0	26	160.0	110.0	37	160.0	150.0	6	5.0	4.0	22	5.0	4.0	22	39.0	36.0	8	**39.0**	**21.0**	**60**	5.0	4.0	22	5.0	4.0	22
	Mercury	mg/kg	0.1 (Primary): 0.05 (Inter	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
	Nickel	mg/kg	1 (Primary): 0.5 (Interlab	23.0	29.0	23	23.0	27.0	16	24.0	20.0	18	24.0	20.0	18	110.0	110.0	0	110.0	110.0	0	24.0	20.0	18	24.0	21.0	13	72.0	74.0	3	72.0	72.0	0
	Zinc	mg/kg	1 (Primary): 0.5 (Interlab	46.0	64.0	33	46.0	66.0	36	1000.0	720.0	33	1000.0	1200.0	18	44.0	41.0	7	44.0	53.0	19	58.0	49.0	17	58.0	51.0	13	38.0	35.0	8	38.0	44.0	15
Asbestos ID - soils	Asbestos fibres	-		0.0	0.0	0	0.0																									
Organochlorine Pesticides	4,4-DDE	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	a-BHC	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Aldrin	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	b-BHC	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Chlordane (cis)	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Chlordane (trans)	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	d-BHC	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	DDD	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	DDT	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Dieldrin	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Endosulfan I	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Endosulfan II	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Endrin	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	g-BHC (Lindane)	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Heptachlor	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Hexachlorobenzene	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Methoxychlor	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
Organophosphorus Pesticides	Bromophos-ethyl	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Chlorpyrifos	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Chlorpyrifos-methyl	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Diazinon	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Dimethoate	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Ethion	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Fenitrothion	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Ronnel	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
PAHs in Soil	Acenaphthene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Acenaphthylene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Anthracene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Benz(a)anthracene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Benzo(a) pyrene	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0											
	Benzo(b)&(k)fluoranthene	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.2	0											
	Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Chrysene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Dibenz(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Fluoranthene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Fluorene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Naphthalene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Phenanthrene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
	Pyrene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.1	0											
PCBs in Soil	Arochlor 1016	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Arochlor 1232	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Arochlor 1242	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Arochlor 1248	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Arochlor 1254	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
	Arochlor 1260	mg/kg	0.1	<0.1	<0.1	0	<0.1																									
sTPH in Soil (C10-C36)	TPH C10 - C14 Fraction	mg/kg	50 (Primary): 20 (Interlat	<50.0	<50.0	0	<50.0	<20.0	0							<50.0	<50.0	0	<50.0	<20.0	0											
	TPH C15 - C28 Fraction	mg/kg	100 (Primary): 50 (Interl	<100.0	<100.0	0	<100.0	<50.0	0							<100.0	<100.0	0	<100.0	<50.0	0											
	TPH C29-C36 Fraction	mg/kg	100 (Primary): 50 (Interl	<100.0	170.0	**52**	<100.0	<50.0	0							<100.0	<100.0	0	<100.0	<50.0	0											
vTPH & BTEX in Soil	Benzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0							<0.5	<0.5	0	<0.5	<0.5	0											
	Ethylbenzene	mg/kg	1 (Primary): 0.5 (Interlab	<1.0	<1.0	0	<1.0	<0.5	0							<1.0	<1.0	0	<1.0	<0.5	0											
	Toluene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0							<0.5	<0.5	0	<0.5	<0.5	0											
	TPH C 6 - C 9 Fraction	mg/kg	25 (Primary): 20 (Interlat	<25.0	<25.0	0	<25.0	<20.0	0							<25.0	<25.0	0	<25.0	<20.0	0											
	Xylene (m & p)	mg/kg	2	<2.0	<2.0	0	<2.0									<2.0	<2.0	0	<2.0													
	Xylene (o)	mg/kg	1	<1.0	<1.0	0	<1.0	<3.0								<1.0	<1.0	0	<1.0	<3.0												

*RPDs have only been considered where a concentration is greater than 4 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 50 (4-10 x EQL); 30 (10-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Job No. 40638
Department of Planning - Cnr Carrington Road and Doran Drive, Castle Hill NSW
Combined Phase 1 and Phase 2 Environmental Site Assessment
Table E - Groundwater Relative Percentage Difference Calculations

Field Duplicates (water) Filter: SDG in('25296','25102','25079','25079-A')	SDG	25296	25296		25296	Interlab_D	
	Field_ID	MW3	QC1	RPD	MW3	QC1A	RPD
	Sampled_Date-Time	18/12/2008	18/12/2008		18/12/2008	18/12/2008	
Method_Type	**ChemName**	**Units**	**EQL**						
8 HM in water - dissolved	Arsenic (Filtered)	mg/l	0.001	0.0023	0.0024	4	0.0023	0.003	26
	Cadmium (Filtered)	mg/l	0.0001	<0.0001	<0.0001	0	<0.0001	<0.0001	0
	Chromium (III+VI) (Filtered)	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Copper (Filtered)	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Lead (Filtered)	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Mercury (Filtered)	mg/l	0.0005	<0.0005	<0.0005	0	<0.0005	<0.0005	0
	Nickel (Filtered)	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0
	Zinc (Filtered)	mg/l	0.001	<0.001	0.0013	26	**<0.001**	**0.003**	**100**
PAHs in Water - Low Level	Acenaphthene	µg/L	0.1	2.6	2.8	7	2.6	2.6	0
	Acenaphthylene	µg/L	0.1	<0.1	<0.1	0	<0.1	<0.1	0
	Anthracene	µg/L	0.1	0.6	0.6	0	**0.6**	**<0.1**	**143**
	Benz(a)anthracene	µg/L	0.1	0.2	0.2	0	0.2	<0.1	67
	Benzo(a) pyrene	µg/L	0.1	0.2	0.3	40	0.2	<0.1	67
	Benzo(b)&(k)fluoranthene	µg/L	0.2	0.4	0.5	22	0.4	<0.2	67
	Benzo(g,h,i)perylene	µg/L	0.1	0.2	0.2	0	0.2	<0.1	67
	Chrysene	µg/L	0.1	0.2	0.3	40	0.2	<0.1	67
	Dibenz(a,h)anthracene	µg/L	0.1	<0.1	<0.1	0	<0.1	<0.1	0
	Fluoranthene	µg/L	0.1	1.4	1.6	13	**1.4**	**0.9**	**43**
	Fluorene	µg/L	0.1	1.7	1.9	11	1.7	1.6	6
	Indeno(1,2,3-c,d)pyrene	µg/L	0.1	0.2	0.2	0	0.2	<0.1	67
	Naphthalene	µg/L	0.1	0.3	0.3	0	0.3	<0.1	100
	Phenanthrene	µg/L	0.1	1.0	1.1	10	1.0	0.7	35
	Pyrene	µg/L	0.1	1.1	1.3	17	**1.1**	**0.8**	**32**
sTPH in Water (C10-C36)	TPH C10 - C14 Fraction	µg/L	50	**200.0**	**84.0**	**82**	200.0	<100.0	67
	TPH C15 - C28 Fraction	µg/L	100	1200.0	910.0	27	**1200.0**	**630.0**	**62**
	TPH C29-C36 Fraction	µg/L	100	140.0	<100.0	33	140.0	<200.0	35
vTPH & BTEX in Water	Benzene	µg/L	1	<1.0	<1.0	0	<1.0	<0.5	0
	Ethylbenzene	µg/L	1	<1.0	<1.0	0	<1.0	<0.5	0
	Toluene	µg/L	1	<1.0	<1.0	0	<1.0	<0.5	0
	TPH C 6 - C 9 Fraction	µg/L	10	<10.0	<10.0	0	<10.0	<40.0	0
	Xylene (m & p)	µg/L	2	<2.0	<2.0	0	<2.0		0
	Xylene (o)	µg/L	1	<1.0	<1.0	0	<1.0	<3.0	0

*RPDs have only been considered where a concentration is greater than 4 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 50 (4-10 x EQL); 30 (10-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Borehole No.: SB1

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.0m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Greg Bartlett
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Gravelly sand, grey/black, damp, loose, coarse grained sand, heterogeneous with inclusions of coarse basalt gravels.	SB1-0.1	D	2.7		
		SANDY CLAY Orange/grey, homogenous, damp, firm, moderate plasticity.	SB1-0.3	D	2.1		
			SB1-0.5	D	1.1		
1.0			SB1-1.0	D	2.4		
		End of investigation at 1.0m bgs.					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB2

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.0m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly clayey sand, grey/brown, heterogeneous, damp, loose, medium grained sand with basalt and sandstone gravel inclusions.	SB2-0.1	U	3.5		
			SB2-0.3	U	4.2		
		SANDY CLAY Dark brown/orange, damp, firm, non plastic	SB2-0.5	U	4.0		
1.0			SB2-1.0	U	4.2		
		End of investigation at 1.0m bgs. Refusal encountered in sandstone.					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB3

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.12m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Mike Parker
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Gravelly clayey sand, medium brown, heterogeneous, dry to damp, loose, fine grained sand with trace sandstone gravel inclusions.	SB3-0.1	D	2.0		
		End of investigation at 0.12m bgs. Refusal encountered in sandstone.					
1.0							
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB4

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.7m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Mike Parker
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Gravelly clayey sand, medium brown, heterogeneous, dry, loose, fine grained sand with inclusions of sandstone and trace bitumen pieces.	SB4-0.1	D	2.0		
			SB4-0.3	D	1.4		
		FILL Gravelly clay, mottled orange with brown and light grey, heterogeneous, dry to damp, very stiff, low to moderate plasticity with sandstone gravel inclusions.	SB4-0.5	D	0.1		
			SB4-0.7	D	0.1		
1.0		**FILL** As above with timber pieces and fibre cement fragment.					
		FILL As above with shale gravels and black rocks present.					
		FILL Sand, grey to brown, damp, homogenous, moderately loose, medium grained with trace sandstone gravel inclusions.					
2.0		**End of investigation at 0.7m bgs. Refusal encountered on sandstone gravels.**					
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger	***U - undisturbed tube sample***		
SFA - Solid Flight Auger	***D - disturbed sample***		
HFA - Hollow Flight Auger	***CS - core sample***		
PT - Push Tubing			

Borehole No.: SB5

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.27m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Mike Parker
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Gravelly clayey sand, medium brown/light to medium grey, loose, heterogeneous, dry, fine grained sand, inclusions of sandstone gravels.	SB5-0.1	D	0.1		
1.0		**End of investigation at 0.27m bgs. Refusal encountered on sandstone gravels.**					
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB6

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.1m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Greg Bartlett
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Clayey sand, light brown, dry, very loose, fine grained sand with trace basalt and sandstone gravel inclusions.	SB6-0.1	D	0.0		
1.0		**End of investigation at 0.1m bgs. Refusal encountered on sandstone.**					
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB7

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.12m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Greg Bartlett
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Clayey sand, light brown, dry, very loose, fine grained sand with trace sandstone and ironstone gravel inclusions.	SB7-0.1	D	0.0		
		End of investigation at 0.12m bgs. Refusal encountered on sandstone.					
1.0							
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB8

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.45m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Greg Bartlett
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Clayey sand, light brown, dry, very loose, fine grained with sandstone and ironstone gravel inclusions.	SB8-0.1	D	0.5		
			SB8-0.3	D	0.6		
			SB8-0.45	D	1.2		
1.0		**End of investigation at 0.45m bgs. Refusal encountered on sandstone.**					
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

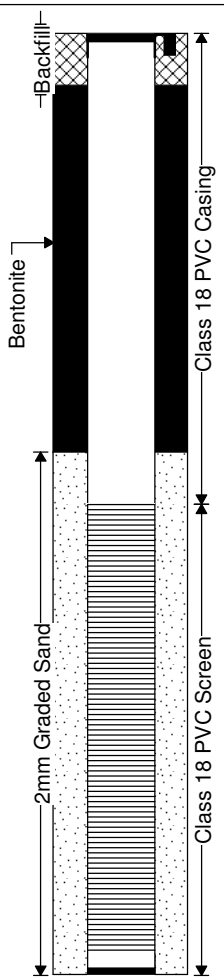
Borehole No.: SB9/MW1 **Location:** Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 9.0m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT/Pneumatic Hammer
Log By: Greg Bartlett
Bore Diameter: 0.15m

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		FILL Clayey sand, dark brown, heterogeneous, damp, loose, fine to medium grained sand with trace fine ironstone and sandstone gravel inclusions.	SB9-0.1	U	1.9	Duplicate and triplicate samples QC5 and QC5A collected at SB9-0.1.	
			SB9-0.3	U	4.2		
			SB9-0.5	U	3.2		
1.0			SB9-1.0	U	3.8		
2.0		**CLAY** Brown/orange, heterogeneous, dry, hard, non plastic with trace sandstone gravels.					
3.0		**CLAYEY SAND** Light to dark brown, dry, very loose, fine to coarse grained sand.					
4.0		**CLAY** Brown/orange, heterogeneous, dry, hard, non plastic.					
		SANDSTONE Yellow to white, dry, hard.					
5.0		**SANDSTONE** As above, orange, damp.					
		SANDSTONE As above, yellow/white.					
6.0							
7.0							
8.0							
9.0		**End of investigation at 9.0m bgs.**					
10.0							



Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB10

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.2m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Mike Parker
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Gravelly sandy clay, homogenous, dry to damp, medium to dark brown, non plastic to low plasticity.	SB10-0.1	D	0.2		
			SB10-0.2	D	1.6		
		CLAYEY SAND Mottled orange-brown, light grey, damp, moderately loose, well sorted, medium grained sand with weathered sandstone present.					
1.0		**End of investigation at 0.2m bgs. Refusal encountered on sandstone.**					
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB11

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.22m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Mike Parker
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Gravelly clayey sand, heterogeneous, medium brown, loose, poorly sorted, fine grained sand with inclusions of fine to coarse sandstone gravels and rootlets.	SB11-0.1	D	0.0	Duplicate and triplicate samples QC1 and QC1A collected at SB11-0.1.	
			SB11-0.2	D	0.2		
		CLAY Silty, mottled orange, brown and light grey, very stiff, low plasticity with little sand, and gravels of shale and sandstone inclusions.					
1.0		**SANDSTONE** Mottled, light grey and orange/brown, dry, hard.					
		End of investigation at 0.22m bgs. Refusal encountered on sandstone.					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger	***U - undisturbed tube sample***		
SFA - Solid Flight Auger	***D - disturbed sample***		
HFA - Hollow Flight Auger	***CS - core sample***		
PT - Push Tubing			

Borehole No.: SB12

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.0m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly clayey sand, grey/black, heterogeneous, dry, very loose, sand with basalt gravel inclusions.	SB12-0.1	U	6.5		
			SB12-0.3	U	5.6		
		SANDY CLAY Orange/yellow, homogenous, damp, firm, moderate plasticity.	SB12-0.5	U	5.8		
		SANDSTONE Orange/white with red mottle, weathered, damp.	SB12-1.0	U	5.2		
1.0		**End of investigation at 1.0m bgs. Refusal encountered in sandstone.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB13

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.5m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Clayey sand, dark brown to black, damp, loose, medium grained.	SB13-0.1	U	3.2		
		SANDSTONE Yellow/white, dry to damp, hard.	SB13-0.3	U	5.5		
			SB13-0.5	U	4.3		
1.0		**End of investigation at 0.5m bgs. Refusal encountered in sandstone.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB14

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.5m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Clayey sand, dark brown to black, damp, loose, medium grained.	SB14-0.08	U	4.2		
			SB14-0.3	U	6.2		
		SANDSTONE Red/white, dry to damp, hard.	SB14-0.5	U	4.0		
1.0		**End of investigation at 0.5m bgs. Refusal encountered in sandstone.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB15

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.9m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		CONCRETE					
		FILL Gravelly clayey sand, dark brown, heterogeneous, dry to damp, loose, medium grained sand with sandstone gravel inclusions.	SB15-0.15	U	3.6		
			SB15-0.3	U	4.9		
		CLAYEY SAND Yellow/red, damp, medium grained sand, loose.	SB15-0.5	U	4.2		
		SANDSTONE Red/yellow, damp, hard.	SB15-0.9	U	2.9		
1.0		**End of investigation at 0.9m bgs. Refusal encountered in sandstone.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB16

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.55m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
		Ground Surface					
0.0		**CONCRETE**					
		CLAYEY SAND Light brown/yellow with white mottle, damp, loose, fine grained.	SB16-0.26	U	3.2		
		SANDSTONE White to light brown, weathered, damp.	SB16-0.55	U	3.3		
		End of investigation at 0.55m bgs. Refusal encountered in sandstone.					
1.0							
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB17

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.51m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		CONCRETE					
		CLAYEY SAND Light to dark brown, damp, loose, heterogeneous, coarse grained sand with trace basalt and sandstone gravel inclusions.	SB17-0.22	U	3.3		
			SB17-0.5	U	4.3		
		SANDSTONE Light brown, damp, weathered.					
1.0		**End of investigation at 0.51m bgs. Refusal encountered in sandstone.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB18

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.1m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Greg Bartlett
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		FILL Clayey sand, light brown, dry, loose, heterogeneous with trace ironstone and sandstone gravel inclusions.	SB18-0.1	D	5.5	Duplicate and triplicate samples QC2 and QC2A collected at SB18-0.1.	
1.0		**End of investigation at 0.1m bgs. Refusal encountered on sandstone.**					
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB19

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.12m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly sand, dark grey, heterogeneous, dry, very loose, coarse grained sand with basalt gravel inclusions.	SB19-0.1	U	5.1		
		End of investigation at 0.12m bgs. Refusal encountered on sandstone.					
1.0							
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB20

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.2m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
		Ground Surface					
0.0		**BITUMEN**					
		FILL Clayey sand, light to medium brown, slightly damp, heterogeneous, very loose, coarse grained sand with inclusions of sandstone gravels.	SB20-0.2	U	1.2		
			SB20-0.5	U	0.7		
		FILL As above, yellow.					
1.0			SB20-1.0	U	0.9		
		SANDSTONE Yellow/white, dry, hard.	SB20-1.2	U	0.9		
		End of investigation at 1.2m bgs. Refusal encountered in sandstone.					
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB21

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.4m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly sand with trace clay, grey, slightly damp, heterogeneous, very loose, medium grained sand with fine to coarse basalt gravel inclusions.	SB21-0.13	U	0.6		
			SB21-0.3	U	0.9		
			SB21-0.5	U	1.2		
1.0		**SANDY CLAY** Medium to dark brown, damp, medium to coarse grained sand, soft to firm, moderate plasticity.	SB21-1.0	U	0.6		
		SANDSTONE Yellow, damp, hard.	SB21-1.3	U	0.4		
		End of investigation at 1.4m bgs. Refusal encountered in sandstone.					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB22

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.1m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		CONCRETE					
		FILL Clayey sand, brown, damp, heterogeneous, very loose, fine to medium grained with trace basalt gravel inclusions.	SB22-0.15	U	1.6	Black staining noted. No odour.	
			SB22-0.3	U	3.3		
		SANDY CLAY White/red, dry to damp, medium grained sand, non plastic to low plasticity with trace fine sandstone gravel inclusions.	SB22-0.5	U	3.2		
1.0		**SANDSTONE** White to light brown, weathered, damp.	SB22-1.0	U	3.1		
			SB22-1.1	U	5.2		
		End of investigation at 1.1m bgs. Refusal encountered in sandstone.					
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB23

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.0m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		CONCRETE					
		FILL Gravelly sand, dark brown with some black, damp, loose, coarse grained sand with trace sandstone gravel inclusions.	SB23-0.15	U	2.7		
			SB23-0.3	U	2.2		
		SANDSTONE White and red, slightly weathered, hard, trace clay.	SB23-0.5	U	2.3		
		SANDSTONE As above, yellow/red.	SB23-1.0	U	2.2		
1.0		**End of investigation at 1.0m bgs. Refusal encountered in sandstone.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB24 **Location:** Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.7m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly clayey sand, medium brown/grey, damp, heterogeneous, loose, coarse grained with ironstone, sandstone and basalt gravel inclusions.	SB24-0.15	U	6.1		
			SB24-0.3	U	6.3		
			SB24-0.5	U	0.7		
			SB24-0.7	U	0.5		
1.0		**End of investigation at 0.7m bgs. Refusal encountered in sandstone.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

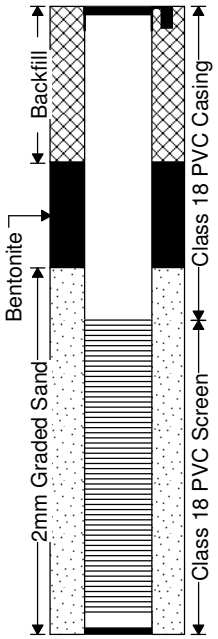
Borehole No.: SB25/MW4 **Location:** Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 6.0m
Eastings: -
Northings: -
Date: 9 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT/SFA
Log By: Greg Bartlett
Bore Diameter: 0.15m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN	SB25-0.13	U	0.0		
		FILL Gravelly sandy clay, medium brown/grey, moist, non plastic, heterogeneous, coarse grained with inclusions of basalt and ironstone gravels.	SB25-0.3	U	0.7	Very slight hydrocarbon odour noted. Duplicate and triplicate samples QC3 and QC3A collected at SB25-0.13.	
			SB25-0.5	U	0.1		
1.0			SB25-1.0	U	0.5		
			SB25-1.5	U	0.6		
2.0		**FILL** As above, dark brown with no gravel inclusions.	SB25-2.0	U	1.3		
		CLAY Medium brown with orange mottle, homogenous, damp, firm, low plasticity.	SB25-2.5	U	0.8		
3.0			SB25-3.0	U	0.4		
		SANDSTONE Yellow, dry to damp, weathered.	SB25-3.5	U	0.1		
4.0		**CLAY** Medium brown with orange mottle, damp, firm, low plasticity with trace medium grained sand.	SB25-4.0	U	0.4		
			SB25-4.5	U	0.3		
5.0		**CLAY** As above, moist to wet.	SB25-5.0	U	0.4		
		CLAY As above, some black colour, no sand.	SB25-6.0	U	0.2		
6.0		**End of investigation at 6.0m bgs.**					
7.0							
8.0							
9.0							
10.0							



Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

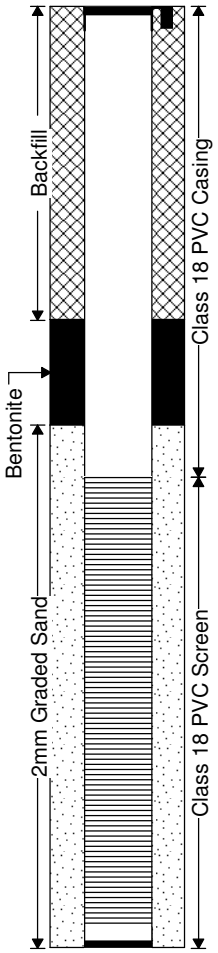
Borehole No.: SB26/MW5 **Location:** Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 9.0m
Eastings: -
Northings: -
Date: 9 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT/Pneumatic Hammer
Log By: Greg Bartlett
Bore Diameter: 0.15m

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		BITUMEN	SB26-0.14	U	0.3		
		FILL Clayey sand, grey/brown, heterogeneous, dry, very loose, medium grained with trace ironstone and sandstone gravel inclusions.	SB26-0.3	U	0.4		
			SB26-0.5	U	0.3		
1.0							
		FILL Sandstone gravels, white/grey, very hard, dry.	SB26-2.0	U	0.1		
2.0							
		FILL Gravelly clay, medium brown, dry, with sandstone and ironstone gravel inclusions.	SB26-2.5	U	0.1		
			SB26-3.0	U	0.5		
3.0							
		FILL As above with shale inclusions.	SB26-3.5	U	0.5		
			SB26-4.0	U	0.5		
4.0		**CLAY** Medium brown, slightly damp, homogenous, firm, moderate plasticity.	SB26-4.5	U	0.4		
			SB26-5.0	U	0.4		
5.0							
		CLAY As above, damp to slightly moist, soft to firm.	SB26-6.0	U	0.6		
6.0							
			SB26-7.0	U	0.1		
7.0							
			SB26-8.0	U	0.2		
8.0							
			SB26-9.0	U	0.2		
9.0		**End of investigation at 9.0m bgs.**					
10.0							



Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB27

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 2.0m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly sand, grey/medium brown, dry, heterogeneous, loose, medium grained sand with basalt gravel inclusions.	SB27-0.1	U	2.9		
			SB27-0.3	U	2.1		
		FILL As above with trace clay.	SB27-0.5	U	1.8		
		SANDY CLAY Brown/orange, dry, stiff, non plastic.					
1.0		**SANDY CLAY** As above with sandstone inclusions.	SB27-1.0	U	2.1		
		SANDY CLAY As above, orange, hard, dense, no sandstone inclusions.					
			SB27-1.5	U	1.1		
			SB27-2.0	U	0.9		
2.0		**End of investigation at 2.0m bgs. Refusal in dense compacted clay.**					
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

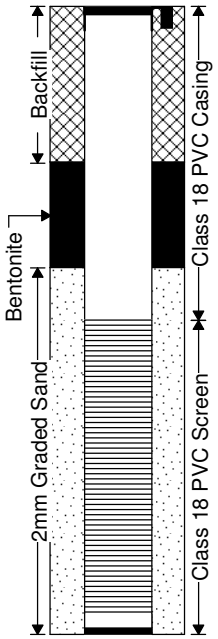
Borehole No.: SB28/MW3 **Location:** Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 6.0m
Eastings: -
Northings: -
Date: 9 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT/SFA
Log By: Greg Bartlett
Bore Diameter: 0.15m

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		BITUMEN	SB28-0.1	U	0.5		
		FILL Gravelly sand, grey, dry, very loose, heterogeneous, coarse grained sand with basalt gravel inclusions.	SB28-0.3	U	0.5		
			SB28-0.5	U	0.5		
1.0			SB28-1.0	U	0.4		
		FILL Sandy clay, light brown,/orange, heterogeneous, very stiff, coarse grained sand with trace ironstone and sandstone gravel inclusions	SB28-1.5	U	0.2		
2.0			SB28-2.0	U	0.0		
			SB28-2.5	U	0.4		
3.0		**FILL** As above, black, damp with ash and slag present.	SB28-3.0	U	0.3		
			SB28-3.5	U	0.0	Coal tar like odour noted.	
4.0		**FILL** As above, moist.	SB28-4.0	U	0.6		
		FILL As above, wet to saturated.	SB28-4.5	U	0.5		
5.0		**CLAY** Medium brown, homogenous, saturated, soft, moderate plasticity.	SB28-5.0	U	0.2		
			SB28-5.5	U	0.1		
6.0		**End of investigation at 6.0m bgs.**	SB28-6.0	U	0.3		
7.0							
8.0							
9.0							
10.0							



Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

JBS ENVIRONMENTAL

Borehole No.: SB29

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 2.5m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly sand, grey/brown, heterogeneous, loose, fine to medium grained sand with basalt gravel inclusions.	SB29-0.1	U	5.4		
			SB29-0.3	U	2.1		
		FILL Clay, dark brown with red mottle, heterogeneous, dry, stiff, non plastic with trace basalt gravels.	SB29-0.5	U	2.3		
		FILL As above, light brown, no inclusions.					
1.0			SB29-1.0	U	2.1		
		FILL As above, yellow, damp, firm, non plastic with ash and slag inclusions.	SB29-1.5	U	3.6		
		SANDY CLAY Dark brown with red mottle, dry, stiff, non plastic.					
2.0			SB29-2.0	U	2.4		
			SB29-2.5	U	0.6		
		End of investigation at 2.5m bgs.					
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB30

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.0m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly sand, light brown/grey, dry, very loose, heterogeneous, medium grained sand with inclusions of basalt and sandstone gravels.	SB30-0.1	U	3.1		
			SB30-0.3	U	4.0		
		SANDY CLAY Orange/yellow with red mottle, slightly damp, stiff, non plastic.	SB30-0.5	U	3.3		
1.0			SB30-1.0	U	3.9		
		End of investigation at 1.0m bgs.					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB31

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.0m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly clayey sand, light brown/grey, dry, heterogeneous, loose, medium grained sand with basalt and sandstone gravel inclusions.	SB31-0.1	U	3.1		
			SB31-0.3	U	4.0		
		SANDY CLAY Orange/yellow with red mottle, medium grained sand, slightly damp, stiff, non plastic.	SB31-0.5	U	3.3		
1.0			SB31-1.0	U	3.9		
		End of investigation at 1.0m bgs.					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB32

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 2.0m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly sand, grey/brown, heterogeneous, slightly damp, very loose with basalt gravel inclusions.	SB32-0.1	U	0.3	Duplicate and triplicate samples QC4 and QC4A collected at SB32-0.1.	
			SB32-0.3	U	1.4		
			SB32-0.5	U	0.5		
		SANDY CLAY Orange/light brown, heterogeneous, damp, soft, low to moderate plasticity, coarse grained sand with inclusions of sandstone gravels.					
1.0			SB32-1.0	U	0.2		
		SANDY CLAY As above, medium brown with red mottle and trace sandstone gravel inclusions.					
		SANDY CLAY As above, dark brown, damp to moist.	SB32-1.5	U	2.5		
			SB32-2.0	U	1.5		
2.0		**End of investigation at 2.0m bgs.**					
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger	***U - undisturbed tube sample***		
SFA - Solid Flight Auger	***D - disturbed sample***		
HFA - Hollow Flight Auger	***CS - core sample***		
PT - Push Tubing			

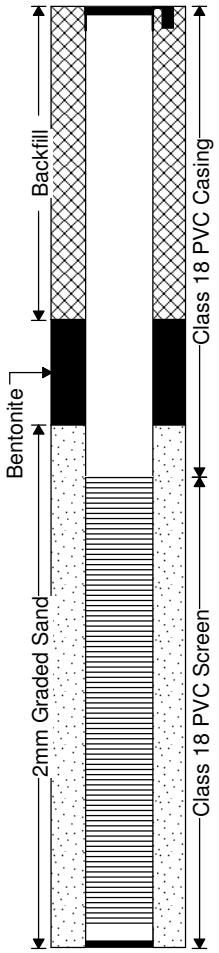
Borehole No.: SB33/MW2 **Location:** Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 9.0m
Eastings: -
Northings: -
Date: 9 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT/Pneumatic Hammer
Log By: Greg Bartlett
Bore Diameter: 0.15m

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		FILL Gravelly sand, grey, damp, loose, heterogeneous, coarse grained sand with coarse basalt gravel inclusions.	SB33-0.1	U	2.5		
			SB33-0.3	U	3.0		
			SB33-0.5	U	1.5		
1.0		**FILL** Clay, brown/orange, heterogeneous, damp, firm, moderate plasticity with trace sandstone and ironstone gravel inclusions.	SB33-1.0	U	3.7		
			SB33-1.5	U	2.5		
2.0			SB33-2.0	U	3.3	Black staining noted. No odour.	
		FILL As above with burnt wood fragments present.					
3.0			SB33-3.0	U	3.4		
		FILL As above, yellow, no burnt wood fragments present.	SB33-3.3	U	2.3		
4.0		**SANDSTONE** White/grey/yellow, dry, weathered.					
5.0		**SANDSTONE** As above, white/grey, hard..					
6.0		**SANDSTONE** As above, yellow.					
7.0							
8.0							
9.0		**End of investigation at 9.0m bgs.**					
10.0							



Sample Method	Sample Condition		
HA - Hand Auger	U - undisturbed tube sample		
SFA - Solid Flight Auger	D - disturbed sample		
HFA - Hollow Flight Auger	CS - core sample		
PT - Push Tubing			

Borehole No.: SB34

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.0m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly sandy clay, orange/brown, dry to damp, heterogeneous, stiff, low plasticity with inclusions of basalt and sandstone gravels.	SB34-0.1	U	4.4		
			SB34-0.2	U	4.2		
			SB34-0.5	U	4.5		
		SANDY CLAY Brown/black, damp, stiff, low plasticity with trace red sandstone gravels inclusions.	SB34-1.0	U	4.3		
1.0		**End of investigation at 1.0m bgs.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB35

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.0m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly clayey sand, grey, damp, heterogeneous, very loose with inclusions of gravels of basalt.	SB35-0.1	U	5.1	Duplicate and triplicate samples QC6 and QC6A collected at SB35-0.1.	
			SB35-0.2	U	4.6		
			SB35-0.5	U	4.3		
		SANDY CLAY Orange/yellow with red mottle, dry to damp, fine grained sand, firm to stiff, low plasticity.	SB35-1.0	U	4.2		
1.0		**End of investigation at 1.0m bgs.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB36

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.5m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly clayey sand, grey, dry, heterogeneous, loose, medium grained with basalt gravel inclusions.	SB36-0.1	U	5.5		
			SB36-0.3	U	5.1		
		SANDY CLAY Dark brown and grey, damp, heterogeneous, firm, low plasticity with fine yellow sandstone gravel inclusions.	SB36-0.5	U	1.9		
		SANDSTONE Yellow/white, damp.					
1.0		**End of investigation at 0.5m bgs. Refusal encountered in sandstone.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB37

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.2m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly clayey sand, grey, heterogeneous, damp, loose, medium grained sand with basalt gravel inclusions.	SB37-0.1 SB37-0.2	U U	5.5 5.1		
		SANDSTONE White, damp, hard.					
		End of investigation at 0.2m bgs. Refusal encountered in sandstone.					
1.0							
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB38

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.55m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		CONCRETE					
		FILL Clayey sand, brown with some red, heterogeneous, damp, fine grained sand, loose with trace sandstone gravel inclusions.	SB38-0.22	U	3.2	Black staining noted.	
			SB38-0.5	U	3.3		
		SANDSTONE Yellow and white, damp, hard with trace clay.					
1.0		**End of investigation at 0.55m bgs. Refusal encountered in sandstone.**					
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB39

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.0m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		FILL Gravelly clayey sand, grey, damp, heterogeneous, loose with basalt gravel inclusions.	SB39-0.1	U	3.9		
			SB39-0.2	U	6.7		
		FILL Gravelly sandy clay, orange to medium brown, heterogeneous, damp, stiff, low plasticity with inclusions of basalt and sandstone gravels.	SB39-0.5	U	6.0		
		SANDY CLAY Orange with trace yellow and red mottle, homogenous, damp, firm, low plasticity with trace red and yellow sandstone gravel inclusions.	SB39-1.0	U	4.5		
1.0		**End of investigation at 1.0m bgs.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB40 **Location:** Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.15m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Greg Bartlett
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Clayey sand, light brown, dry, very loose, fine grained sand, heterogeneous with trace sandstone gravel inclusions.	SB40-0.1	D	0.2		
		End of investigation at 0.15m bgs. Refusal encountered on sandstone.					
1.0							
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB41

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 1.0m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		CONCRETE					
		FILL Gravelly clayey sand, grey/black, dry, coarse grained with basalt gravel inclusions.	SB41-0.15	U	2.8		
			SB41-0.3	U	2.1		
		SANDY CLAY Orange with red and black mottle, homogenous, coarse grained sand, firm, damp, non plastic to low plasticity.	SB41-0.5	U	3.2		
1.0			SB41-1.0	U	3.2		
		End of investigation at 1.0m bgs.					
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB42

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.5m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		SANDY CLAY Light brown, dry, compacted, very hard, non plastic.	SB42-0.1	U	3.9		
			SB42-0.2	U	3.1		
		SANDY CLAY As above, orange/yellow.	SB42-0.5	U	3.6		
1.0		**End of investigation at 0.5m bgs.**					
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB43

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.4m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Mike Parker
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		CLAY Silty, dry, light to medium grey/brown with mottles, very stiff, homogenous, low plasticity.	SB43-0.3	D	0.2		
		CLAY As above, slightly darker brown.	SB43-0.4	D	0.3		
		End of investigation at 0.4m bgs.					
1.0							
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB44

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.3m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Mike Parker
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		CLAY Silty, light grey to brown, homogenous, dry, very stiff, non plastic to low plasticity.	SB44-0.1	D	0.0		
			SB44-0.3	D	0.2		
		End of investigation at 0.3m bgs.					
1.0							
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB45

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.5m
Eastings: -
Northings: -
Date: 11 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		BITUMEN					
		SANDY CLAY Dark brown, dry to damp, fine to medium grained, stiff, non plastic.	SB45-0.1	U	3.5		
			SB45-0.2	U	2.7		
		SANDY CLAY As above, yellow.	SB45-0.5	U	4.3		
		End of investigation at 0.5m bgs.					
1.0							
2.0							
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger *SFA - Solid Flight Auger* *HFA - Hollow Flight Auger* *PT - Push Tubing*	*U - undisturbed tube sample* *D - disturbed sample* *CS - core sample*		

Borehole No.: SB46

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.3m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Mike Parker
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		CLAY Light brown, homogenous, dry, very stiff, non plastic.	SB46-0.1	D	0.4		
			SB46-0.3	D	0.2		
		End of investigation at 0.3m bgs.					
1.0							
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB47

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 2.0m
Eastings: -
Northings: -
Date: 10 December 2008

Driller and Co.: A Mullan/ Macquarie Drilling P/L
Drill Method: PT
Log By: Greg Bartlett
Bore Diameter: 0.05m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		CONCRETE					
		FILL Gravelly clayey sand, grey/black, heterogeneous, damp, medium grained with basalt gravel inclusions.	SB47-0.3	U	2.4		
			SB47-0.5	U	3.1		
		FILL Sandy clay, dark grey/brown, heterogeneous, damp, firm, low plasticity with sandstone gravel inclusions.					
1.0		**FILL** Clay, trace sand, orange/yellow, heterogeneous, damp, firm, low plasticity.	SB47-1.0	U	2.7		
		FILL Gravelly sandy clay, black/dark brown, heterogeneous, stiff, non plastic, coarse grained sand with coarse coal/slag gravels and basalt gravel inclusions.	SB47-1.5	U	2.6		
		SANDY CLAY Dark brown/orange, homogenous, damp, stiff, non plastic.					
2.0			SB47-2.0	U	2.0		
		End of investigation at 2.0m bgs.					
3.0							

Sample Method	*Sample Condition*		
HA - Hand Auger ***SFA - Solid Flight Auger*** ***HFA - Hollow Flight Auger*** ***PT - Push Tubing***	***U - undisturbed tube sample*** ***D - disturbed sample*** ***CS - core sample***		

Borehole No.: SB49 **Location:** Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.3m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Mike Parker
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		CLAY Light grey to brown, homogenous, dry, very stiff, non plastic with rootlets present.	SB49-0.1	D	0.0		
			SB49-0.3	D	0.4		
		End of investigation at 0.3m bgs.					
1.0							
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB50

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.25m
Eastings: -
Northings: -
Date: 8 December 2008

Driller and Co.: -
Drill Method: HA
Log By: Greg Bartlett
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Gravelly sandy clay, grey/brown, heterogeneous, damp to moist, soft, moderate plasticity with basalt gravel inclusions.	SB50-0.1	D	29.3		
			SB50-0.25	D	2.6		
		End of investigation at 0.25m bgs. Refusal encountered on sandstone.					
1.0							
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

Borehole No.: SB51

Location: Cnr Carrington Rd and Doran Dr, Castle Hill NSW

Project: Combined P1 & P2 Contamination Assessment
Project No.: 40638
Client: Department of Planning
Project Manager: Cathy Roberts

Total Hole Depth: 0.25m
Eastings: -
Northings: -
Date: 9 December 2008

Driller and Co.:
Drill Method: HA
Log By: Greg Bartlett
Bore Diameter: 0.1m

SUBSURFACE PROFILE			SAMPLE				
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	Well Completion Details
0.0		Ground Surface					
		FILL Gravelly clayey sand, light brown, damp, heterogeneous, very loose, fine to medium grained sand with inclusions of sandstone and ironstone gravels.	SB51-0.1	D	0.3		
			SB51-0.25	D	0.5		
		End of investigation at 0.25m bgs. Refusal encountered in sandstone.					
1.0							
2.0							
3.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

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