



ENVIRONMENTAL - REMEDIATION - GEOTECHNICAL ENGINEERING - WORK HEALTH & SAFETY - LABORATORIES - DRILLING

# DETAILED SITE INVESTIGATION

**253 Coward Street,  
Mascot NSW**

*Prepared for*

**Skylife Coward Pty Limited**

9<sup>th</sup> March 2020

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## ABBREVIATIONS

AIP	Australian Institute of Petroleum Ltd
ADWG	Australian Drinking Water Guidelines
ANZECC	Australian and New Zealand Environment and Conservation Council
AST	Aboveground Storage Tank
BGL	Below Ground Level
BTEX	Benzene, Toluene, Ethyl benzene and Xylene
COC	Chain of Custody
DQOs	Data Quality Objectives
EPA	Environment Protection Authority
ESA	Environmental Site Assessment
HIL	Health-Based Soil Investigation Level
LGA	Local Government Area
NEHF	National Environmental Health Forum
NEPC	National Environmental Protection Council
NHMRC	National Health and Medical Research Council
OCF	Organochlorine Pesticides
OPP	Organophosphate Pesticides
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PID	Photo Ionisation Detector
PQL	Practical Quantitation Limit
PSH	Phase Separated Hydrocarbon
QA/QC	Quality Assurance / Quality Control
RAC	Remediation Acceptance Criteria
RAP	Site Remediation Plan
RPD	Relative Percentage Difference
SAC	Site Assessment Criteria
SMP	Site Management Plan
SVC	Site Validation Criteria
TCLP	Toxicity Characteristics Leaching Procedure
TPH	Total Petroleum Hydrocarbons
UCL	Upper Confidence Limit
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
VHC	Volatile Halogenated Compounds

## EXECUTIVE SUMMARY

Aargus Pty Ltd (Aargus) was appointed by Skylife Coward Pty Limited (the 'client') to undertake a Site Investigation within the property located at 253 Coward Street, Mascot NSW (the 'site'). The site is proposed for the demolition of the current structures and development into a commercial building with basement car parking and deep soil landscaping areas.

At the time of the inspection (27<sup>th</sup> October 2018 & 15<sup>th</sup> February 2020), the site was used for commercial purposes, and occupied by a Trans Hino truck dealer office and workshop building along the eastern boundary and then a car parking area.

The land title information provided suggested that the site was initially owned by private individuals between 1912 and 1950 and then was used by different companies. In 2018, the site was transferred to the Skylife Coward Street Pty Ltd the current owner.

Aerial photography indicated that the land use of the site appeared to have been residential from at least 1930 to 1970 and subsequently re-developed for commercial land used between 1970 to the current date. The general land use of immediate site vicinity seems to have been vacant land with potential market gardening activities and low density residential to the north and south between 1930 and 1943. From 1970, the general land use of the surrounding properties seems to have been consistently commercial/industrial to the current date, with commercial/industrial development appearing to increase between 1991 to 2018.

The findings of the assessment indicated the following areas of potential environmental concern, those being: imported fill materials, concrete and bitumen car park and driveway areas where leaks and spills from cars may have occurred, oil waste and combustible liquid C2 tanks storage area within the Hino's workshop warehouse, current and previous site usage, potential use of pesticide, and asbestos based building materials.

The soil assessment revealed the following:

- All of heavy metals concentrations from the soil samples analysed met their respective assessment criteria under the HIL 'D', EILs and site derived EILs.
- The TRH, BTEX, naphthalene and/or benzo(a)pyrene concentrations from the samples were below the HSL'D', ESLs for a commercial and industrial land use and the Management Limits for a commercial and industrial land use.
- The PAH, OC, PCB, Phenols and/or Cyanide concentrations were below the HIL'D', ESLs for a commercial and industrial land use and/or the EILs for a commercial and industrial land use.
- VOCs concentrations were below the laboratory PQL and below the HIL'D' for a commercial and industrial land use.
- No asbestos fragments were observed during the site inspection.
- No asbestos fibres were detected in the soil samples analysed.

The groundwater assessment revealed the following:

- Collected groundwater samples were tested for contaminants of concern: heavy metals, total petroleum hydrocarbons, polycyclic aromatic hydrocarbons and phenols. All the results were below the guideline criteria for fresh water, marine water and drinking water criteria.
- GWD1 (a duplicate sample of GW3) had elevated zinc at concentrations above ANZECC 2000 guidelines for fresh waters. As the site is located within an industrial area and concentrations of all up-gradient wells are similar, it is considered that the concentration of zinc in groundwater at the site can be attributed to background levels of the area.

Based on the results of this investigation it is considered that the risks to human health and the environment associated with the soil and groundwater contamination at the site are negligible within the context of the proposed use of the site for development into a commercial building with basement car parking and deep soil landscaping areas.

The site is therefore considered to be suitable for the proposed use.

Any soils requiring removal from the site, as part of future site works, should be classified in accordance with the “*Waste Classification Guidelines, Part 1: Classifying Waste*” NSW EPA (2014).

# 1 INTRODUCTION

## 1.1 Background

Aargus Pty Ltd (Aargus) was appointed by Skylife Coward Pty Limited (the ‘client’) to undertake a Detailed Site Investigation within the property located at 253 Coward Street, Mascot NSW (the ‘site’). The location of the property is presented in Figure 1 of Appendix A.

It is understood that the site is proposed for the demolition of the current structures and development into a commercial building with one level of basement car parking and deep soil landscaping areas. A copy of the proposed development plans is included in Appendix Q.

## 1.2 Objective

The primary objectives of this report are as follows:

- Identify potential areas where contamination may have occurred from current activities;
- Identify potential contaminants associated with potentially contaminating activities;
- Assess the potential for soils and groundwater to have been impacted by current activities;
- Provide a Site Investigation report based on its current condition and the findings of this investigation; and
- Assess the suitability of the site for redevelopment into a commercial building with one level of basement car parking and deep soil landscaping areas, based on its current condition and the findings of this investigation.

### 1.3 Scope of Works

The scope of works for this report includes:

- Review of the physical site setting and site conditions based on a site inspection, including research of the location of sewers, drains, holding tanks and pits, spills, patches of discoloured vegetation, etc. (where applicable);
- Research and review of the information available, including current and historical titles information, review of aerial photographs, groundwater bore searches, EPA notices, anecdotal evidence, site survey and site records on waste management practices;
- Development of a preliminary Conceptual Site Model (CSM) to demonstrate the interactions between potential sources of contamination, exposure pathways and human/ecological receptors identified;
- A targeted soil boring/sampling investigative study – formulating and conducting a sampling plan and borehole investigation;
- Groundwater monitoring well installation and groundwater sampling;
- Laboratory analysis and results from sample analysis – findings and comparison to regulatory guidelines;
- Field and laboratory Quality Assurance/Quality Control (QA/QC); and
- Recommendations for additional investigations should any data gaps be identified or possible strategies for the management of the site, where relevant.

This report was prepared with reference to the NSW Environment Protection Authority (EPA) "*Guidelines for Consultants Reporting on Contaminated Sites*" (2011).

## 2 SITE IDENTIFICATION AND DESCRIPTION

### 2.1 Site Identification

Site identification information and land use is summarised in the table below.

**Table 1: Site Identification**

<b>Lot and DP Number (Address) *</b>	Lot 1 in DP104795 (253 Coward Street, Mascot NSW)
<b>Coordinates *</b>	NW: Latitude: -33.92405853, Longitude: 151.183986037
<b>Approx. Site Area</b>	4,047m <sup>2</sup>
<b>Parish</b>	Botany
<b>County</b>	Cumberland
<b>Local Government Area</b>	Bayside
<b>Current Land Zoning**</b>	B5 – Business Development
<b>Current Site Owner</b>	Skylife Cowards Pty Ltd
<b>Site End Users</b>	Workers, Visitors

Notes: \* refer to <https://maps.six.nsw.gov.au/>

\*\* refer to refer Section 149 Planning Certificate included in Appendix G

\* \*\* refer to NSW department of land title office included in Appendix D

The site boundary and Lot and DP numbers are presented in Figure 2 of Appendix A.

## 2.2 Site Inspection

A site visit was carried out on the 27<sup>th</sup> October 2018 by an Aargus field scientist to inspect the site for any potential sources of contamination and document any observations made regarding the current site conditions. At the time of the site inspection, the following observations were made with the site features presented in Figure 3 of Appendix A and the site photographs are included in Appendix C.

- The site is rectangular in shape, with an approximate total area of 4,047m<sup>2</sup>
- An Adtrans Hino workshop and two-storey office building occupied one third of the site along the eastern boundary.
- The Adtrans Hino office building was a two-storey building with the workshop constructed of brick with a colorbond roof adjacent to it and was utilised for truck services and repairs.
- Access to the workshop was via metal garage doors facing west.
- The workshop was concrete covered. Major oil staining was noted at the time of the inspection on the surface of the concrete.
- Multiples metal shelves were observed in various places to store tools and equipment.
- Two large metal shipping containers were noted in the south eastern corner within the workshop. One of the containers was used to store tools and equipment. The second container was locked at the time of the inspection.
- An excavated pit was noted in the centre of the workshop and used for storage of one waste oil tank and two combustible liquid C2 tanks. In addition, one 200 litre oil drum and multiple oil and liquid containers were noted inside the pit. The pit was observed to be concrete covered.
- 200 litres oil drums were noted in various places in the eastern and middle portions of the workshop.
- The remainder of the site in the front was concrete covered, with exception of a bitumen covered area in the north eastern corner and along the southern boundary. The concrete and bitumen areas were used to park trucks. The concrete and bitumen were generally in good condition with some cracks on the surface.
- Metal skip bins were noted in the southern portion of the site.
- Small garden bed areas were observed in the western side of the site.



- Access to the site was via metal entrance gate from Kent Road from the west side of the site.
- The site boundaries were defined by Coward Street to the north, No.2 Chalmers Crescent to the south, Kent Road to the west and a commercial building to the east.
- Major oil staining was observed on the concrete surfaces.

Another inspection was carried out on the Saturday 15<sup>th</sup> February 2020 by an Aargus site engineer. No apparent changes were observed on site comparing to the site condition noted in 2018.

### **2.3 Topography and Surface Water Drainage**

The following observations were made during the site inspection carried out on both 27<sup>th</sup> October 2018 and 15<sup>th</sup> February 2020:

- The site topography is generally flat, with Chalmers Crescent slightly sloping to the west.
- According to the topographic map of Mascot, the general slope of the area is towards the western side of the site.
- Stormwater runoff from the site is expected to flow to the stormwater drains on site and/or along Chalmers Crescent and Kent Road.

## 2.4 Surrounding Land Uses

The surrounding land uses identified are described in the table below:

**Table 2: Surrounding Land Uses**

No.253 Coward Street	
Orientation	Description
North	Coward Street/ high density residential & commercial
East	Bridgestone car and 4WD centre
South	No.2 Chalmers Crescent/ Chalmers Crescent
West	Kent Road / Totally Workwear Mascot and Thrifty offices

### 3 SITE HISTORY

#### 3.1 Land Titles

A review of historical documents held at the NSW Department of Lands offices was undertaken to identify the current and previous land owners, and potential land uses. The results of the title search are summarised in the following table.

**Table 3: Land Title Information**

Year	Lot 1 in DP104795 (253 Coward Street, Mascot NSW)
2018-Current	Skylife Coward Pty Ltd
1997-2018	TNT Properties NSW Pty Ltd
1993-1997	TNT Properties NSW Pty Ltd
1988-1993	MIFF Pty Ltd
2017-2022 (Lease)	Adtrans Hino Pty Ltd
2006-2016 (Lease)	David Best Truck Repairs Pty Ltd
2003-2006 (Lease)	David Best Truck Repairs Pty Ltd
1999-2003 (Lease)	Mack Trucks Australia Pty Ltd
1991-1994 (Lease)	Boral Tyres Pty Ltd
	<b>Prior: Vol. 710297, Fol. 186</b>
1991-1988	TNT Properties NSW Pty Ltd
1966-1991	Mascot Investments Pty Ltd
	<b>Prior: Vol. 7005, Fol. 227</b>
1955-1966	The Murchison Estate Pty Ltd
	<b>Prior: Vol. 6199, Fol. 175</b>
1950-1955	The Murchison Estate Pty Ltd
	<b>Prior: Vol. 2248, Fol. 66</b>
1948-1950	Rose Winterbottom
1912-1948	Rose Winterbottom

In summary, the land title information provided suggested that No.253 Coward Street was initially owned by private individuals between 1912 and 1950 and then was used by different companies. In 2018, the site was transferred to the Skylife Coward Street Pty Ltd the current owner.

The operations of the listed companies (where available) have been compiled from an internet search and will further identify possible land uses at the time of ownership and/or lease and include the following:

- TNT Properties NSW Pty Ltd: is a property development and consulting firm.
- Adtrans Hino Pty Ltd: is a new and used Hino trucks, finances and services
- Mack Trucks Australia Pty Ltd: is a truck dealer.
- Boral Tyres Pty Ltd: listed as sale and fitting tyres company.

A copy of the historical land titles information can be found in Appendix B.

### 3.2 Aerial Photographs

Selected aerial photographs obtained from the NSW Department of Lands were reviewed to describe the site features and surrounding areas at various timelines. A summary of the review is presented in the table below.

**Table 4: Summary of Historical Aerial Photos**

Year	Site	Surrounding areas
1930	The site comprised of building structures in the north, north east and along the western boundary. The remainder of the site appeared to be vacant land. However, it was noted that photo resolution was of very poor quality	N: A road, then vacant land S: Vacant land E: Building structures W: A road, then some building structures & vacant land
1943	The site layout appeared to be similar to that observed in 1930. The entire site was occupied by residential houses.	N: A road, the vacant land with potential market gardening activities are visible S: Vacant land, with potential market gardening activities are visible E: Low density residential W: A road, then low density residential
1970	All previous structures are gone. The site is comprised of two main large structures located in the eastern portion of site. A few other small structures also were noted along the western boundary. The remainder of the site appeared to be vacant.	N: A road, then vacant land. Market gardening activities no longer visible S: Market gardening activities no longer visible E: House structure is gone W: A road, then new commercial development

Year	Site	Surrounding areas
1991	It seems that the entire site is occupied by buildings. However, it was noted that the photo resolution was of very poor quality.	N: New commercial development S: New commercial/industrial warehouses development E: New commercial/industrial development W: New Commercial/industrial development
2020	The site is comprised of a large warehouse along the eastern boundary. The remainder of the site is either concrete and/or bitumen covered.	N: A road, then a new high density residential S: Commercial/industrial warehouse E: Commercial/industrial W: A road, then commercial/industrial

In summary, land use of the site appeared to have been residential from at least 1930 to 1970 and subsequently re-developed for commercial land used between 1970 to the current date.

The general land use of immediate site vicinity seems to have been vacant land with potential market gardening activities and low-density residential to the north and south between 1930 and 1943. From 1970, the general land use of the surrounding properties seems to have been consistently commercial/industrial to the current date, with commercial/industrial development appearing to increase from 1991 to 2018. After 2010s, the area to the north of the site appeared to be redeveloped for high density residential uses.

Copies of current and historical aerial photographs are presented in Appendix D.

### **3.3 EPA Records**

#### **3.3.1 CLM Act 1997**

The NSW EPA publishes records of contaminated sites under Section 58 of the Contaminated Land Management (CLM) Act 1997. The notices relate to investigation and/or remediation of site contamination considered to pose a significant risk of harm under the definition in the CLM Act. However, it should be noted that the EPA record of Notices for Contaminated Land does not provide a record of all contaminated land in NSW.

The subject site is not on the list of NSW contaminated sites notified to EPA, however there are three (3) sites listed within the Mascot area. Former Mascot Galvanising was located within 850m to the south east of the site. There are five (5) current and two (2) former notices related to this property. A former Shell Service Station Mascot was located within 1.4km to the north east of the site. The latest notice issued in 2020 suggested that the service station is no longer significantly contaminated to warrant regulation under the CLM Act. Mascot Pioneer Plating was located within 500m to the north west of the site. There is one (1) current notice related to this site.

Copies of the EPA records are included in Appendix E.

#### **3.3.2 POEO Register**

A search of the POEO Register revealed that the site was not listed. A copy of the POEO register search is included in Appendix E.

### **3.4 SafeWork NSW Records**

A search of the Stored Chemical Information Database (SCID) for licences to keep dangerous goods at the site was conducted on the 5<sup>th</sup> March 2020. The search suggested that there was no record pertaining to the storage of hazardous chemicals on the site.

A copy of the SafeWork search is included in Appendix P.

### 3.5 Section 149 Certificates

The Planning Certificate – Section 149 (2) of the Environmental Planning & Assessment Act 1979 for the site was obtained by the client and provided to Aargus for review. A summary of the information pertaining to the site is provided below:

- The site is zoned B5 – Business Development.
- Complying Developments under the General Housing Code may not be carried out on the land.
- The land is identified on an Acid Sulfate Soils map as being Class 1 or Class 2.
- The land does not include or comprise critical habitat.
- The land is not within a conservation area.
- The land is not an item of environmental heritage.
- The land is not within a proclaimed mine subsidence district.
- The subject property is located within a 25-30 ANEF contour under the Australian Noise Exposure Forecast 2033 (ANEF).
- The land subject has not been identified on Council's bush fire prone land map.
- The land is not biodiversity certified land.
- Loose Fill Asbestos Insulation registration does not apply to the subject site.
- The land is not subject to any biobanking agreement.
- The land is not affected by a property vegetation plan under the Native Vegetation Act 2003.
- The land has no matters relating to the *Contaminated Land Management Act, 1997*.

Copies of the certificates are included in Appendix F.

### 3.6 Industrial Processes and Products Manufactured

Based on the historical record available and the site inspection, industrial processes and/or products manufacturing activity would have previously occurred on site was by Adtrans Hino workshop.

### **3.7 Former Chemical Storage and Transfer Areas**

Based on the site inspection, one waste oil tank and two combustible liquid C2 tanks were kept within an excavated concrete covered pit inside the Hino's workshop.

### **3.8 Product Spill & Loss History**

The entire of the site is currently either occupied by a warehouses and office buildings and/or sealed surfaces. At the time of the inspections, the sealed surfaces of the concrete slab were in generally good condition with some cracks observed. In addition, there were minor visible signs of oil and/or chemical staining, indicating that any surface spills (if they did occur at all) were cleaned up immediately and did not appear to penetrate the existing slab. Major oil staining noted on the concrete surface inside the Hino's workshop warehouse.

### **3.9 Discharges to Land, Water and Air**

Based on POEO register search, the site was not issued with any Environmental Protection Licence under Section 55 of Protection of the Environment Act to discharge any pollution into land, water or air.

### **3.10 Complaint History**

No complaints were noted for the site.

### **3.11 Historical Use of Adjacent Land**

Based on the aerial photographs, general land use of immediate site vicinity seems to have been vacant land with potential market gardening activities and low-density residential to the north and south between 1930 and 1943. From 1970, the general land use of the surrounding properties seems to have been consistently commercial/industrial to the current date, with commercial/industrial development appearing to increase between 1991 to 2020.



### 3.12 Discussion and Summary of Site History

Based on available information, the site historical usage is summarised as follows:

- Land title documents suggested that No.253 Coward Street was initially owned by private individuals between 1912 and 1950 and then was used by different companies. In 2018, the site was transferred to the Skylife Coward Street Pty Ltd the current owner.
- Aerial photographs indicate the land use of the site appeared to have been residential from at least 1930 to 1970 and subsequently re-developed for commercial land used between 1970 to the current date.
- The general land use of immediate site vicinity seems to have been vacant land with potential market gardening activities and low density residential to the north and south between 1930 and 1943. From 1970, the general land use of the surrounding properties seems to have been consistently commercial/industrial to the current date, with commercial/industrial development appearing to increase between 1991 to 2018. After 2010s, the area to the north of the site appeared to be redeveloped for high density residential uses.
- A search of the POEO Register search of the POEO Register revealed that the site was not listed.
- There were three (3) sites listed on the NSW EPA database within the Mascot area, however, are not considered to be impacting on the site.
- The land is identified on an Acid Sulfate Soils map as being Class 1 or Class 2.
- The land has no matters relating to the Contaminated Land Management Act, 1997.
- SafeWork search suggested no record was located for the storage of hazardous chemicals on site.

## 4 ENVIRONMENTAL SETTING

### 4.1 Sensitive Environmental Receptors

The nearest down-gradient watercourses are Alexandra Canal (approximately 590m to the west) which eventually discharges to Botany Bay located approximately 2.7km to the south of the site.

Other sensitive receptors are Mascot Oval located approximately 430m to the east of the site and Sydney domestic airport located approximately 270m to the southeast of the site.

### 4.2 Geology

The Geological Map of Sydney (Geological Series Sheet 9130, Scale 1:100,000, 1983), published by the Department of Mineral Resources indicates the residual soils within the site to be underlain by Quaternary Age soils consisting of medium to fine grained “marine” sand with podsols.

### 4.3 Soil

Soil Landscape Map of Sydney (soil Landscape Series Sheet 9130, Scale 1:100,000, 2002), prepared by the Soil Conservation Service of NSW, indicates that the site is located within the Blacktown landscape area and typically consists of highly plastic and relatively impermeable residual soil.

### 4.4 Acid Sulfate Soils

To determine whether there is a potential for acid sulphate soils to be present at the site, reference was made to the NSW Department of Land & Water Conservation (DLWC) *Acid Sulphate Soil Risk Maps* (Edition Two, December 1997, Scale 1:250,000), specifically Map No. 93 – “Botany Bay”. A review of the map indicated that the site located within the “Disturbed Terrain”. Soil Investigations are required to assess these areas for acid sulfate potential.

The NSW Government Planning & Environment website ([https://www.planningportal.nsw.gov.au/find-a-property/1886405\\_253\\_Coward\\_Street\\_1\\_Mascot\\_DP104795](https://www.planningportal.nsw.gov.au/find-a-property/1886405_253_Coward_Street_1_Mascot_DP104795)) states that the site is in a Class 2 on the Acid Sulfate Soil Map.

During the field work, Aargus investigated the acid sulphate soils condition beneath the site, with a summary provided below:

- The test results indicated the  $\text{pH}_f$  values of the tested samples were greater than 4 units in all the recovered samples, which indicates the recovered soil samples from the boreholes drilled at this site did not contain Actual Acid Sulfate Soil (AASS).
- The test results indicated the  $\text{pH}_{fox}$  values of the tested samples were greater than 5 units in the majority of the recovered samples.
- All the samples from five (5) boreholes were submitted to the laboratory for SPOCAS analysis, with the results indicating that Potential Acid Sulfate Soils are present within the site at the most north-eastern corner of the site. Reference should be made to the *Acid Sulfate Soils Management Plan* (Ref: ES7399/2 dated 9th March 2020) report prepared by Aargus for further details in regards to the works undertaken within the site.

#### 4.5 Hydrogeology

Based on available information, our desktop study indicates that groundwater from site is likely to be flowing towards Alexandra Canal approximately 590m to the west of the site.

A search of the Department of Natural Resources (DNR) borehole database information revealed thirty-six (36) groundwater bores within a 500m radius of the site. A summary of the five (5) closest groundwater bores provided by the registered groundwater bore record search is provided in the following table.

**Table 5: Summary of Registered Groundwater Bore Records**

GW Bore ID	Approximate Location	Intended Purpose	Depth (m bgl)	Standing Water Level (m bgl)	Water Bearing Zones	Salinity (µS/cm)
GW027248	72m NE	Industrial	4.80	2.40	Unconsolidated	-
GW112218	73m NE	Industrial	4.80	2.40	Unconsolidated	-
GW112217	276 W	Monitoring	4.10	-	-	-
GW112219	299m NW	Monitoring	4.0	-	-	-
GW112651	252m NE	Dewatering	6.0	-	-	-

The registered groundwater bores within a 500mm radius of the site were located up-gradient and down-gradient and used for industrial and monitoring purposes and were unlikely to be used for human consumption since the site is not located within the SEPP boundary for the Sydney Drinking Water Catchment.

A copy of the groundwater bore search records can be found in Appendix G.

#### 4.6 Summary of Local Meteorology

The monthly rainfall of the local area can be represented by the data collected by Bureau of Meteorology (BOM) from the rainfall gauge located in Sydney Airport AMO, which is located approximately 13.3km north east of the site. Records indicate that the annual mean rainfall from 1929 to 2020 is 1077.4mm.

Reference can be made to Appendix H – Local Meteorology.

## 5 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

Based on the site inspection, site history, previous reports and review of available information from the desktop study, the potential Areas of Environmental Concern (AEC) and their associated Contaminants of Concern (CoC) for the site were identified. These are summarised in the following table.

**Table 6: Summary of Potential Areas and Contaminants of Concern**

Potential AEC	Potentially contaminating activity	Potential CoCs	Potentially Impacted Medium	Likelihood of Site Impact	Justification
Entire site	Importation of fill material from unknown origin.	Metals, TPH, BTEX, PAH, OCP, PCB, Phenols, Cyanides, Asbestos	Soil	Low	Based on the site observations, the presence of imported fill material is likely to be minimal.
	Current and previous site usage	Metals, TPH, BTEX, PAH, OC, PCB, Phenols, Cyanides & VOCs	Soils	Low	The entire site is either occupied by buildings or is concrete/bitumen covered, which was in generally good condition with some oil staining and cracks on the surface.
	Potential for pesticides to have been sprayed or injected on or underneath concrete slabs	OCP		Low	If use of OCPs has occurred, the impact is likely to have been localised and limited to the topsoil layer.
Waste oil tanks and combustible liquid tanks	Leaks / spillages from fuel/chemicals/waste oil/lubricant tanks or containers or vehicles	Metals, TPH, BTEX, PAH, Phenols & VOCs	Soils	Low	The workshop was concrete covered with minor crack. Major staining was noted on the surface.
Driveways and parking areas	Leaks from the vehicles	Metals, TPH, BTEX, PAH	Soils	Low	Oil staining noted on the sealed surfaces especially inside the Hino's workshop. Some cracks were also observed.

Potential AEC	Potentially contaminating activity	Potential CoCs	Potentially Impacted Medium	Likelihood of Site Impact	Justification
Former and Present Building Structures	Potential Asbestos/Fibro Features	Asbestos		Low	If currently present, these will be removed by licensed contractors.

## **6 DATA QUALITY OBJECTIVES**

### **6.1 Step 1 – State the Problem**

#### **6.1.1 Problem Statement**

The site is proposed for redevelopment into a commercial building with basement car parking and deep soil landscaping areas. As part of the DA application, it is a Council requirement that a site investigation report be prepared by a consultant to assess whether the site is suitable for the proposed development.

However, the desktop study identified some areas of potential environmental concern in relation to imported fill materials, concrete and bitumen car park and driveway areas where leaks and spills from cars may have occurred, oil waste and combustible liquid C2 tanks storage area within Hino's workshop warehouse, current and previous site usage, potential use of pesticide, and asbestos based building materials, which may pose risks to human and environmental receptors.

#### **6.1.2 Objectives**

The objectives of the report are:

- To assess the potential for the soils and groundwater to have been impacted by current and historical contaminating activities;
- Provide a report based on its current condition and the findings of this investigation; and
- Assess the suitability of the site for redevelopment into a commercial building with basement car parking and deep soil landscaping areas.

### 6.1.3 Project Team

The nominated core project team and their responsibilities are listed in the table below.

**Table 7: Project Team and Responsibilities**

Project Team Member	Responsibilities
Mark Kelly – Principal Environmental Geologist	Technical Review
Setareh Kazimi – Environmental Scientist	Field Representative and Report Author
Ningye Zhang – Environmental Engineer	Field Representative and Report Author

## 6.2 Step 2 - Identify the Decisions of the Study

The decisions required to address the contamination problem are as follows:

- Is soil and groundwater contamination present within the areas of potential environmental concern identified?
- Is soil and groundwater contamination likely to present an unacceptable risk of harm to humans or the terrestrial and aquatic environments?
- Is the site currently suitable for redevelopment into a commercial building with deep soil landscaping?
- Is there a potential for onsite/offsite migration issues?
- If not, does the site require further investigation and/or remediation works?



### **6.3 Step 3 - Identify Information Inputs**

The following information is required for input into the decisions identified in Step 2:

- Identification of potential areas and contaminants of concern as detailed in Section 5 of this report;
- Selection of soil and groundwater assessment criteria from appropriate guidelines as detailed in Section 8 of this report;
- Collection of soil and groundwater samples from site;
- Headspace analysis for screening of VOCs present within soils using a PID;
- Measurement of groundwater quality parameters including pH, temperature, redox potential, electrical conductivity and dissolved oxygen; and
- Comparison and interpretation of results against the adopted soil and groundwater assessment criteria.

### **6.4 Step 4 – Define the Study Boundaries**

The spatial and temporal aspects of the investigation area that the data must represent to support the decisions identified in Step 2 are as follows:

- The lateral extent of the study boundary is defined by the site boundaries as shown in the Site Location Plans (refer to Figure 1).
- The vertical extent of the study boundary is defined by the depth of the natural soil some boreholes to a depth of approximately 7.1 metres below the ground surface.
- The vertical extent of the study boundary is defined by the depth of the groundwater in GW3/BH14 to a depth of approximately 4.3 metres below the ground surface.

### **6.5 Step 5 – Develop the Analytical Approach**

The acceptable limits for laboratory QA/QC parameters are shown in the table below and are based upon the laboratory reported acceptable limits and those stated within the NEPM 2013 Guidelines.

**Table 8: Acceptable Limits for QC Samples**

Type of QC Sample	Control Limit
<b>FIELD</b>	
Rinsate Blanks	Analytes <LOR
Intra-Laboratory Duplicates	RPD's <50%
Inter-Laboratory Duplicates	RPD's <50%
Trip Blanks	Volatiles <LOR
Trip Spike Recovery	>70%
<b>LABORATORY</b>	
Method Blanks	< Laboratory LOR
Matrix Spike	Recovery targets: <ul style="list-style-type: none"> <li>Metals: 70% to 130%</li> <li>Organics: 60% to 140%</li> </ul>
Laboratory Duplicate	RPD's <50%
Laboratory Control Samples	Recovery targets: 60% to 140%
Surrogate Spike	Recovery targets: 60% to 140%

The following conditions should be adopted:

- If the control limits are exceeded, then an assessment of the significance of the results should be carried out;
- If the results of the DQI assessment indicate that the data set is reliable, then the data set will be deemed to be acceptable for the purposes of the investigation; and
- If the measured concentrations of soil and groundwater samples analysed meet their respective validation criteria, then no additional assessment is required.

## 6.6 Step 6 - Specify Limits on Decision Errors

There are two types of decision errors:

- **Sampling errors**, which occur when the samples collected are not representative of the conditions within the investigation area; and
- **Measurement errors**, which occur during sample collection, handling, preparation, analysis and data reduction.

These errors may lead to following (null hypothesis):

- Deciding that the site is not suitable for the proposed development when it actually is (Type I error);
- Deciding that the site is suitable for the proposed development when it is actually not (Type II error);
- Deciding that the risks to human health from soil vapour concentrations are high and require further management or remediation, when the risks are actually low (Type I error); and
- Deciding that the risks to human health from soil vapour concentrations are low and requires no further management, when the risks are actually high (Type II error).

A 5% significance level has been selected for Type I errors on the basis that 95% of the data set will satisfy the DQIs. Therefore, the acceptable limit of the decision errors is based on a 5% probability of the hypothesis being incorrect. An assessment will be made as to the likelihood of a decision error being made based on:

- The acceptable limits for inter/intra laboratory duplicate sample comparisons as specified in Step 5 of the DQOs; and
- The acceptable limits for laboratory QA/QC parameters are based upon the laboratory reported acceptable limits and those stated within the NEPM Guidelines.

If the concentration of a particular contaminant of concern exceeds its assessment criteria, then a further assessment is required to address the significance of the result. Statistical analysis based on 95% UCL may be used to assess the significance of the data provided the following conditions are met:

- the arithmetic mean of the data set must be less than its respective threshold level; that is, it is acceptable for individual results to exceed its respective threshold level, but the cumulative mean of the data set of soil sample results must not exceed the threshold level;

- the standard deviation of the data set is less than 50% of the relevant threshold level; and
- no individual sample result should be greater than 250% of the relevant threshold level.

## **6.7 Step 7 - Optimise the Design for Obtaining Data**

The optimum design for obtaining data in order to achieve the Data Quality Objectives is as follows:

- Only NATA-accredited environmental testing laboratories will be commissioned to analyse soil and groundwater samples and will implement a quality control plan conforming to the NEPM (Assessment of Site Contamination) Measure Schedule B(3) Guidelines for Analysis of Potentially Contaminated Soils;
- An assessment of the Data Quality Indicators to determine if the field procedures and laboratory analytical results are reliable;
- The investigation will be carried out by an experienced and qualified Environmental Scientist, who is trained in sampling at contaminated sites in accordance with Aargus protocols based on best practice industry standards;
- Collection of QA/QC samples at frequencies prescribed in the NEPM Guidelines; and
- In accordance with the NSW EPA “Sampling Design Guidelines” (September 1995) a minimum of twelve (12) sampling points for a site area of 4,047m<sup>2</sup> is required. Aargus previously collected soil samples from ten (10) boreholes drilled systematically from across the site during the 2018 investigation. An additional two sampling points targeting the environmental concerns (in the vicinity of the waste oil tank) has been adopted in the 2020 investigation in order to meet the guideline requirements.

## 7 DATA QUALITY OBJECTIVES

### 7.1 General

The five Data Quality Indicators (DQIs) comprising completeness; comparability; representativeness; precision and accuracy provide an assessment of the reliability of field procedures and laboratory analytical results in accordance with the 'Guidelines for the NSW Site Auditor Scheme (3<sup>rd</sup> Edition), 2017. These are addressed in the following sub-sections.

### 7.2 Completeness

Data Completeness is a measure of the amount of useable data (expressed as %) from a data collection activity. The completeness is equal to the percentage of valid quality assurance and quality control results.

The assessment should address the following:

**Table 9: Data Completeness**

Field	Laboratory
<ul style="list-style-type: none"><li>• All critical locations are sampled</li><li>• All samples collected from critical grids and depths</li><li>• Consistency in the use of standard operating procedures, equipment, sampler</li><li>• Completion and correctness of field documentation</li></ul>	<ul style="list-style-type: none"><li>• All critical samples and analytes are analysed in accordance with the DQOs</li><li>• Appropriateness of laboratory methods and PQLs</li></ul>

The minimum target frequency for each type of QA/QC sample should be carried out in accordance with the following tables:

**Table 10: QA/QC Requirements**

Field QA/QC Sample	Frequency
Intra-Laboratory Duplicate	1 in 20 samples
Inter-Laboratory Duplicate	1 in 20 samples
Field Blanks	1 per day (rinsate)
Trip Blank	1 per sample batch
Trip Spike	1 per sample batch

Where any of the above objectives are not achieved for particular samples, steps will be taken to rectify the non-conformance, if possible. Alternatively, data qualifiers detailing the nature of the quality problem will be documented in the report and attached to relevant data in the result summary tables.

The target for overall completeness for each data set is a minimum of 95%. A data completeness of less than 95% may be accepted where it can be justified that the non-conformance does not have a significant effect on the outcome of the results.

### 7.3 Comparability

Data Comparability is the confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event.

The qualitative assessment should address the following:

**Table 11: Data Comparability**

Field	Laboratory
<ul style="list-style-type: none"> <li>Consistency in the use of standard operating procedures, equipment, sampler</li> <li>Consistency in the method of sample collection for each media</li> <li>Quantification of influence by climatic conditions</li> </ul>	<ul style="list-style-type: none"> <li>Consistency of analytical methods and limits of reporting (LOR) for each analyte</li> <li>Whether laboratory limits of reporting are set at &lt; 20% of the adopted site criteria value for each analyte</li> <li>Consistent use of one primary and one secondary laboratory</li> </ul>

## 7.4 Representativeness

Data Representativeness is the confidence (expressed qualitatively) that data are representative of each media present on the site.

The qualitative assessment should address the following:

**Table 12: Data Representativeness**

Field	Laboratory
<ul style="list-style-type: none"><li>• Samples are collected in accordance with the DQOs</li><li>• Receipt of samples within holding times</li><li>• Receipt of intact samples</li><li>• Receipt of adequately preserved samples</li></ul>	<ul style="list-style-type: none"><li>• All samples are extracted and analysed within their respective holding times</li></ul>

## 7.5 Precision

Data Precision is a quantitative measure of the variability (or reproducibility) of data.

Intra-laboratory or Inter-laboratory Duplicate Samples (B) results are compared with Primary Sample (A) results using Relative Percentage Differences (RPDs) according to the following formula:

$$\%RPD = \left| \frac{A - B}{A + B} \right| \times 200$$

Duplicate sampling rates for this assessment (**for each separate sample batch**) are to be tested for all the same analytes as the primary sample:

**Table 13: Data Precision**

Type of QC Sample	Control Limit
Field Intra-Laboratory Duplicate (Blind)	RPD < +/- 50%
Field Inter-Laboratory Duplicate (Split)	RPD < +/- 50%

Where the laboratory has reported results for a particular analyte below the limit of reporting for either the primary sample or a duplicate sample, the RPD is reported as ‘Not Calculable’ or NC. A discussion should be made as to which sample should be adopted and compared against the relevant assessment criteria. However, no discussion is required where both the primary sample and the duplicate sample for a particular analyte are below the limit of reporting.

## 7.6 Accuracy

Data Accuracy is a quantitative measure of the closeness of reported data to the true value. Laboratory measured recovery of analytes in lab control samples with known concentrations. Laboratory QA/QC testing is to include:

**Table 14: Data Accuracy**

Laboratory QA/QC Sample	Frequency
Method Blank	1 per 20 samples
Matrix Spike	1 per 20 samples
Laboratory Duplicate	Laboratory defined
Laboratory Control	Laboratory defined
Surrogate Spike	All organic samples



## 8 SITE INVESTIGATION AND SCREENING LEVELS

### 8.1 General

The selection of appropriate human health, ecological and groundwater site assessment criteria were based on the following guiding documents:

- “Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018” (ANZECC).
- “Australian Water Quality Guidelines 2018” (AWQG).
- “Australian Drinking Water Guidelines 2011” (ADWG).
- “Guidelines for Managing Risk to Recreational Waters 2008 (GMRRW).
- “National Environmental Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1)”, NEPC (2013).

Full details of the site investigation and screening levels for each potential contaminant of concern in soils and groundwater identified in Section 5 are presented in Appendix I.

### 8.2 Soils Investigation and Screening Levels

#### 8.2.1 Health Investigation Levels (HILs)

The NEPM presents Tier 1 Health Investigation Levels (HILs) for a broad range of chemicals such as metals, inorganics, PAHs, phenols, pesticides and other organics. The HILs are applicable to generic land uses such as residential, commercial/industrial or public open space and all soil types, generally within the first 3 metres of soil below ground level. The HILs have been applied to assess human health risks via all relevant pathways of exposure.

Based on the current commercial land use, soil investigation results within the site will be assessed against the **HIL ‘D’** – *Commercial/industrial, including premises such as shops, offices, factories and industrial sites.*

### 8.2.2 Health Screening Levels (HSLs)

The NEPM presents Tier 1 Health Screening Levels (HSLs) for the following petroleum compounds and fractions:

- Benzene, Toluene, Ethylbenzene and Xylenes (BTEX);
- Naphthalene; and
- TPH C6-C10 and TPH >C10-C16 fractions

The HSLs are applicable to generic land uses such as residential, commercial/industrial or recreational/public open space and different soil types between the ground surface and soils >4 metres below ground level. The HILs have been applied to assess human health risks via the inhalation and direct contact pathways of exposure.

### 8.2.3 Ecological Investigation Levels (EILs)

The NEPM presents Ecological Investigation Levels (Interim EILs) for As, Cu, CrIII, Ni, Pb, Zn, DDT and naphthalene.

The EILs are applicable to generic land uses such as areas of ecological significance, urban residential areas and public open space, and commercial/industrial land uses. The EILs have been applied to assess risks to terrestrial ecosystems, generally, within the top 2 metres of soil at the final surface/ground level.

Site specific EILs for Copper, Zinc, Nickel and Chromium III can be derived by adding the Ambient Background Concentration (ABC) to the Added Contaminant Limits (ACL), as per the formula,  $EIL = ABC + ACL$ .

The ABC of a contaminant is the soil concentration in a specified locality that is the sum of the naturally occurring background level and the contaminant levels that have been introduced from diffuse or non-point sources by generating anthropogenic activity not attributed to industrial, commercial, or agricultural activities.

The ACL is the added concentration (above the ABC) of a contaminant above which further appropriate investigation and evaluation of the impact on ecological values is required. ACLs are based on the soil characteristics of pH, CEC and clay content. Different soils types / profiles will have different contaminant EILs rather than a single generic EIL for each contaminant. ACLs apply chromium III (CrIII), copper (Cu), nickel (Ni) and zinc (Zn) for site-specific EIL determination.

The soil properties to be measured for site-specific derivation of ACLs for CrIII, Cu, Ni and Zn are summarised below:

- pH - Cu
- CEC - Cu, Ni, Zn
- % clay - CrIII

*Note – the lowest concentration of copper that is derived from the pH or the CEC calculation is to be used for the ACL.*

Insufficient data was available to derive ACLs for As, Pb, DDT and naphthalene. As a result, the derived EILs are generic to all soils and are presented as total soil contaminant concentrations in Tables 1(B)4 and 1(B)5.

#### **8.2.4 Ecological Screening Levels (ESLs)**

Table 1B (6) of the NEPM presents Ecological Screening Levels (ESLs) for TPH C6-C40 fractions, BTEX and benzo(a)pyrene.

The ESLs are applicable to generic land uses such as areas of ecological significance, urban residential areas and public open space, and commercial/industrial land uses. The ESLs have been applied to assess risks to terrestrial ecosystems, generally, within the top 2 metres of coarse or fine soil at the final surface/ground level.

## 8.2.5 Petroleum Hydrocarbon Management Limits

Table 1B (7) of the NEPM presents petroleum hydrocarbon management limits for application to TPH fractions C<sub>6</sub>-C<sub>10</sub>, >C<sub>10</sub>-C<sub>16</sub>, >C<sub>16</sub>-C<sub>34</sub> and >C<sub>34</sub>-C<sub>40</sub>. The management limits are applicable for coarse or fine soils in residential, parkland, public open space or commercial/industrial land uses following consideration of relevant ESLs and HSLs.

## 8.2.6 Asbestos

Health screening for asbestos in soil, which are based on scenario-specific likely exposure levels, are adopted from the WA DoH guidelines and are referred in Table 7 in Schedule B1.

**Table 15 Health screening levels for asbestos contamination in soil**

Form of asbestos	Health Screening Level (w/w)			
	Residential A <sup>1</sup>	Residential B <sup>2</sup>	Recreational C <sup>3</sup>	Commercial/Industrial D <sup>4</sup>
Bonded ACM	0.01%	0.04%	0.02%	0.05%
FA and AF <sup>5</sup> (friable asbestos)	0.001%			
All forms of asbestos	No visible asbestos for surface soil			

1. Residential A with garden/accessible soil also includes children's day care centres, preschools and primary schools.
2. Residential B with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.
3. Recreational C includes public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and unpaved footpaths.
4. Commercial/industrial D includes premises such as shops, offices, factories and industrial sites.
5. The screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friable asbestos) only applies where the FA and AF are able to be quantified by gravimetric procedures (refer Section 4.10). This screening level is not applicable to free fibres.

## 8.3 Groundwater Investigation and Screening Levels

### 8.3.1 Potential Beneficial Uses

Groundwater investigation and screening levels were established by identifying the potential beneficial uses of groundwater down-gradient from the site based on the Six Environmental Values presented in the table below.

**Table 16: Potential Beneficial Uses of Groundwater**

Environmental Value	Applicability
Freshwater aquatic ecosystem	x
Marine aquatic ecosystem	✓
Agricultural use - irrigation	x
Agricultural use – stock watering	x
Recreational use	✓
Raw drinking water	x

The applicable Environmental Values were selected on the basis of the following down-gradient receptors as identified in Section 4.1 of this report:

- Recreational users and aesthetics at Alexandra Canal (approximately 590m to the west) which eventually discharges to Botany Bay located approximately 2.7km to the south of the site.
- The marine water aquatic ecosystem at Alexandra Canal, as Alexandra Canal is considered tidal influenced.

No abstraction wells for agricultural use were identified within 500m of the site.

For each relevant Environmental Value identified above, the groundwater investigation and screening levels adopted are discussed in the following sub-sections. Full details of the investigation and screening levels for potential contaminants of concern in groundwater are presented in Appendix I.

If the screening or investigation levels are exceeded, then further consideration will be given to processes such as natural attenuation, advection, adsorption and contaminant flux to assess potential risks to down-gradient aquatic ecosystems or drinking water sources.

### 8.3.2 Protection of Aquatic Ecosystems

Table 1C of the NEPM presents Groundwater Investigation Levels (GILs) for the protection of fresh water and marine water in slightly to moderately disturbed ecosystems. However, where the closest sensitive receptor is high value or highly disturbed, Section 3.1 of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2018) provides a range of water quality guidelines values based upon three levels of ecosystem conditions as shown in the table below.

**Table 17: Aquatic Ecosystem Values**

Ecosystem Value	Protection Level	Brief Definition	Applicability
High value ecosystems (HVE)	99%	Effectively unmodified, with ecological integrity regarded as intact.	✗
Slightly to moderately disturbed ecosystems (SMDE)	95%	Small impacts to aquatic biological diversity within moderately cleared catchments with reasonably intact riparian vegetation.	✓
Highly disturbed ecosystems (HDE)	90%	Measurably degraded ecosystems typically associated with shipping ports or urban catchments.	✗

Based on observations made during the site walkover, the aquatic ecosystem value of the Alexandra Canal area was considered to be slightly to moderately disturbed and that the NEPM GILs are applicable.

However, where contaminants are potentially bio-accumulative, trigger values for the protection of 99% of species were used. Low reliability trigger values presented in Table 3.4.1 of the ANZECC 2000 guidelines were also adopted in the absence of high or moderate reliability trigger values.

### **8.3.3 Recreational Water Use and Aesthetics**

The GMRRW guidelines (as referenced in NEPM) recommend adopting a multiplication factor of 10 to 20 to the ADWG for the assessment of recreational water quality. This is based on the rationale that the ADWG guideline values are based on a daily consumption of 2L, which is considered to be very conservative for application to recreational water exposure. On this basis, a multiplication factor of '10' (i.e. recreational consumption of 200mL per day) will be applied to the ADWG health guidelines to establish screening criteria.

### **8.3.4 Protection of Human Health**

The NSW DEC (2007) states that groundwater should be considered as potential drinking water unless the total dissolved solids (TDS) exceeds 2000 mg/L. NSW DEC (2004) indicates that TDS can be estimated from EC using a correction factor of 0.00155 and applied to the field measurements taken during the groundwater investigation. The results indicated EC concentrations of X  $\mu\text{S}/\text{cm}$ , which is considered to be brackish to saline.

Table 1C of the NEPM presents Groundwater Investigation Levels (GILs) for the protection of drinking water sources based on the health values of the ADWG and were adopted as groundwater assessment criteria for the protection of drinking water.

### **8.3.5 Groundwater Health Screenings Levels for Vapour Intrusion**

Table 1A(4) of the NEPM presents Groundwater Health Screening Levels (HSLs) for vapour intrusion. The HSLs are applicable to generic land uses such as residential, commercial/industrial or recreational/public open space and different soil types between 2m and >4 metres below ground level. The HSLs have been applied to assess human health risks via the inhalation pathway of exposure.

If site conditions are conducive to biodegradation, the following factors will be applied to the HSLs:

- Factor of x10 for depths to source of 2 to <4m; and
- Factor of x100 for depths to source of 4m and greater where the vapour source strength is 100 mg/L (100,000 mg/m<sup>3</sup>) or less.

For groundwater concentrations exceeding their respective solubility limits in Table 1A(4) of Schedule B1 of the NEPM, it is considered that the soil vapour concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario and is denoted as 'NL' (not limiting).

#### **8.4 Export of Waste**

To assess the waste classification of materials to be disposed of off-site, the NSW EPA refers to the NSW EPA (2014) "*Waste Classification*



## **9 SOIL INVESTIGATION**

### **9.1 General Methodology**

The initial soil investigation was carried out on the 27<sup>th</sup> October 2018. The additional investigation was carried out on the 15<sup>th</sup> February 2020. Both investigations were designed to meet the Data Quality Objectives. The fieldwork procedures adopted were carried out in general accordance with the Aargus fieldwork protocols, which are based on industry standard practice as prescribed in the NEPM.

Boreholes BH5 to BH17 were drilled using a drilling rig, then upon completion the boreholes were backfilled with the excavated spoil and clean sand/gravel.

A description of sub-surface conditions observed during drilling are presented in borehole logs included in Appendix J.

### **9.2 Sampling Design Rationale**

Eleven (11) boreholes (BH5 to BH15) were drilled by adopting a near systematic grid sampling pattern across the site to provide general site coverage with consideration given to accessibility and site features. Two additional boreholes BH16 and BH17 were drilled in the vicinity of the waste oil tank area applying a targeted sampling strategy.

Based on the NSW EPA “Sampling Design Guidelines” (1995), for a site with an area of approximately 4,047m<sup>2</sup>, a minimum of twelve (12) locations are required to be sampled. Samples were recovered from a total of thirteen (13) locations, which satisfied the minimum requirements for a site of this size. The borehole locations are shown in Figure 4 of Appendix A.

### 9.3 Sampling Density and Sampling Depth

Boreholes were advanced through fill/natural material and terminated at least 1m BGL to allow for the collection of one fill and one natural soil sample, where available. Boreholes in the vicinity of the waste oil tank storage pit (BH16 & BH17) were terminated at a depth of 2.5m below ground level, to target the potential contamination migration pathway from the bottom of the pit.

A maximum target depth of four (4) metres was adopted in location BH9/GW2, BH14/GW3 and BH13/GW4 where groundwater wells were installed. In addition, some deeper natural soil samples were recovered.

### 9.4 Sampling Methodology

Soil sampling was carried out in general accordance with Aargus Fieldwork Protocols. In summary:

- Soil samples were collected directly from the drilling rig's auger.
- Samples were transferred into clean laboratory supplied containers using a hand trowel.
- In general, each soil sample was divided into two sub-samples. One of the sub-samples was placed into a laboratory-supplied container and a second sub-sample was placed in a separate zip-lock bag for field headspace screening using a PID.

Sampling of asbestos was undertaken as follows:

- One wetted 500ml sample from each sampling location was submitted for laboratory analysis for AF.

## 9.5 Field Tests

A calibrated Photo-ionisation Detector (PID) meter was used to obtain the following field measurements:

- Background concentrations of ionisable volatile organic compounds (VOCs) in the ambient air taken approximately 5 to 10 metres upwind of the general work area; and
- Headspace analysis of bagged soil samples collected to detect the presence of ionisable VOCs.

The PID readings were observed before and after each measurement of a sample to ensure that the PID was operating correctly. The procedures followed in performing field headspace on soil samples can be found in the Aargus Field Protocols.

Readings of PID maximums were recorded in Aargus field record forms included in Appendix K. The PID calibration certificate can be found in Appendix K.

## 9.6 Soil Laboratory Analysis

Soil samples were submitted to their respective laboratories as specified in Section 11.2. The schedules of analysis for each sampling batch are presented in Appendix O.

## 10 GROUNDWATER INVESTIGATION

### 10.1 General Methodology

The groundwater investigation was carried out on the 3<sup>rd</sup> November 2018. Groundwater gauging, purging and sampling methodology adopted was carried out in accordance with Aargus fieldwork protocols.

Groundwater-related field record forms included in Appendix K.

### 10.2 Sampling Design Rationale

Three (3) of the boreholes drilled were converted into groundwater monitoring wells on the 27<sup>th</sup> October 2018 and were designated as GW2 (BH9) & GW3 (BH14) and GW4 (BH13). The locations of the monitoring wells are shown on Figure 4 of Appendix A and were selected on the following basis:

- To provide an assessment groundwater conditions within the site.
- Establish groundwater flow direction.

A list of the proposed groundwater monitoring wells and their function in the monitoring network are presented in the table below.

**Table 18: Groundwater Network**

Well ID	Installed	Function
GW2	27 <sup>th</sup> October 2018	Down-gradient well and general monitoring
GW3	27 <sup>th</sup> October 2018	Up-gradient well and general monitoring
GW4	27 <sup>th</sup> October 2018	Up-gradient well and general monitoring

### 10.3 Well Installation

Groundwater monitoring wells were constructed on the 27<sup>th</sup> October 2018 by adopting the following methodology:

- 50mm diameter, Class 18PVC threaded and flush joined casing and 0.45 machine-slotted screens were used;
- The screen extended 1m above and 2m below the standing water table measured after drilling;
- Coarse, washed sand and gravel was placed in the annulus surrounding the piping to a height of 0.2m above the screen;
- Bentonite pellets were placed in the annulus above the sand to form an impermeable plug of a thickness of 1.0m and near the top of the well to prevent surface runoff from entering directly into the well;
- A PVC cap was placed on the casing; and
- 100mm diameter stainless steel flushed covers were used for GW2/ GW3 and GW4 and concreted on to the ground surface. GW1 was finished in the form of standpipe.

A summary of the groundwater monitoring well construction details installed are listed in the table below and are also presented in full detail within their respective borehole logs included in Appendix J.

**Table 19: Summary of Well Construction Details**

Well ID	Total Depth (m BGL)	Screening Zone (m BGL)	Lithological Description
GW2	4.0	1.0-4.0	Sand
GW3	4.3	1.3-4.3	Sand
GW4	4.0	1.0-4.0	Sand

## 10.4 Groundwater Gauging

Prior to purging and sampling of groundwater at each monitoring well, groundwater levels were measured and the presence of phase-separated hydrocarbons (PSH) was checked using a bailer. No PSHs were observed.

Measurements of groundwater well depths were also obtained to assess whether siltation of the well had occurred following well development. Where a significant difference was noted, the well was redeveloped. No siltation was recorded.

Groundwater levels were measured within a single time interval at all locations prior to the commencement of purging and sampling.

## 10.5 Groundwater Purging and Sampling

Wells were purged and sampled using low flow techniques with a Micro-purge pump and maintaining a flow rate of between 100ml/min and 500 ml/min to reduce potential loss of VOCs.

Purging of groundwater was carried out until three consecutive readings from a calibrated Water Quality Meter were measured within the stabilisation criteria specified for each physico-chemical parameters listed in the table below.

**Table 20: Groundwater Quality Stabilisation Criteria**

Parameter	Measurement Unit	Stabilisation Variance
Temperature	°C	± 0.2
pH	pH units	± 0.1
Oxidation Reduction Potential (ORP)	mV	± 10 mV
Dissolved Oxygen (DO)	mg/L	± 0.2 or 10%
Electrical Conductivity	mS/cm	± 5%

Groundwater samples were collected only after stabilised groundwater quality readings were achieved to ensure representative sampling and then transferred into laboratory-supplied sample containers appropriate for laboratory analyses. A copy of the calibration certificate can be found in Appendix K.

## **10.6 Laboratory Analyses**

Groundwater samples were submitted to their respective laboratories as specified in Section 11.2. The schedules of analysis for each sampling batch are presented in Appendix O.

## 11 QUALITY ASSURANCE / QUALITY CONTROL

### 11.1 Field QA/QC

#### 11.1.1 General

The frequency required for each field quality assurance / quality control (QA/QC) sample is presented in the table below.

**Table 21: QA/QC Sampling Frequency**

	Intra-Lab Duplicates	Inter-Lab Duplicates	Rinsates	Trip Blanks	Trip Spikes
<b>Sampling Frequency</b>	1 in 20 primary samples	1 in 20 primary samples	1 / Day	1 / Day	1 / Day

#### 11.1.2 Field Duplicates

Duplicates of primary samples were collected to enable the assessment of variability in analyte concentrations between samples collected from the same sampling point. The tables below list the duplicate soil and groundwater samples collected with their corresponding primary samples.

**Table 22: Soil Field Duplicate Samples**

Primary Sample ID	Sample Depth (m bgl)	Blind Duplicate ID	Split Duplicate ID	Date Sampled
BH6	0.5-1.0	D1	SS1	27 <sup>th</sup> October 2018

**Table 23: Groundwater Field Duplicate Samples**

Primary Sample ID	Screen Zone (m bgl)	Blind Duplicate ID	Split Duplicate ID	Date Sampled
GW3	1.0-4.0	GWD1	GWSS1	3 <sup>rd</sup> November 2018



### 11.1.3 Rinsates

Rinsate samples recovered for each day in which sampling took place to identify possible cross contamination between the sampling locations are listed in the table below.

**Table 24: Rinsate Samples**

Sample ID	Equipment Type	Sample Media	Date Collected
R2	Hand Trowel	Soil	27 <sup>th</sup> October 2018
GWR1	Water Quality Meter and Dip Meter	Water	2 <sup>nd</sup> November 2018
R3	Hand Trowel	Soil	15 <sup>th</sup> February 2020

### 11.1.4 Trip Blanks / Spikes

Trip spike and trip blank samples were collected to assess the effect of sample handling on volatile concentrations in the samples collected and are listed in the table below.

**Table 25: Trip Blank/Trip Spikes**

Sample ID	QC Sample Type	Media	Date Collected
TB2	Trip Blank	Soil	27 <sup>th</sup> October 2018
TS2	Trip Spike	Soil	27 <sup>th</sup> October 2018
GWTB1	Trip Blank	Groundwater	2 <sup>nd</sup> November 2018
GWTS1	Trip Spike	Groundwater	2 <sup>nd</sup> November 2018

### **11.1.5 Sample Handling, Storage and Transport**

The following sampling handling, storage and transport procedures were adopted to ensure sample integrity:

- Samples were collected in laboratory supplied containers. A list of sample preservation methods and the types of sample containers used are attached in Appendix L.
- Soil and groundwater sample containers were placed immediately into a chilled cooler box and dispatched to their respective analytical laboratories on the same day. If this was not possible, samples were temporarily held overnight in the Aargus office refrigerator at a temperature of no greater than 4 °C and dispatched the following day.
- A Chain of Custody form (COC) was completed for all samples collected and included with the samples for transport to their respective laboratories for chemical analysis. Copies of COCs are included in Appendix M.
- All glass bottles were individually bubble wrapped for protection and insulated containers/coolers were used for sample shipment.
- Disposable nitrile gloves were used for OH&S purposes and were changed between every sample location.

### **11.1.6 Decontamination Procedures**

The decontamination of non-dedicated sampling equipment was achieved by washing with phosphate-free detergent and tap water, followed by a final rinse with distilled water. Decontamination was conducted after the collection of samples at each sample location. A clean pair of disposable gloves was used when handling each sample.

The drilling augers were decontaminated between sampling locations by physically removing soil material between boreholes, washing the augers with Decon 90 and rinsing them with water.

We highlight that separate disposable tubing used when sampling. These equipment items were not subject to decontamination procedures.

### **11.1.7 Calibration of Equipment**

The 10.6eV lamp of the PID was calibrated with isobutylene gas at 100ppm prior to commencement of fieldwork and prior to commencement of each day's fieldwork. The battery in the PID unit was recharged after every day's use in the field. The Water Quality Meter was calibrated prior to the commencement of groundwater sampling. Copies of calibration records for each relevant item of equipment used can be found in Appendix K.

## **11.2 Laboratory QA/QC**

### **11.2.1 Laboratories Used**

The following NATA-accredited laboratories were commissioned to carry out laboratory analysis of soil and groundwater samples collected:

- Primary Laboratory – ALS Environmental (Sydney)
- Secondary Laboratory (Soil) – ALS Environmental (Melbourne) & SGS Environmental (Sydney)
- Secondary Laboratory (Groundwater) – ALS Environmental (Melbourne)
- Asbestos Laboratory – ASET (Hornsby)

These laboratories also operate Quality Systems that are designed to comply with ISO/IEC 17025. All primary samples, blind duplicates, rinsate samples, trip blank/spikes were dispatched to the primary laboratory. All split samples were dispatched to the secondary laboratory. Laboratory Certificates of Analysis are included in Appendix M.

### **11.2.2 Holding Times**

The holding times for chemicals analysed are presented in Appendix L and were based on USEPA methods, Standard Methods for the Examination of Water and Wastewater (APHA).

### 11.2.3 Test Methods and Practical Quantitation Limits

The test methods adopted by ALS Environmental – Sydney & Melbourne are listed in Appendix L and Practical Quantitation Limits (PQLs) adopted are specified within the Laboratory Certificates of Analysis included in Appendix M.

The methods used by the laboratories generally comply with those listed in the NEPM and the Australian and New Zealand Environment and Conservation Council (ANZECC)-1996 “*Guidelines for the Laboratory Analysis of Contaminated Soils*”. Alternate methods used by the laboratories (i.e. not identified in the NEPM and ANZECC guidelines) have been validated by the laboratories, as recommended in the NEPM and ANZECC guidelines, and endorsed by NATA.

### 11.3 QA/QC Data Evaluation

A full evaluation of the Data Quality Indicators (DQIs) for both fieldwork and laboratory procedures is presented in Appendix N. These were assessed with reference to Appendix V of the NEPM and Guidelines for the NSW Site Auditor Scheme 2017. In summary, the findings of the QA/QC evaluation indicated the following:

#### Soils

- Data Completeness – The data set is considered to be adequately complete. With the exception of:
  - Laboratory Matrix Spike for soil was not tested for TRH and BTEX by ALS Sydney.
- Data Comparability – The data set is considered to be adequately comparable.
- Data Representativeness – The data set is considered to be adequately representative.
- Data Precision – The data set is considered to be adequately precise.
- The RPDs of Copper in one sample was exceeded LOR based limits.
- Data Accuracy – The data set is considered to be adequately accurate, with the exception of:

- Recovery of trip spike concentrations for TRH, Toluene, Ethyl benzene and total Xylene was <70%. However, the results for these analytes were all below their respective PQLs. Therefore, the non-conformance is not considered to have any effect on the investigation outcome.

## Groundwater

- Data Completeness – The data set is considered to be adequately complete, with the exception of:
  - Laboratory PAH for GW1/GW2/GW3/ GWD1/ GWSS1 and GW4 tested by ALS Sydney and ALS Melbourne were not within holding times.
  - Laboratory duplicates did not test for PAH, PAH/Phenols and TRH in water by ALS Sydney and ALS Melbourne.
  - Laboratory matrix spikes did not test for PAH, PAH/Phenols and TRH in water by ALS Sydney and ALS Melbourne.
- Data Comparability – The data set is considered to be adequately comparable.
- Data Representativeness – The data set is considered to be adequately representative.
- Data Precision – The data set is considered to be adequately precise.
- Data Accuracy – The data set is considered to be adequately accurate, with the exception of:
  - Recovery of trip spike concentrations for total Xylenes was <70%. However, the results for these analytes were all below their respective PQLs. Therefore, the non-conformance is not considered to have any effect on the investigation outcome.

The sampling methods (including sample preservation, transport and decontamination procedures) and laboratory methods followed during this investigation works were consistent with Aargus protocols and were found to meet the DQOs for this project. It is therefore considered that the data is sufficiently reliable and that the results can be used for the purpose of this project.

## 12 FIELD OBSERVATIONS

### 12.1 Geology

Based on surface and sub-surface conditions observed during the intrusive investigation, the surface and sub-surface profile across the site is summarised in the table below.

**Table 26: Summary of Geological Observations**

Geological Unit	Lithological Description
Fill	Gravelly Sand, medium to coarse grained, dark brown, with some metal pieces and road base gravels, observed in BH17 in the vicinity of the warehouse building footings
Natural Soils	SAND, fine grained, yellow

The following additional observations were made:

- No hydrocarbon staining was observed within any of the borehole locations.
- No hydrocarbon odours were encountered within any of the borehole locations.
- No fibre-containing fragments or sheeting were observed in any of the borehole samples.

We recommend that this section be read in conjunction with Figure 4 (Sample Location Plan) in Appendix A, the Daily Work Sheets in Appendix K and the borehole logs in Appendix J.

### 12.2 Field Headspace Results

Ionisable VOC detections in PID readings taken from soil samples subjected to field headspace analysis were noted in the field to be all below 5ppm.

The PID field record forms can be found in Appendix K.

## 12.3 Groundwater Observations during Drilling

Groundwater observations made during drilling are summarised in the table below.

**Table 27: Groundwater Observations during Drilling**

Borehole ID	Initial Depth (m BGL)	Flow Type	PSH (mm)	Lithology (Initial Depth)
BH9	2.0	Seepage	No	SAND
BH14	2.3	Seepage	No	SAND
BH13	2.0	Seepage	No	SAND

## 12.4 Groundwater Monitoring Results

### 12.4.1 Groundwater Measurements

Groundwater levels measured, and observations made during the monitoring event carried out on the 2<sup>nd</sup> November 2018 are summarised in the table below.

**Table 28: Groundwater Elevations and Observations**

Well ID	Well Depth (m BGL)	Groundwater Depth Measured (m BGL)	PSH Depth (m BGL) / Thickness (mm)
GW2	4.0	2.2	None
GW3	4.3	2.5	None
GW4	4.0	2.2	None

#### 12.4.2 Physio-Chemical Parameters

The stabilised measurements taken for each groundwater physico-chemical parameter are summarised in the table below. Copies of detailed field measurement records for each monitoring well location are presented in Appendix K.

**Table 29: Physico-Chemical Parameters**

Well ID	Temperature (°C)	pH	EC (S/cm)	Redox (mV)	DO (ppm)
GW2	21.8	6.89	340.5	165.6	67
GW3	19.1	6.54	385.8	94.6	26.12
GW4	20.1	6.54	297.2	193.4	60.91



## 13 LABORATORY RESULTS

### 13.1 General

A comparison of soil and groundwater laboratory results against their respective assessment criteria (as specified in Section 8) are presented in the summary tables in Appendix O. Certificates of laboratory analysis are attached in Appendix M. A discussion of the results is presented in the following sub-sections.

### 13.2 Soil Results

#### 13.2.1 Heavy Metals

##### 13.2.1.1 Health Investigation Levels (HILs)

As indicated in Table A1, the concentrations of the heavy metals were below the Health Investigation Level (HIL) for a commercial / industrial land use, that being the HIL 'D'.

##### 13.2.1.2 Ecological Investigation Levels (EILs)

As indicated in Table A1, the arsenic concentrations were below the Ecological Investigation Level (EIL) for commercial and industrial.

The EILs for Copper, Zinc and Nickel were derived by adding the Ambient Background Concentration (ABC) to the Added Contaminant Limits (ACL), as per the formula  $EIL = ABC + ACL$ .

The ABC for the site has been determined by recovering a sample from an appropriate reference point, that being BH12 (0.9-1.0m), sampled from natural soil within the concrete car park area.

The ABC concentrations are summarised in Table A3 in Appendix O

The results of pH and CEC for the soil samples are summarised in Table A2 in Appendix O. Based on the results in Table A2, the site ACLs for CrIII, Cu, Ni and Zn have been derived and are provided in Table A3. The calculated EIL for CrIII, Cu, Pb, Ni and Zn after appropriate rounding have been summarised in Table A3.

Therefore, as shown in Table A4, the CrIII, Cu, Pb, Ni and Zn concentrations were below the site derived EILs.

### **13.2.2 TRH, BTEX & NAPHTHALENE**

#### **13.2.2.1 Health Screening Levels (HSLs)**

As indicated in Table B1, the F1 (C<sub>6</sub>-C<sub>10</sub>), F2 (>C<sub>10</sub>-C<sub>16</sub>), benzene, toluene, ethyl benzene, xylenes and naphthalene concentrations were below the HSL 'D' for a clay soil profile with a source depth of "0m to <1m".

#### **13.2.2.2 Ecological Screening Levels (ESLs)**

As indicated in Table B2, the F1 (C<sub>6</sub>-C<sub>10</sub>), F2 (>C<sub>10</sub>-C<sub>16</sub>), F3 (C<sub>16</sub>-C<sub>34</sub>), F4 (C<sub>34</sub>-C<sub>40</sub>), benzene, toluene, ethyl benzene, xylenes and benzo(a)pyrene concentrations were below the ESL for a coarse grained soil texture in an "Commercial and industrial" environment.

#### **13.2.2.3 Management Limits**

As indicated in Table B3, the F1 (C<sub>6</sub>-C<sub>10</sub>), F2 (>C<sub>10</sub>-C<sub>16</sub>), F3 (C<sub>16</sub>-C<sub>34</sub>) and F4 (C<sub>34</sub>-C<sub>40</sub>) concentrations were below the Management Limits for a coarse soil texture in a "commercial and industrial" environment.

### **13.2.3 PAH, OCP, PCB, Phenols & Cyanide**

#### **13.2.3.1 Health Investigation Levels (HILs)**

As indicated in Table C, the concentrations of the benzo(a)pyrene (as TEQ), Total PAH, OCP and PCB, Phenols & Cyanide were below the Health Investigation Level (HIL) for a commercial / industrial land use, that being the HIL 'D'.

#### **13.2.3.2 Ecological Investigation Levels (EILs)**

As indicated in Table C, the concentrations of naphthalene and DDT/DDE/DDD were below the Ecological Investigation Level (EIL) for commercial and industrial open space.

#### **13.2.3.3 Ecological Screening Levels (ESLs)**

As indicated in Table C, the benzo(a)pyrene concentrations were below the ESL for a coarse grained soil texture in an “commercial/industrial and public open space” environment.

### **13.2.4 VOCs**

As indicated in Table D, the concentrations of VOCs were below LOR and / or the adopted assessment criteria for the commercial/industrial area.

### **13.2.5 Asbestos**

As indicated in Table E, no asbestos was detected.

## **13.3 Groundwater Results**

### **13.3.1 Heavy Metals**

As indicated in Table F, the heavy metal concentrations were below the assessment criteria (marine water, recreational and drinking water) with exception of the zinc concentrations in sample GWD1 (a duplicate sample of GW3) which was equal to the marine water criteria.

### **13.3.2 TRH, BTEX & PAH**

#### **13.3.2.1 Fresh, Recreational, Drinking Water**

As indicated in Table G, the BTEX concentrations were either less than the laboratory limit of reporting (LOR) and/or below the assessment criteria (marine water, water for recreational purposes, drinking water).

#### **13.3.2.2 Health Screening Levels (HSLs)**

As indicated in Table H, the F1 (C<sub>6</sub>-C<sub>10</sub>), F2 (>C<sub>10</sub>-C<sub>16</sub>), benzene, toluene, ethyl benzene, xylenes and naphthalene concentrations were below the HSL 'D' for a sand soil profile with a source depth of "2m to <4m".

### **13.3.3 PAH & Phenols**

As indicated in Table I, the PAH and Phenols concentrations were below the assessment criteria (marine water, water for recreational purposes, drinking water).

## 14 DISCUSSION OF RESULTS

### 14.1 Soil

The soil assessment revealed the following:

- All of heavy metals concentrations from the soil samples analysed met their respective assessment criteria under the HIL 'D', EILs and site derived EILs.
- The TRH, BTEX, naphthalene and/or benzo(a)pyrene concentrations from the samples were below the HSL'D', ESLs for a commercial and industrial land use and the Management Limits for a commercial and industrial land use.
- The PAH, OC, PCB, Phenols and/or Cyanide concentrations were below the HIL'D', ESLs for a commercial and industrial land use and/or the EILs for a commercial and industrial land use.
- VOCs concentrations were below the laboratory PQL and below the HIL'D' for a commercial and industrial land use.
- No asbestos fragments were observed during the site inspection. No asbestos fibres were detected in the soil samples analysed.

### 14.2 Groundwater

Collected groundwater samples from three (3) wells were tested for contaminants of concern: heavy metals, total petroleum hydrocarbons, polycyclic aromatic hydrocarbons and phenols. All the results were below the guideline criteria for marine water, marine water and water for recreational purpose criteria.

GWD1 (a duplicate sample of GW3) had elevated zinc at concentrations equals to the ANZECC 2000 guidelines for marine waters. As the site is located within an industrial area and concentrations of all upgradient wells are similar, it is considered that the concentration of zinc in groundwater at the site can be attributed to background levels of the area.

## 15 CONCLUSIONS

Based on the results of this investigation it is considered that the risks to human health and the environment associated with the soil and groundwater contamination at the site are negligible within the context of the proposed use of the site for development into a commercial building with basement car parking and deep soil landscaping areas.

The site is therefore considered to be suitable for the proposed use.

Any soils requiring removal from the site, as part of future site works, should be classified in accordance with the “*Waste Classification Guidelines, Part 1: Classifying Waste*” NSW EPA (2014).

Thank you for the opportunity to undertake this work. We would be pleased to provide further information on any aspects of this report.

For and on behalf of

**Aargus Pty Ltd**



**Ningye Zhang**

Environmental Engineer

**Reviewed By:**



**Mark Kelly**

Principal Environmental Consultant

## LIMITATIONS

The Aargus assessment is based on the result of site investigations and sample testing. Neither Aargus, nor any other reputable consultant, can provide unqualified warranties nor does Aargus assume any liability for site conditions not observed or accessible during the time of the investigations.

Despite all reasonable care and diligence, the materials encountered and concentrations of contaminants measured may not be representative of conditions between the locations sampled and investigated. There is always some disparity in subsurface conditions across a site that cannot be fully defined by investigation. Hence it is unlikely that measurements and values obtained from sampling and testing during environmental works carried out at a site will characterise the extremes of conditions that exist within the site. In addition, site characteristics may change at any time in response to variations in natural conditions, chemical reactions, truck movement or contractor movement of soils and other events, e.g. groundwater movement and or spillages of contaminating substances. These changes may occur subsequent to Aargus investigations and assessment.

This report and associated documentation and the information herein have been prepared solely for the use of the client at the time of writing the report and is valid (for the purposes of management or transport of material) for a period of one month only from the date of issue. Any other reliance assumed by third parties on this report shall be at such parties' own risk. Any ensuing liability resulting from use of the report by third parties cannot be transferred to Aargus.

Whilst this report provides a review of site conditions encountered at sampling locations within the investigation, it should be noted that if materials are proposed to be moved from site - Part 5.6, Section 143 of the Protection of the Environment Operations (POEO) Act 1997 states that it is an offence for waste to be transported to a place that cannot lawfully be used as a facility to accept that waste. It is the duty of the owner and transporter of the waste to ensure that all material removed from a site must be accompanied by an appropriate waste classification report and materials are disposed of appropriately. An environmental or validation report does not constitute a waste classification report and results are treated

differently. Aargus accepts no liability for the unlawful disposal of waste materials from any site. Aargus does not accept any responsibility for the material tracking, loading, management, transport or disposal of waste from the site. If material is to be removed from a site, before disposal of any material to a licensed landfill is undertaken, the site owner must ensure an appropriate waste classification exists for all materials on the site planning to be removed, the waste producer will need to obtain prior consent from the licensed landfill/recycler. The receiving site should check to ensure that the material received matches the description provided in the report.

Opinions are judgements, which are based on our understanding and interpretation of current regulatory standards, and should not be construed as legal opinions.

Appendix Q – Important information about your environmental site report should also be read in conjunction with this report.



## REFERENCES

This report was prepared with reference to the following guiding documents:

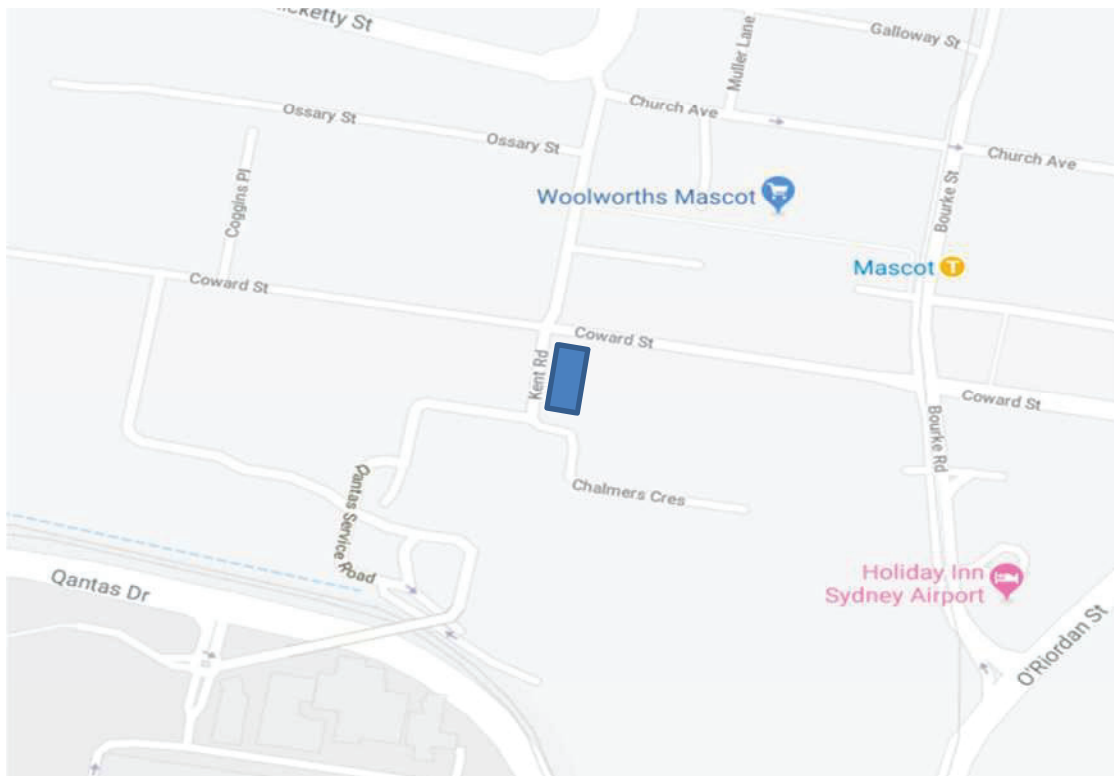
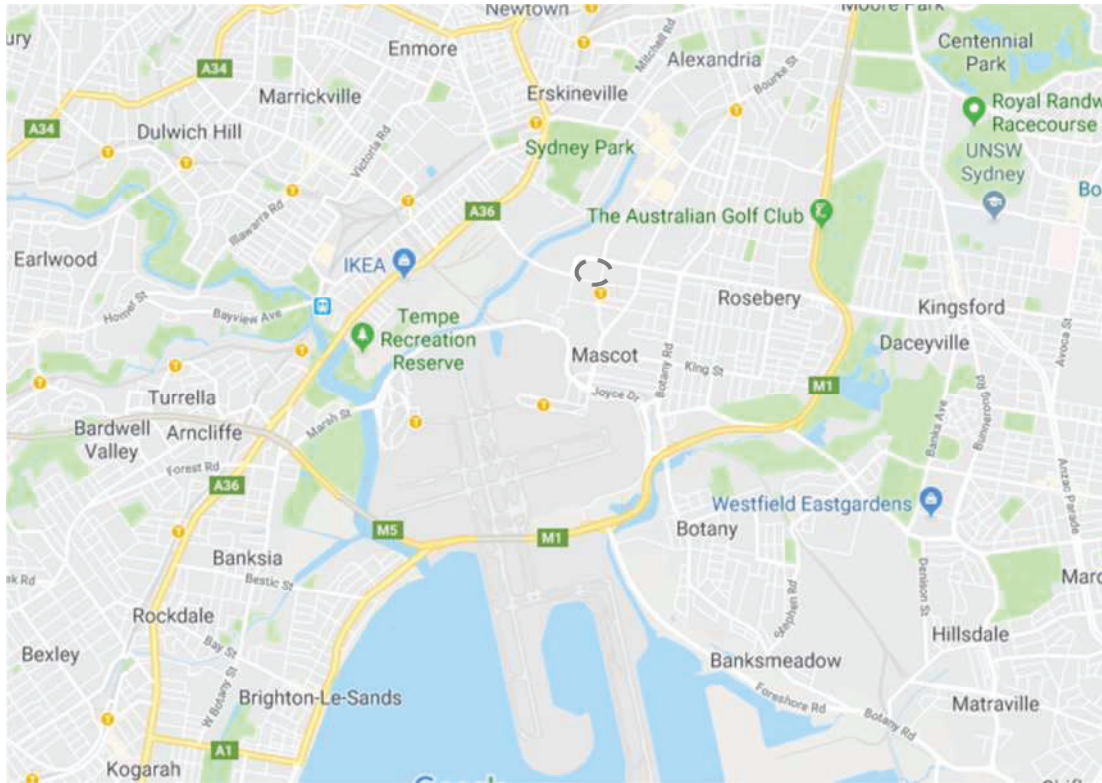
- ANZECC/NHMRC (1992) – “Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites”. Australian and New Zealand Environment and Conservation Council and the National Health and Medical Research Council, Canberra.
- ANZECC National Water Quality Management Strategy “Australian Water Quality Guidelines for Fresh and Marine Waters”, 1992.
- Department of Urban Affairs and Planning – EPA (1998) “Managing Land Contamination – Planning Guidelines – SEPP 55 – Remediation of Land”.
- National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1).
- NSW DEC, “Guidelines for the Assessment and Management of Groundwater Contamination” (March 2007).
- NSW DEC “Guidelines for the NSW Site Auditor Scheme” (2006, 2<sup>nd</sup> edition). NSW Environment Protection Authority, Sydney.
- NSW EPA (2014) – “Waste Classification Guidelines, Part 1: Classifying Waste”;
- NSW EPA “Guidelines for Consultants Reporting on Contaminated Sites” (2011). NSW Environment Protection Authority, Sydney.
- NSW EPA “Sampling Design Guidelines” (1995). NSW Environment Protection Authority, Sydney.

# APPENDIX A

---

## SITE PLANS

# SITE LOCALITY MAP



## PROJECT DETAILS

Project Title	Site Investigation Report
Project No.	ES7399
Client	Skylife Coward Pty Limited
Site Address	253 Coward Street, Mascot NSW



## DRAWING DETAILS

Figure No.	1	Rev No.	0
Scale	As above	Size	A4
Drawn by	SP	Date	21.11.2018
Approved by	MK	Date	02.08.2019

# LOT & DEPOSITED PLAN



## PROJECT DETAILS

Project Title	Site Investigation Report
Project No.	ES7399
Client	Skylife Coward Pty Limited
Site Address	253 Coward Street, Mascot NSW

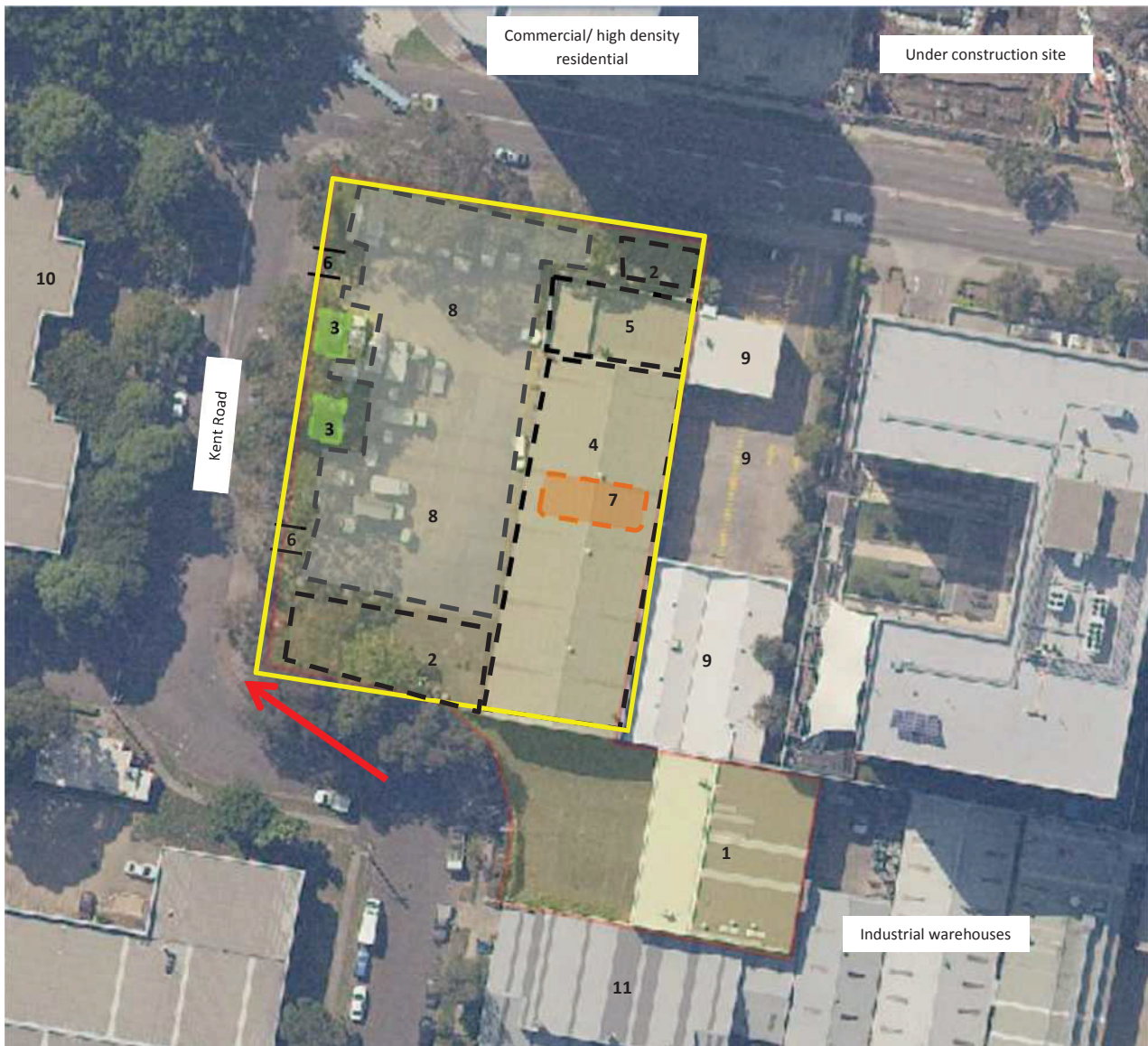




## DRAWING DETAILS

Figure No.	2	Rev No.	0
Scale	As above	Size	A4
Drawn by	SP	Date	21.11.2018
Approved by	MK	Date	02.08.2019



# SITE FEATURES & SURROUNDING LAND



Site Features	
1	No.2 Chalmers Crescent - Commercial
2	Bitumen car park area
3	Garden bed area
4	Hino's workshop warehouse
5	Hino's office building
6	Entrance gate
7	Excavated pit, storage area for waste oil tanks and combustible liquid tanks
8	Concrete covered parking area
9	Bridgestone car and 4WD centre
10	Totally Workwear Mascot / Thrifty Offices
11	No.4 Centrum Printing
	Slope
	Site Boundary

## PROJECT DETAILS

Project Title	Site Investigation Report
Project No.	ES7399
Client	Skylife Coward Pty Limited
Site Address	253 Coward Street, Mascot NSW



## DRAWING DETAILS

Figure No.	3	Rev No.	0
Scale	1:1128	Size	A4
Drawn by	SP	Date	23.11.2018
Approved by	MK	Date	02.08.2019

# BOREHOLE LOCATIONS ON AERIAL VIEW



## LEGEND



GW location



Borehole location 2018



Borehole location 2020

## PROJECT DETAILS

Project Title	Site Investigation Report
Project No.	ES7399
Client	Skylife Coward Pty Limited
Site Address	253 Coward Street, Mascot NSW

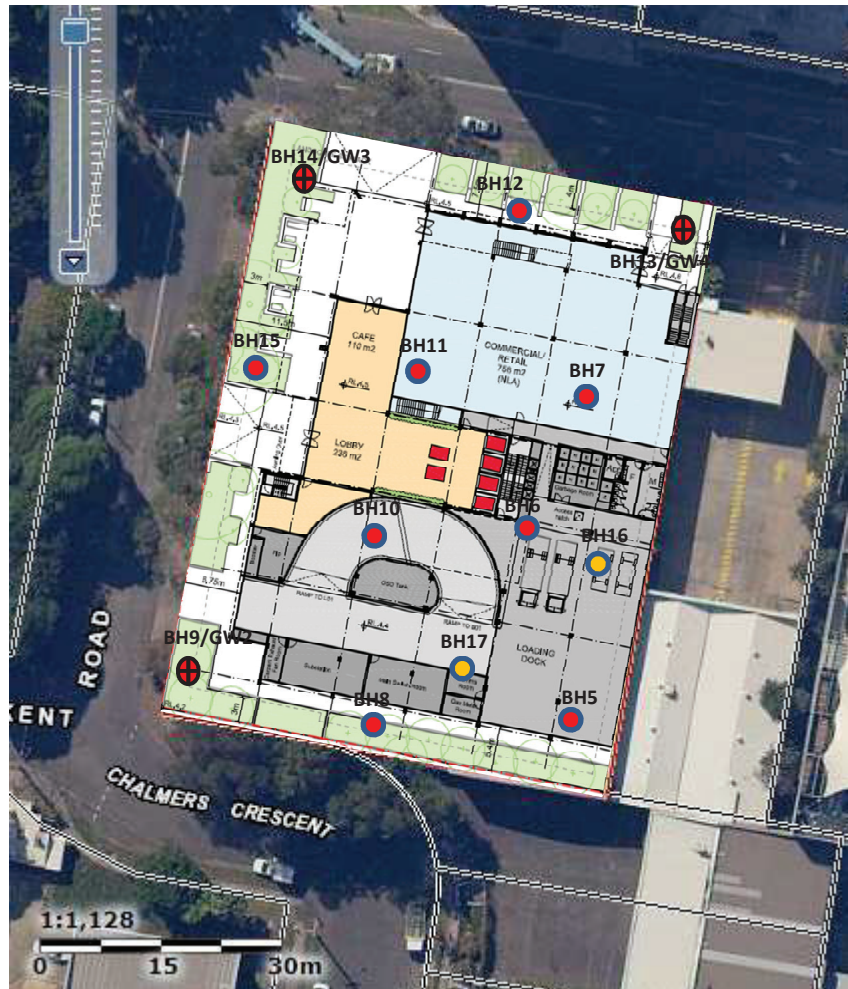


## DRAWING DETAILS

Figure No.	4a	Rev No.	0
Scale	1:1128	Size	A4
Drawn by	NZ	Date	25.02.2020
Approved by	MK	Date	25.02.2020



# BOREHOLE LOCATIONS ON DEVELOPMENT PLAN



## LEGEND



GW location



Borehole location 2018



Borehole location 2020

## PROJECT DETAILS

Project Title	Site Investigation Report
Project No.	ES7399
Client	Skylife Coward Pty Limited
Site Address	253 Coward Street, Mascot NSW



## DRAWING DETAILS

Figure No.	4b	Rev No.	0
Scale	1:1128	Size	A4
Drawn by	NZ	Date	25.02.2020
Approved by	MK	Date	25.02.2020

# SOIL EXCEEDANCES



BH12 (02-0.3m)

Zinc concentration of 638mg/kg, exceeded the site derived EILs of 290mg/kg

## PROJECT DETAILS

Project Title	Site Investigation Report
Project No.	ES7399
Client	Skylife Coward Pty Limited
Site Address	253 Coward Street, Mascot NSW



## DRAWING DETAILS

Figure No.	5	Rev No.	0
Scale	1:1128	Size	A4
Drawn by	SP	Date	28.11.2018
Approved by	MK	Date	02.08.2019



# APPENDIX B

---

## LAND TITLE INFORMATION

# TITLE SEARCH

Computer Folio Certificate issued under  
Section 96D of the Real Property Act 1900

No. 08

Search certified to:

7/11/2018 12:10 PM

COMPUTER FOLIO REFERENCE	
1/104795	
EDITION No. & DATE OF CURRENT CERTIFICATE OF TITLE	
11	23/8/2018

Page 1

NO CERTIFICATE OF TITLE HAS ISSUED FOR THE CURRENT EDITION OF THIS FOLIO.  
CONTROL OF THE RIGHT TO DEAL IS HELD BY AUSTRALIA AND NEW ZEALAND BANKING  
GROUP LIMITED.

LAND

----

LOT 1 IN DEPOSITED PLAN 104795  
LOCAL GOVERNMENT AREA BAYSIDE  
PARISH OF BOTANY COUNTY OF CUMBERLAND  
TITLE DIAGRAM DP104795

FIRST SCHEDULE

-----

SKYLIFE COWARD PTY LTD

(T AN490910)

SECOND SCHEDULE (3 NOTIFICATIONS)

-----

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 AM664474 LEASE TO ADTRANS HINO PTY LTD EXPIRES: 31/8/2022.  
AN490909 VARIATION OF LEASE AM664474 EXPIRY DATE NOW  
30/4/2020.
- 3 AN607735 MORTGAGE TO AUSTRALIA AND NEW ZEALAND BANKING GROUP  
LIMITED

NOTATIONS

-----

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

doccop4

PRINTED ON 7/11/2018

08

The Registrar General certifies that at the date and time specified above the person(s) described in the First Schedule was the registered proprietor of an estate in fee simple (or other such estate or interest set out in the Schedule) in the land described, subject to any exceptions, encumbrances, interests, and entries which appear in the Second Schedule.

\* 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.



Registrar General

# HISTORICAL TITLE SEARCH

Certificate issued under Section 96G  
of the Real Property Act 1900

No. 09

Search certified to: 7/11/2018 12:14PM

Computer Folio Reference: 1/104795

Page 1

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 10297 FOL 186

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
19/10/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
- 3/4/1992	✓ E366433	LEASE	EDITION 1
- 2/3/1993	I26484	TRANSFER	EDITION 2
6/2/1997	2816644	DISCHARGE OF MORTGAGE	EDITION 3
- 24/12/1997	3692848	TRANSFER	EDITION 4
- 12/1/1999	✓ 5520765	LEASE	EDITION 5
5/9/2003	9944301	SURRENDER OF LEASE	
- 5/9/2003	9944302	LEASE	EDITION 6
- 4/12/2006	AC786264	LEASE	EDITION 7
15/12/2007	AD641220	TRANSFER OF LEASE	EDITION 8
- 22/8/2017	AM664474	LEASE	EDITION 9
10/7/2018	AN490909	VARIATION OF LEASE	
- 10/7/2018	AN490910	TRANSFER	EDITION 10
23/8/2018	AN607735	MORTGAGE	EDITION 11

END OF PAGE 1 - CONTINUED OVER

doccop4

PRINTED ON 7/11/2018

09

The Registrar General certifies that at the date and time specified above the information set out in this search constitutes the historical record of all dealings recorded in or action taken in respect of the mentioned title which is required to be kept by the Registrar General under section 32(7) of the Real Property Act 1900.



Registrar General

# HISTORICAL TITLE SEARCH

Certificate issued under Section 96G  
of the Real Property Act 1900

No. 09

Search certified to: 7/11/2018 12:14PM

Computer Folio Reference: 1/104795

Page 2

Recorded	Number	Type of Instrument
----------	--------	--------------------

C.T. Issue

CORD ISSUED

\*\*\* END OF SEARCH \*\*\*

doccop4

PRINTED ON 7/11/2018

09

The Registrar General certifies that at the date and time specified above the information set out in this search constitutes the historical record of all dealings recorded in or action taken in respect of the mentioned title which is required to be kept by the Registrar General under section 32(7) of the Real Property Act 1900.



Registrar General

NEW SOUTH WALES

Application 5037

Prior Titles Vol. 7005 Fols. 1

**CERTIFICATE OF TITLE**

PROPERTY ACT, 1900, as amended



10297/186

SC. Vol. 10297 Fol. 186

Edition issued 22.4.1966.

K274376



**CANCELLED**

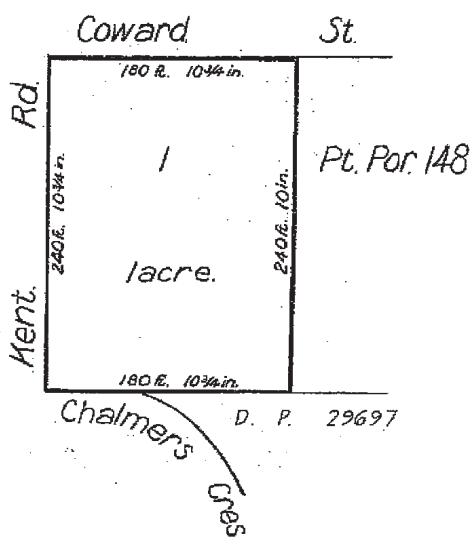
I certify that the person described in the First Schedule is the proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness *D. Sullivan*.

**SEE AUTO FOLIO**

**PLAN SHOWING LOCATION OF LAND**

*Jawatson*  
Registrar General.



K274376 L.L.

—Scale:— 100 feet to one inch.—

ESTATE AND LAND REFERRED TO  
DP104795

Estate in Fee Simple in Lot 1 in plan lodged with Transfer No. 621063 (Filed as F.P. 104795) in the Municipality of Botany, Parish of Botany and County of Cumberland, being part of Portion 148 granted to Henry Isler on 10.2.1843.

*Jawatson*  
Registrar General.

FIRST SCHEDULE (continued overleaf)

~~MASCO INVESTMENTS PTY. LIMITED.~~

*Jawatson*  
Registrar General.

GRY

SECOND SCHEDULE (continued overleaf)

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

*Jawatson*  
Registrar General.



PT 1, 17 V.C.N. Blight, Government Printer

**FIRST SCHEDULE (continued)**

**REGISTERED PROPRIETOR**

REGISTERED PROPRIETOR	NATURE	INSTRUMENT		ENTERED	Signature of Registrar-General
			NUMBER		
The name of the registered proprietor as T.V.T. Properties N.A.W. Pty Limited	Charge of above		M161376	23.2.1971	
<b>CANCELLED</b>					
<b>SEE AUTO FOLIO</b>					

**CANCELLED**

**SEE AUTO FOLIO**

## SECOND SCHEDULE (continued)

SECOND SCHEDULE (continued)						
NATURE	INSTRUMENT NUMBER	DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION
Mortgage	14550-33	13.8.1966	To State Refinancing Board	13.8.1966	[Signature]	
Mortgage	M161376P	31.9.1970	To Commonwealth Trading Bank of Australia	23.2.1971	[Signature]	Discharged V173017A
Mortgage	1762125	21.2.1974	To State Supervision Board	21.1.1974	[Signature]	Discharged V173011
Refinancing	1762126	21.2.1974	Mortgage No. V176175 is entitled in priority to all other mortgages before mortgage No. V176174.	2.9.1974	[Signature]	Cancelled V173011

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE REGISTRAR GENERAL

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

n: 97-07L

cence: 026CN/0537/96

**LEASE**  
New South Wales  
Real Property Act 1900

5520765M



Instructions for filling out this form are available from the Land Titles Office  
Office of State Revenue use only

1458895

10/208523200 11 2057 661021  
N.S.W. STAMP DUTY \$83.95

B

(A) PROPERTY LEASED

Show no more than 20 titles.  
If appropriate, specify the part or premises.

Folio Identifier 1/104795

(B) LODGED BY

LTO Box	Name, Address and Telephone <b>PM ALLEN &amp; CO</b> Law Stationers 47V REFERENCE (15 character maximum): <i>BSS 970623 M.F.P/L</i>
---------	---

(C) LESSOR

MIFF PTY LIMITED (ACN 001 627 023)

(D) The lessor leases to the lessee the property described above.

Encumbrances (if applicable) 1. 2. 3. 4.

(E) LESSEE

<b>L</b>	<b>MACK TRUCKS AUSTRALIA PTY LTD (ACN 009 719 582)</b> of 616 Boundary Road, Richlands, Queensland
(F)	TENANCY:

(G) 1. TERM: Five (5) years

2. COMMENCING DATE: 1 January 1999

3. TERMINATING DATE: 31 December 2003

4. With an **OPTION TO RENEW** for a period of five (5) years set out in Clause 22 of Memorandum U596904W.

5. ~~With an OPTION TO PURCHASE set out in~~

6. ~~Together with and reserving the RIGHTS set out in~~

7. Incorporates the provisions set out in **ANNEXURE 'A'** hereto.

8. Incorporates the provisions set out in **MEMORANDUM No. U596904W** filed in the Land Titles Office as varied in the manner set out in Annexure 'A'.

*De* *De*

Form: 07L  
Release: 4-4

**LEASE**  
New South Wales  
Real Property Act 1900



**AM664474T**

**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.

**STAMP DUTY**

Office of State Revenue use only

**(A) TORRENS TITLE**

Property leased

FOLIO IDENTIFIER 1/104795

**(B) LODGED BY**

Document  
Collection  
Box 47 V

Name, Address or DX, Telephone, and Customer Account Number if any

LLPN H.M. Allen & Co.  
123012 E DX 437 Sydney  
Ph 9232 3652

Reference: 20170307

CODE

**L**

**(C) LESSOR**

MIFF PTY LIMITED (ACN 001 627 023)

The lessor leases to the lessee the property referred to above.

**(D)**

Encumbrances (if applicable): NIL

**(E) LESSEE**

ADTRANS HINO PTY LTD (ACN 127 369 260)

**(F)**

TENANCY:

**(G) 1. TERM FIVE (5) YEARS**

2. COMMENCING DATE 1 SEPTEMBER 2017

3. TERMINATING DATE 31 AUGUST 2022

4. With an OPTION TO RENEW for a period of N/A  
set out in clause N/A of N/A

5. With an OPTION TO PURCHASE set out in clause N/A of N/A

6. Together with and reserving the RIGHTS set out in clause N/A of N/A

7. Incorporates the provisions or additional material set out in ANNEXURE(S) "A" hereto.

8. Incorporates the provisions set out in memorandum filed pursuant to 80A Real Property Act 1900  
No. 3875927E

9. The RENT is set out in item No. 8 of THE REFERENCE SCHEDULE IN ANNEXURE "A"

ALL HANDWRITING MUST BE IN BLOCK CAPITALS.

OFF L AC 7862 64





Form: 07L  
Release: 2.0  
Licence: 01-10-065  
Licencee: Initio Pty Ltd  
Firm Name: Bull Son & Schmidt

**LEASE**  
New South Wales  
Real Property Act 1900

**AC786264Y**

**PRIVACY NOTE:** Section 31B of the Real Property Act 1900 (RP 1900) 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.

**STAMP DUTY**

Office of State Revenue use only

Stamp Duty	555
Doc No: 25-0010	
Duty: \$14,147.35	3859530
Assessment:	

**(A) TORRENS TITLE**

Property leased: if appropriate, specify the part or premises

Certificate of Title Folio Identifier 1/104795  
known as 253-259 Coward Street, Mascot

**(B) LODGED BY**

Delivery  
Box

Name, Address or DX and Telephone

H M ALLEN  
LAW STATIONERS  
LLPN 123012E

123012E

Reference (optional): BSS DM:260863

CODE

L

47V

**(C) LESSOR**

MIFF PTY LIMITED (ACN 001 627 023)

The lessor leases to the lessee the property referred to above.

**(D)**

Encumbrances (if applicable): NIL

**(E) LESSEE**

DAVID BEST TRUCK REPAIRS PTY LIMITED (ACN 063 003 467)

**(F)**

TENANCY:

**(G) 1. TERM: TEN (10) YEARS**

2. COMMENCING DATE: 1 September 2006

3. TERMINATING DATE: 31 August 2016

4. With an **OPTION TO RENEW** for a period of FIVE (5) YEARS

set out in clause Item 7.2 of Annexure "A" Reference Schedule

5. With an **OPTION TO PURCHASE** set out in clause N.A. of N.A.

6. Together with and reserving the **RIGHTS** set out in clause N.A. of N.A.

7. Incorporates the provisions or additional material set out in **ANNEXURE(S)** "A" hereto.

8. Incorporates the provisions set out in **MEMORANDUM** filed at Department of Lands, Land and Property Information Division as No. 3875927E.

9. The **RENT** is set out in item No. 8 of Annexure "A" Reference Schedule.

off L 9944302

Form: 07L  
Licence: 01-10-065  
Licencee: Initio Pty Ltd  
Firm Name: Bull Son & Schmidt

**LEASE**  
New South Wales  
Real Property Act 1900



**9944302Q**

PRIVACY NOTE: this information is legally required and

**STAMP DUTY**

Office of State Revenue use only

NEW SOUTH WALES DUTY  
13-08-2003 0001548695-001  
LEASE - GENERAL  
DUTYABLE AMOUNT \$ \*\*\*\*\*932,692.00  
DUTY \$ \*\*\*\*\*93,264.45

**(A) TORRENS TITLE**

Property leased: if appropriate, specify the part or premises  
CERTIFICATE OF TITLE FOLIO IDENTIFIER 1/104795

**(B) LODGED BY**

Delivery  
Box

Name, Address or DX and Telephone  
H M ALLEN  
LAW STATIONERS

CODE

**47V**

Reference (optional): BSS DM:230556

**L**

**(C) LESSOR**

MIFF PTY LIMITED (ACN 001 627 023)

The lessor leases to the lessee the property referred to above.

**(D)**

Encumbrances (if applicable): NIL

**(E) LESSEE**

DAVID BEST TRUCK REPAIRS PTY LIMITED (ACN 063 003 467)

**(F)**

**TENANCY:**

**(G) 1. TERM: THREE (3) YEARS**

2. **COMMENCING DATE:** 1 September 2003

3. **TERMINATING DATE:** 31 August 2006

4. With an **OPTION TO RENEW** for a period of **THREE (3) YEARS**

set out in clause Item 7.2 of Annexure "A" Reference Schedule

5. With an **OPTION TO PURCHASE** set out in clause N.A. of N.A.

6. Together with and reserving the **RIGHTS** set out in clause N.A. of N.A.

7. Incorporates the provisions or additional material set out in **ANNEXURE(S) "A"** hereto.

8. Incorporates the provisions set out in **MEMORANDUM** filed at Land and Property Information New South Wales as No. 3875927E.

9. The **RENT** is set out in item No. 8 of Annexure "A" Reference Schedule.

All handwriting must be in block capitals

Total Pages (office use only) \_\_\_\_\_

RP 1 STAMP DUTY

OFFICE USE ONLY



E  
366433 V



OFFICE OF STATE REVENUE P59  
STAMP DUTY 1992/93  
DUTY \$ 1385.30 1ST REC# 200408195

LEASE

REAL PROPERTY ACT, 1900  
(To be lodged in duplicate)

(See instructions for Completion issued as Form RP 1B)

L	of	R
\$		

DESCRIPTION  
OF LAND  
Note (a)

LAND of which LESSOR is registered proprietor		
Torrens Title Reference	If Part or premises, see note (a) (ii)	Location
Folio Identifier 1/104795	WHOLE  PART being the whole of the second floor and the workshop located on the ground floor of the Building	MASCOT

LESSOR  
Note (b)

TNT Properties NSW Pty Limited A.C.N. 000 151 780 of  
9th Floor, Tower One, TNT Plaza, Lawson Square, Redfern

(the abovenamed LESSOR) hereby leases to the LESSEE

LESSEE  
Note (b)

BORAL TYRES PTY LIMITED A.C.N. 008 678 377 of  
253-259 Coward Street, Mascot

OFFICE USE ONLY

Note (c)

as joint tenants/tenants in common

Note (h)

PRIOR  
ENCUMBRANCES  
Note (d)

the land and premises above described, subject to the following PRIOR ENCUMBRANCES 1. M161376

TERM

Note (e)

Note (f)

Note (g)

Note (h)

for a TERM of three (3) years commencing on 1 / 8 / 91 and TERMINATING on 31 / 7 / 94  
(with an OPTION TO PURCHASE and/or an OPTION OF RENEWAL as set forth in clause(s) 11 of SCHEDULE TWO hereto,  
together with and reserving the rights and liberties set forth in SCHEDULE ONE hereto), and

SUBJECT TO THE covenants and provisions:

- (i) implied by sections 24 and 25 of the Conveyancing Act, 1919 as are not expressly negated or modified herein;
- (ii) set forth in the Memorandum filed in the Land Titles Office as Number;
- (iii) set forth in SCHEDULE TWO hereto, which covenants and provisions shall be deemed to be incorporated herein.

DATE 23 March 1992

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

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

THE COMMON SEAL of TNT PROPERTIES NSW

PTY LIMITED A.C.N. 000 151 780 was

hereunto affixed in the presence of:



EXECUTION  
Note (i)

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

THE COMMON SEAL of BORAL TYRES PTY

LIMITED A.C.N. 008 678 377 was hereunto  
duly affixed by authority of its Board  
in the presence of:



Director

Secretary

Director

Secretary

TO BE COMPLETED  
BY LODGING PARTY  
Notes (j)  
and (k)

OFFICE USE ONLY

LODGED BY		LOCATION OF DOCUMENTS	
KEDDIES.		CT	OTHER
Ref: 91-835 TNT			Herewith.
Delivery Box Number: 101E			In L.T.O. with
			Produced by 22N
Checked 27/	Passed	REGISTERED - 19	
Signed	Extra Fee	Secondary Directions	
		Delivery Directions	

97-01T



①

# TRANSFER

Real Property Act, 1900

3692848 T



Office of State Revenue use only

\$2.00

N-S-M. STAMP DUTY 4629 04 201296750/03

2

## (A) LAND TRANSFERRED

Show no more than 20 References to Title.  
If appropriate, specify the share transferred.

1/104795

## (B) LODGED BY

L.T.O. Box

Name, Address, DX and Telephone

H. M. ALLEN & CO

Law Stationers

47V

REFERENCE (max. 15 characters):

BSS 970165

## (C) TRANSFEROR

TNT AUSTRALIA PTY LIMITED ACN 000 495 269

## (D) acknowledges receipt of the consideration of .... \$1900000.00

and as regards the land specified above transfers to the Transferee an estate in fee simple

## (E) subject to the following ENCUMBRANCES

1. .... 2. .... 3. ....

## (F) TRANSFEE

T  
TS  
(s713 LGA)  
TW  
(Sheriff)

MIFF PTY LIMITED ACN 001 627 023

TENANCY:

## (G)

## (H) We certify this dealing correct for the purposes of the Real Property Act, 1900. DATED .....

Signed in my presence by the Transferor who is personally known to me.

THE COMMON SEAL OF TNT AUSTRALIA

Signature of Witness

PTY LIMITED HAS BEEN AFFIXED IN

Name of Witness (BLOCK LETTERS)

ACCORDANCE WITH ITS ARTICLES OF

Address of Witness

ASSOCIATION IN THE PRESENCE OF:

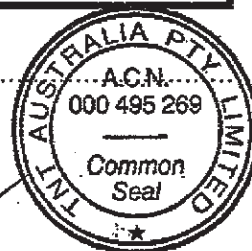
Signed in my presence by the Transferee who is personally known to me.

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Signature of Transferor



*[Handwritten Signature]*

DANIEL MARUCCI

TRANSFEE'S SOLICITOR  
14 MAY 1997

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

AUSDOC Office Pty. Ltd.

366123



RP13



**TRANSFER**

Real Property Act, 1900



I  
026484 B

Office of State Revenue use only

**B**



**D**

**(A) LAND TRANSFERRED**

Show no more than 20 References to Title.  
If appropriate, specify the share transferred.

see Annexure "A"

**(B) LODGED BY**

L.T.O. Box

Name, Address or DX and Telephone

TNT Limited  
PO Box 1033  
STRAWBERRY HILLS NSW 2012

REFERENCE (max. 15 characters): F. Moratti

**(C) TRANSFEROR**

TNT Properties NSW Pty. Limited

**(D)** acknowledges receipt of the consideration of ..... see Annexure "A" .....

and as regards the land specified above transfers to the transferee an estate in fee simple

**(E)** subject to the following ENCUMBRANCES 1. see Annexure "A" 2. .... 3. ....

**(F) TRANSFEE**



TNT AUSTRALIA PTY. LIMITED

as joint tenants in common

**(H)** We certify this dealing correct for the purposes of the Real Property Act, 1900. DATE OF EXECUTION 11.12.92

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

The Common Seal of  
TNT PROPERTIES NSW  
PTY. LIMITED was hereunto  
affixed in the presence of:

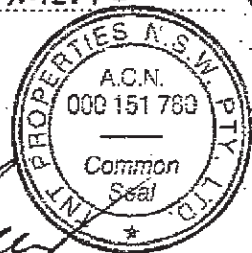
Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

SECRETARY

Signature of Transferor



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

The Common Seal of  
TNT AUSTRALIA PTY. LIMITED  
was hereunto affixed in the  
presence of:

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

SECRETARY

Signature of Transferee



INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

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Form: 01T  
Release: 6-1

**TRANSFER**  
New South Wales  
Real Property Act 1900



**AN490910S**

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

**STAMP DUTY**

Office of State Revenue use only

Office of State Revenue NSW Treasury	
Client No: 109163208	2836
Duty \$10	Trans No: 9196220-001
Asst details:	

**(A) TORRENS TITLE**

1/104795

**(B) LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any  SYDNEY LEGAL 392 C Reference: 126005 Law - 442865	CODES <b>T</b> <b>TW</b>
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**(C) TRANSFEROR**

MIFF PTY LIMITED ACN 001 627 023

**(D) CONSIDERATION** The transferor acknowledges receipt of the consideration of \$ 24,200,000.00 and as regards

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

**(F) SHARE TRANSFERRED**

**(G)** Encumbrances (if applicable):

**(H) TRANSFEE**

SKYLIFE COWARD PTY LTD ACN 626 283 707

**(I) TENANCY:**

**DATE**

**(J)** Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the company named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.

Company: MIFF PTY LIMITED ACN 001 627 023  
Authority: section 127 of the Corporations Act 2001

Signature of authorised person:

Name of authorised person:  
Office held:

*Richard Smith*  
RICHARD SMITH  
DIRECTOR

Signature of authorised person:

Name of authorised person:  
Office held:

*Philip Murrell*  
PHILIP MURRELL  
SECRETARY

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

Signature:

Signatory's name:  
Signatory's capacity:

**DORIAN KRATSAS**  
solicitor

**(K)** The transferee's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 1603094 Full name: DORIAN KRATSAS Signature: *[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 Page 1 of 1 1303

RP13



# TRANSFER

Real Property Act, 1900



I  
054740 B

Office of State Revenue use only

①

62

20/089997100 +0 436E Z421ST

B 0-29

(A) **LAND TRANSFERRED**

Show no more than 20 References to Title.  
If appropriate, specify the share transferred.

Volume 7911 Folio 232 Auto-Consol

(B) **LODGED BY**

L.T.O. Box

Name, Address or DX and Telephone

37Y

WESTPAC

REFERENCE (max. 15 characters): 2031 30062 P12

(C) **TRANSFEROR**

KANAHORE NOMINEES PTY LIMITED ACN 005 097 665

(D) acknowledges receipt of the consideration of \$650,000.00  
and as regards the land specified above transfers to the transferee an estate in fee simple

(E) subject to the following ENCUMBRANCES 1. 2. 3.

(F) **TRANSFEEE**



E K ANDERSON INVESTMENTS PTY LTD (A.C.N. 001 490 624)

as joint tenants/tenants in common

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900.

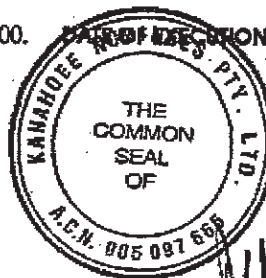
Signed in my presence by the transferor who is personally known to me.

THE COMMON SEAL of KANAHORE NOMINEES PTY LIMITED was hereunto affixed by the authority of the Board of Directors in the presence of:

ARISTOS METAXAS

Name of Witness (BLOCK LETTERS)

LO GODDWOOD CRES. GLADSTONE PARK.  
Secretary Address of Witness



Director

Secretary

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

Signature of Transferee's Solicitor

Peter Victor Toppanwien

CHECKED BY (office use only)

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE



Form: OIT  
Release: 6-0

**TRANSFER** 2  
New South Wales  
Real Property Act 1900

**AH418290F**

**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 Register. Section 66B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

**STAMP DUTY**

Office of State Revenue use only

NSW Treasury

Client No: 1390864

214

Duty: \$10.00 Trans No: 6910968

Asst details:

**(A) TORRENS TITLE**

FOLIO IDENTIFIER 1-2/29697 being AUTO CONSOL 7911-232

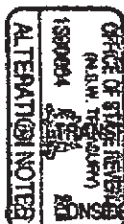
**(B) LODGED BY**

Document Collection Box Name, Address or DX, Telephone, and Customer Account Number if any

M J ARMSTRONG & CO - GADENS  
654X LLP: 131317K  
Reference: 32615579

**CODES**

**T**  
**TW**



**(C) CONVEYANCE**

EK ANDERSON INVESTMENTS ACN: 001 490 624  
PTY LIMITED

**(E) ESTATE**

The transferor acknowledges receipt of the consideration of \$ 2,050,000.00 and as regards the abovementioned land transfers to the transferee an estate in fee simple

**(F) SHARE TRANSFERRED**

WHOLE

**(G)**

Encumbrances (if applicable):

**(H) TRANSFEREE**

MSD CORPORATION (2005) PTY LIMITED ABN: 62 081 836 045 &  
EJB CORPORATION PTY LIMITED ABN: 55 193 311 529

**(I)**

TENANCY: Tenants in Common in Equal Shares

DATE 30 November 2012

**(J) Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the corporation named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.**

Corporation: EK ANDERSON INVESTMENTS PTY LIMITED ACN: 001 490 624  
Authority: section 127 of the Corporations Act 2001

Signature of authorised person:

Signature of authorised person:

Name of authorised person: Margaret Anderson  
Office held: Director

Name of authorised person: Edward Kenneth Andersson  
Office held: Solicitor/Secretary

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

Signature:

Signatory's name: SUZI GESTAKOVSKA  
Signatory's capacity: solicitor

**(K) The transferee**

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



Form: 01T  
Edition: 1607  
Licence: 05-11-638  
Licensee: Sofidocs

2/3

# TRANSFER

New South Wales  
Real Property Act 1900



AM807359B

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

STAMP DUTY

Office of State Revenue (NSW)	
Client No: 1411509	5322
Duty: \$10	Trans No: 991607-001
Asst details: 4/10/17	

(A) TORRENS TITLE

If appropriate, specify the part transferred  
Auto Consol 7911-232

(B) LODGED BY

Document Collection Box <b>535G</b>	Name, Address or DX, Telephone, and Customer Account Number if any SAI GLOBAL LLPN: 123854C DX 895 SYDNEY 9210 0700 Reference (optional): 6696 7059 - Kirshu	CODES <b>T</b> <b>TW</b>
--	--	--------------------------------

(C) TRANSFEROR

MSD CORPORATION (2005) PTY LIMITED ACN 123 237 445 AND BJB CORPORATION PTY LIMITED ACN 123 237 454

(D) CONSIDERATION

The transferor acknowledges receipt of the consideration of \$ 5,100,000.00

and as regards

(E) ESTATE

the land specified above transfers to the transferee an estate in fee simple.

(F) SHARE

TRANSFERRED

(G)

Encumbrances (if applicable):

(H) TRANSFEREE

KIRSHU PTY. LTD. ACN 007 251 121

(I)

TENANCY:

DATE

25 / 07 / 2017

OFF (L) AE 45461

(J)

Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the company named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.

Company: MSD CORPORATION (2005) PTY LIMITED ACN 123 237

445 AND BJB CORPORATION PTY LIMITED ACN 123 237 454

Authority: Section 127(1) of the Corporations Act 2001

Signature of authorised person: See Annexure A

Name of authorised person:

Office held:

Signature of authorised person: See Annexure A

Name of authorised person:

Office held:

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

Signature:

Signatory's name: Peter James Garrett Suhq Kim

Capacity: Solicitor for the transferee

(K)

The transferee's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 1362714 Full name: Peter James Garrett Suhq Kim 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

Form: 01T  
Release: 6.2  
Licence: 01-05-025  
Licensee: LEAP Legal Software Pty Limited  
Firm name: Law Corporation Pty Ltd

**TRANSFER**  
New South Wales  
Real Property Act 1900



**AM961380W**

**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. Office of State Revenue

**STAMP DUTY**

Revenue NSW use only

NSW Treasury  
Client No: 109163208 2836  
Duty: 10 Trans No: 9245295-001  
Asst details:

(A) **TORRENS TITLE**

Auto Consol 7911 - 232

(B) **LODGED BY**

Document  
Collection  
Box  
392C

Name, Address or DX, Telephone, and Customer Account Number if any  
**SYDNEY LEGAL**  
LLP: 128005Y  
Reference: Law- 901039

**CODES**  
**T**  
**TW**

(C) **TRANSFEROR**

Kirshu Pty Ltd ACN 007 251 121  
*off AM887 235 9/11/2*

(D) **CONSIDERATION**

The transferor acknowledges receipt of the consideration of \$6,600,000.00 and as regards the abovementioned land transfers to the transferee an estate in fee simple.

(E) **ESTATE**

(F) **SHARE**

**TRANSFERRED**

(G)

Encumbrances (if applicable):

(H) **TRANSFeree**

SkyLife Mascot Pty Ltd ACN 622 677 838

(I)

**TENANCY:**

**DATE**

(J) Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the corporation named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.

Corporation: Kirshu Pty Ltd ACN 007 251 121  
Authority: section 127 of the Corporations Act 2001

Signature of authorised person:

Name of authorised person: Joseph Frank Camilleri  
Office held: Sole Director/Secretary

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

Signature:

Signatory's name: Dorian Kratsas  
Signatory's capacity: Solicitor for the Transferee

(K) The transferee's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under  
eNOS ID No. 1448209 Full name: Dorian Kratsas Signature:

# APPENDIX C

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## SITE PHOTOGRAPHS

## SITE PHOTOGRAPHS

<b>Client:</b>	Skyline Coward Pty Limited
<b>Project:</b>	Site Investigation report
<b>Site Location:</b>	253 Coward Street, Mascot NSW
<b>Job No.:</b>	ES7399
<b>Photos Taken By:</b>	SP



**Photograph N° 1**



View of: Waste Oil Tank & combustible liquid C2 tanks  
Looking: East  
Inspected on : 27.10.2018

**Photograph N° 2**



View of: Oil drums  
Looking: South west  
Inspected on: 27.10.2018

**Photograph N° 3**



View of: Metal containers  
Looking: South east  
Inspected on: 27.10.2018

**Photograph N° 4**



View of: Metal shelves and tool area  
Looking: North east  
Inspected on: 27.10.2018

## SITE PHOTOGRAPHS

<b>Client:</b>	Skylife Coward Pty Limited
<b>Project:</b>	Site Investigation Report
<b>Site Location:</b>	253 Coward Street, Mascot NSW
<b>Job No.:</b>	ES7399
<b>Photos Taken By:</b>	SP



**Photograph N° 5**



View of: Adtrans Hino's Office and workshop building  
Looking: South east  
Inspected on : 27.10.2018

**Photograph N° 6**



View of: Hinos' Workshop  
Looking: North east  
Inspected on: 27.10.2018

**Photograph N° 7**



View of: Bitumen and concrete parking area  
Looking: North west  
Inspected on: 27.10.2018

**Photograph N° 8**



View of: Parking bitumen area  
Looking: North east corner  
Inspected on: 27.10.2018

**Photograph N° 9**

**Photograph N° 10**

# **APPENDIX D**

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**CURRENT AND HISTORICAL  
AERIAL PHOTOGRAPHS**




HISTORICAL AERIAL PHOTOGRAPHS - 1930



LEGEND

Site Boundary

PROJECT DETAILS		DRAWING DETAILS			
Project Title	Site Investigation Report ES7399 Skylife Coward Pty Limited 253 Coward Street, Mascot NSW	 Aargus		Figure No.	Rev No.
Project No.				Scale	Size
Client				Drawn by	Date
Site Address				Approved by	Date
				A	1
				NA	A3
				SP	19.11.2018
				MK	29.11.2018

